LEXICON MEDICUM;

OR

MEDICAL DICTIONARY;

CONTAINING AN

EXPLANATION OF THE TERMS

IN

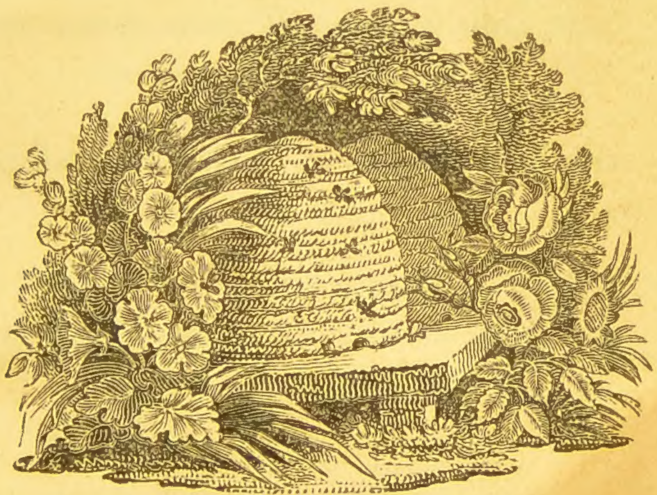
ANATOMY,	MINERALOGY,
BOTANY,	PHARMACY,
CHEMISTRY,	PHYSIOLOGY,
MATERIA MEDICA,	PRACTICE OF PHYSIC,
MIDWIFERY,	SURGERY,

AND THE

VARIOUS BRANCHES OF NATURAL PHILOSOPHY CONNECTED WITH MEDICINE.

SELECTED, ARRANGED, AND COMPILED, FROM THE BEST AUTHORS.

THE SIXTH EDITION, CONSIDERABLY IMPROVED.



" Nec aranearum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes." JUST. LIPS. *Monit. Polit.* lib. i. cap. i.

BY ROBERT HOOPER, M.D. F.L.S.

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1831.

TO

THE REVEREND

THOMAS POOLE HOOPER,

M.A. F.L.S. &c. &c.

RECTOR OF KINGSTON BY SEA, AND VICAR OF SOMPTING IN THE COUNTY OF SUSSEX,

WHO,

FROM A JUST CONVICTION OF THE ADVANTAGES THAT WOULD RESULT TO THE POOR FROM THE CLERGY BEING ACQUAINTED WITH THE TREATMENT OF DISEASES,

DILIGENTLY STUDIED THE SEVERAL BRANCHES OF THE MEDICAL ART;

AND HAS BEEN, FOR MANY YEARS, THE BENEVOLENT AND GRATUITOUS ADVISER TO ALL THE NECESSITOUS SICK IN HIS NEIGHBOURHOOD;

THIS WORK IS DEDICATED

BY

HIS AFFECTIONATE BROTHER,

THE AUTHOR.

PREFACE.

In this (the sixth) edition of the Medical Dictionary, the Author has added and incorporated the new discoveries and improvements which have been made in the several departments since the last edition appeared; and very much enlarged the description and treatment of diseases. He has, likewise, considerably compressed the Mineralogy and Chemistry, as well as the Biography, the articles of which were generally thought to be too prolix. Throughout the whole particular attention has been given to, —

1. The accentuation, in order that the proper pronunciation of the words may be obtained.

2. The derivation of the terms, and the declension of the words in common use.

3. The definitions, which are from the most approved sources.

In the selection and arrangement of the several articles, the Compiler has again to acknowledge his obligations to Abernethy, Accum, Aikin, Albinus, the Bells, Brande, Bergius, Berzelius, Bostock, Burns, Burserius, Callisen, Casselli, Castellius, Cooper, Cruickshank, Cullen, Davy, Denman, Duncan, the Editors of the London and Edinburgh Dispensary, and of Rees's Encyclopædia, Fourcroy, Good, Haller, Henry, Hoffmann, Innis, Latta, Larcy, Lavoisier Lewis, Linnæus, Magendie, Meyer, Murray, Nicholson, Orfila, Parr, Pott, Prout, Richerand, Richter, Saunders, Sauvage, Scarpa, Smith, Soëmmering, Swediaur, Symonds, Thomas, Thompson, Turton, Ure, Vaughan, Vossius, Willan, Woodville, &c. &c.

It was his original intention to have given to each writer the merit of the description selected from his work; but having occasion frequently to abridge and to alter various passages and opinions; and finding it difficult, and, in many instances, impossible, to discover the original writer of several articles; and convinced, at the same time, it would be attended with no particular advantage, he has preferred making a general acknowledgment to particularising the labours of each individual. If he has been so fortunate as to have compressed within the limits of the present publication much general and useful information, his object will be fully answered.

STANMORE,
September, 1830.

A NEW

MEDICAL DICTIONARY.

A. 1. In composition this letter, the *α* or *alpha privativa* in Greek, and *a* in Latin, signifies *without*: thus, *aphonia*, without voice; *acaulis*, without stem; *aphyllus*, without a leaf, &c.

2. A. AA. (From *ανα*, which signifies, of each.) Abbreviations of *ana*, which word is used in prescriptions after the mention of two or more ingredients, when it implies that the quantity mentioned of each ingredient should be taken; thus, ℞. *Potassæ nitratis* — *Sacchari albi* āā ʒj. Take nitrate of potassa and white sugar, of each one drachm.

3. AAA. An amalgam, or the operation of amalgamation.

A'ABAM. An alchemistic name of lead.

AA'RON. A physician of Alexandria, author of thirty books in the Syriac tongue, containing the whole practice of physic, chiefly collected from the Greek writings, and supposed to have been written before A. D. 620. He first mentioned, and described, the small-pox and measles, which were probably brought thither by the Arabians. He directed the vein under the tongue to be opened in jaundice, and noticed the white colour of the fæces in that disease. His works are lost, except some fragments, preserved by Rhazes.

AA'VORA. The fruit of a species of palm-tree which grows in the West Indies and Africa. It is of the size of a hen's egg, and included with several more in a large shell. In the middle of the fruit there is a hard nut, about the size of a peach stone, which contains a white almond, very astringent, and useful against a diarrhœa.

ABA'CTUS. Driven away. Among the ancient physicians, this term was used for a miscarriage, procured by art, or force of medicines, in contradistinction to *abortus*, which meant a natural miscarriage.

A'BACUS. (From a Hebrew word, *abak*, signifying dust.) A table for preparations, so called from the usage of mathematicians of drawing their figures upon tables sprinkled with dust.

ABACUS MAJOR. A trough used in the mines, wherein an ore is washed.

ABAI'SIR. Ivory black. Calcareous powder. See *Spodium abaisir*.

ABALIENA'TIO. Abalienation. Formerly applied to a decay of the body, or a part of it, and a loss of the senses or mind.

ABALIENA'TUS. Abalienated. Corrupted; Alienated. Applied to injuries of the mental powers, and to parts so destroyed as to require immediate extirpation. See *Alienatus*.

A'BANET. (Hebrew. The girdle worn by the Jewish priests.) A girdle-like bandage.

ABA'NGA. See *Ady*.

ABAPTI'STA. (From *α*, priv. and *βαπτω*, to plunge.) 1. The shoulders of the old trepan.

2. The conical saw with a circular edge, formerly used by surgeons to perforate the cranium.

ABAPTI'STON. The same as *Abaptista*.

ABARNAHAS. A chemical term formerly used in the transmutation of metals, signifying *luna plena*, *magnes*, or *magnesia*.

ABA'RTAMEN. Lead.

ABARTICULA'TION. (*Abarticulatio, onis*, f.; from *ab*, and *articulus*, a joint.) Abarticulation. A species of articulation of bones which has evident motion. See *Diarthrosis*.

A'BAS. An Arabian term for the scald-head, and also for Epilepsy.

ABA'SIS. See *Spodium abaisir*.

ABBREVIA'TION. (*Abbreviatio, onis*. f.) The principal uses of medicinal abbreviations are in prescriptions, in which they are certain marks, or half words, used by physicians for despatch and conveniency when they prescribe; thus: — ℞ readily supplies the place of *recipe* — *h. s.* that of *hora somni* — *n. m.* that of *nux moschata* — *elect.* that of *electarium*, &c.; and, in general, all the names of compound medicines, with the several ingredients, are frequently written only up to their first or second syllable, or sometimes to their third or fourth, to make them clear and expressive. Thus *Croc. Anglic.* stands for *Crocus anglicanus* — *Conf. Aromat.* for *Confectio aromatica*, &c.

A point being always placed at the end of such syllable, shows the word to be incomplete.

B. A. *Balneum arenæ.*
B. M. *Balneum mariæ.*
B. V. *Balneum vaporis.*
Dec. *Decoctum.*
F. *Fiat* or *fiant.*
Gutt. *Gutta.*
GR. gr. *Granum.*
Inf. *Infusum.*
M. or MAN. *Manipulum.*
O. *Octarium.*
P. Æ. *Partes æquales.*
Pug. *Pugillus.*
Pulv. *Pulvis.*
Q. S. *Quantum sufficit.*
℞. *Recipe.*
S. A. *Secundum artem.*
SS. ss. *Semi.*

ABBREVIA'TUS. Abbreviate; short. Thus a calyx or cup is said to be abbreviate when it is shorter than the tube of the blossom.

ABDO'MEN. (*men, inis.* n.; from *abdo*, to hide: because it hides the viscera. It is also derived from *abdere*, to hide, and *omentum*, the caul. By others, *omen* is said to be only a termination; as from *lego, legumen*, so from *abdo, abdomen.*) The belly. The largest cavity in the body, bounded superiorly by the diaphragm, by which it is separated from the chest; inferiorly by the bones of the pubes, and ischium; on each side by various muscles, the short ribs and ossa ilii; anteriorly by the abdominal muscles, and posteriorly by the vertebræ of the loins, the os sacrum and os coccygis. Internally it is invested by a smooth membrane, called peritoneum, and externally by muscles and common integuments.

In the cavity of the belly are contained,

Anteriorly and *laterally*,

1. The epiploon. 2. The stomach. 3. The large and small intestines. 4. The mesentery. 5. The lacteal vessels. 6. The pancreas. 7. The spleen. 8. The liver and gall-bladder.

Posteriorly without the peritoneum,

1. The kidneys. 2. The supra-renal glands. 3. The ureters. 4. The receptaculum chyli. 5. The descending aorta. 6. The ascending vena cava.

Inferiorly in the pelvis, and *without the peritoneum.*

In men, 1. The urinary bladder. 2. The spermatic vessels. 3. The rectum.

In women, besides the urinary bladder and intestinum rectum, there are,

1. The uterus. 2. The four ligaments of the uterus. 3. The two ovaria. 4. The two Fallopian tubes. 5. The vagina.

The fore part of this cavity, as has been mentioned, is covered with muscles and common integuments, in the middle of which is the navel. It is this part of the body which is properly called abdomen; it is distinguished, by anatomists, into regions. See *Body.*

The posterior part of the abdomen is called the loins, and the sides the flanks.

ABDO'MINAL. (*Abdominalis*; from *abdomen*, the belly.) Abdominal; pertaining to the belly.

Abdominal aorta. That portion of the aorta which is situated below the diaphragm.

Abdominal aponeurosis. The tendinous aponeurosis of the oblique and transverse muscles which forms the linea alba and sheath of the recti muscles.

Abdominal ganglion. The semilunar and solar ganglia are so called, because they are situated in the abdomen.

Abdominal hernia. See *Hernia.*

Abdominal muscles. See *Muscles.*

Abdominal regions. See *Body.*

Abdominal ring. See *Annulus abdominis.*

Abdominal vertebræ. The lumbar vertebræ are so called, because they form the posterior wall of the abdomen.

Abdominal viscera. See *Abdomen.*

ABDOMINALES. (The plural of *abdominalis.*) The name of an order of fishes in the Linnæan system.

ABDUCENS LABIORUM. See *Levator anguli oris.*

ABDU'CENT. (*Abducens*; from *ab*, from, and *ducere*, to draw.) The name of some muscles which draw parts back in the opposite direction to others. See *Abductor.*

2. The sixth pair of nerves are called *nervi abducentes.* See *Nervi abducentes.*

Abducent muscle. See *Abducent.*

Abducent nerve. See *Abducent.*

ABDU'CTION. (*Abductio, onis.* f.; from *ab*, and *duco*, to draw.) That movement by which a part is drawn away from a certain place or position, or from another body. 1. In *Anatomy*, certain muscles are so moved from their office. See *Abductor.*

2. In *Surgery*, formerly applied to a fracture in which the bone near a joint is so divided transversely, that the extremities recede from each other. Cælius Aurelianus uses this word for a sprain.

ABDU'CTOR. (*or, oris.* m.; from *abduco*, to draw away.) The name of a muscle, the office of which is to pull back or draw the member to which it is affixed from some other. The antagonist is called *adductor.*

ABDUCTOR AURICULARIS. See *Abductor minimi digiti manus.*

ABDUCTOR AURIS. See *Posterior auris.*

ABDUCTOR BREVIS ALTER. See *Abductor pollicis manus.*

ABDUCTOR INDICIS. See *Abductor indicis manus.*

ABDUCTOR INDICIS MANUS. An internal interosseous muscle of the fore-finger, situated on the hand. *Abductor* of Douglas; *Semi-interosseus indicis* of Winslow; *Abductor indicis* of Cowper. It arises from the superior part of the metacarpal bone, and the

os trapezium, on its inside, by a fleshy beginning, runs towards the metacarpal bone of the fore-finger, adheres to it, and is connected by a broad tendon to the superior part of the first phalanx of the fore-finger. Sometimes it arises by a double tendon. Its use is to draw the fore-finger from the rest towards the thumb, and to bend it somewhat towards the palm.

Abductor indicis pedis. An internal interosseous muscle of the fore-toe, which arises tendinous and fleshy, by two origins, from the root of the inside of the metatarsal bone of the foretoe, from the outside of the root of the metatarsal bone of the great-toe, and from the os cuneiforme internum, and is inserted tendinous into the inside of the root of the first joint of the fore-toe. Its use is to pull the fore-toe inwards, from the rest of the small toes.

Abductor longus pollicis. See *Interosseus auricularis.*

Abductor longus pollicis manus. See *Extensor ossis metacarpi pollicis manus.*

Abductor medii digiti pedis. An interosseous muscle of the foot, which arises tendinous and fleshy, from the inside of the root of the metatarsal bone of the middle toe internally, and is inserted tendinous into the inside of the root of the first joint of the middle toe. Its use is to pull the middle toe inwards.

Abductor minimi digiti manus. A muscle of the little finger, situated on the hand. *Extensor tertii internodii minimi digiti* of Douglas; *Hypothenar minor* of Winslow; *Abductor auricularis* of some writers. It arises fleshy from the pisiform bone, and from that part of the *ligamentum carpi annulare* next it, and is inserted, tendinous, into the inner side of the upper end of the first bone of the little finger. Its use is to draw the little finger from the rest.

Abductor minimi digiti pedis. A muscle of the little toe. *Abductor* of Douglas; *Parathenar major* of Winslow, by whom this muscle is divided into two, *Parathenar major* and *metatarseus*; *Abductor minimi digiti* of Cowper. It arises tendinous and fleshy, from the semicircular edge of a cavity on the inferior part of the protuberance of the os calcis, and from the rest of the metatarsal bone of the little toe, and is inserted into the root of the first joint of the little toe externally. Its use is to bend the little toe, and its metatarsal bone, downwards, and to draw the little toe from the rest.

Abductor oculi. See *Rectus externus oculi.*

Abductor pollicis manus. A muscle of the thumb, situated on the hand. *Abductor pollicis manus,* and *Adductor brevis alter* of Albinus; *Adductor thenar Riolani* of Douglas (the *adductor brevis alter* of Albinus is the inner portion of this muscle); *Adductor pollicis* of Cowper. It arises by a broad tendinous and fleshy beginning, from the ligamentum carpi annulare, and from the os trapezium, and is inserted tendinous into the outer side of the root of the first bone of the thumb. Its use is, to draw the thumb from the fingers.

Abductor pollicis pedis. A muscle of the great toe situated on the foot. *Abductor* of Douglas; *Thenar* of Winslow; *Abductor pollicis* of Cowper. It arises fleshy, from the inside of the root of the protuberance of the os calcis, where it forms the heel, and tendinous from the same bone, where it joins the os naviculare; and is inserted tendinous into the internal sesamoid bone and root of the first joint of the great toe. Its use is to pull the great toe from the rest.

Abductor tertii digiti pedis. An interosseous muscle of the foot, that arises tendinous and fleshy from the inside and the inferior part of the root of the metatarsal bone of the third toe; and is inserted tendinous into the inside of the root of the first joint of the third toe. Its use is to pull the third toe inwards.

Abductores. See *Nervi abducentes.*

Abebæ'os. See *Abebæus.*

Abebæ'us. (Αϐεϐαιος; from α neg. and βεϐαιος, firm.) Weak, infirm, unsteady. A term made use of by Hippocrates, de Signis.

Abelicea. (From α, priv. and βελος, a dart, *i. e.* without thorns.) An old name of the logwood tree. See *Hæmatoxylum campechianum.*

Abelmoluch. A species of *Ricinus.*

Abelmosch. See *Hibiscus abelmoschus.*

ABELMO'SCHUS. (*us, i.* m. An Arabian word, *habl él misk,* which signifies musk seed.) See *Hibiscus abelmoschus.*

Abelmusk. See *Hibiscus abelmoschus.*

ABERRA'TION. (*Aberratio, onis.* f.; from *ab* and *erro,* to wander from.) A deviation from the ordinary course of nature. This word is frequently used in medical writings. Its common meaning Boerhaave applied to the fluids which were in vessels not their proper ones. And in the present day, it is applied mostly to the mind and judgment.

Abe'samum. Dirt or clay.

Abe'ssi. (An Arabian term which means filth.) The alvine excrements.

A'besum. Quicklime.

Abevacua'tion. (*Abevacuatio, onis.* f.; from *ab,* diminutive, and *evacuo,* to pour out.) A partial or incomplete evacuation of humours, either naturally or by art.

Abhel. Savine.

Abicum. The thyroid cartilage.

A'BIES. (*es, etis.* f.; from *abeo,* to proceed, because it rises to a great height; or from απιος, a wild pear, the fruit of which its cones something resemble.) The fir. See *Pinus.*

Abies balsamea. See *Pinus balsamea.*

Abies canadensis. See *Pinus balsamea.*

Abies cembra. See *Pinus cembra.*

Abies mungos scopoli. A species of pine, most probably the *Pinus abies;* an alpine of Hungary, which affords the *oleum templinum.* See *Oleum templinum.*

Abies virginiana. See *Pinus balsamea.*

Abietanus. (From *abies,* the pine.) Belonging to the pine or abies; as *Oleum abietanum.*

ABIETIC. (*Abieticus;* from *abies.*) Of or belonging to the fir tribe.

Abietic acid. (*Acidum abieticum.*) A substance soluble in alkohol, and capable of forming salts with the alkalies extracted from the resin of the Pinus abies.

Abiga. (Probably so called from *abigo,* to expel, as it was supposed to promote delivery.) The ground pine or chamæpitys.

Abigea'tus. A miscarriage produced by art.

ABIO'TOS. (From α, neg. and βιοω, to live.) Deadly. A name given to hemlock, from its deadly qualities. Sea *Conium maculatum.*

ABLACTA'TION. (*Ablactatio, onis.* f.; from *ab,* from, and *lacto,* to suckle.) Ablactation, or the weaning of a child from the breast.

ABLA'TION. (*Ablatio;* from *aufero,* to take away.) Ablation. 1. The taking away from the body whatever is hurtful. A term that is seldom used, but, in its general sense, to clothing, diet, exercise, &c.

2. In some old writings, it expresses the interval betwixt two fits of a fever, or the time of remission.

3. Formerly chemists employed this term to signify the removal of any thing that is either finished, or else no longer necessary in a process.

Able'psia. (From α, priv. and βλεπω, to see.) Ablepsy. Blindness; want of sight; rashness; indiscretion.

ABLUE'NT. (*Abluens;* from *abluo,* to wash away.) That which washes away any impurity adhering to the surface.

ABLU'TION. (*Ablutio;* from *abluo,* to wash off.) 1. In *Pathology,* the washing of the body, or a part, by repeated affusions of a proper fluid.

2. In *Chemistry,* it signifies the purifying of a body, by repeated affusions of a proper liquor.

Abo'it. An Arabic term for white lead.

Aboli'tio. From *aboleo,* to destroy. The separation or destruction of diseased parts.

Abo'masus. *Abomasum. Abomasium.* One of the stomachs of ruminating animals.

Aborsus. A miscarriage.

ABO'RTIENS. Miscarrying. In *Botany,* it is sometimes used synonymously with *sterilis,* sterile or barren.

ABO'RTION. (*Abortio, onis.* f.; from *aborior,* to be sterile.) An abortion or miscarriage; called in the works of the ancients, *Aborsus; Amblosis; Diaphthora; Ectrosis; Exambloma; Examblosis; Apopallesis; Apopalsis; Apophthora.* The usual term of pregnancy is forty weeks, or nine calendar months. Within this period, however, the fœtus may be morbidly expelled at any time. If the exclusion take place within six weeks after conception, it is usually called *miscarriage;* if between six weeks and six months, *abortion;* if during any part of the last three months before the completion of the natural term, *premature labour.* Among some writers, however, abortion and miscarriage are used synonymously, and both are made to express the exclusion of the fœtus at any time before the commencement of the seventh month. At seven months, the fœtus will often live. It has been born alive, in a few rare instances, at four months; and has as rarely continued alive when born between five and six months.

The process of gestation may be checked, however, from its earliest period: for many of the causes of abortion, which can operate afterwards, may operate throughout the entire term, and hence a miscarriage occurs not unfrequently within three weeks after impregnation, or before the ovum has descended into the uterus. In this case, the pains very much resemble those of difficult menstruation; and with a considerable discharge of clotted or coagulated blood the tunica decidua passes away alone, having also some resemblance to that imperfect form of it which is produced in some cases of difficult menstruation, but exhibiting a more completely membranous structure. And here the ovulum escapes unperceived at some subsequent period, and is probably decomposed and incapable of being traced.

In subsequent periods of pregnancy, abortion consists of two parts or stages:

1. The separation of the ovum from the fundus of the womb.

2. Its expulsion from the mouth.

Sometimes these take place very nearly simultaneously, but sometimes several days or even weeks intervene; so that the process of abortion may considerably vary in its duration, and become exceedingly tedious. The ovum has remained undischarged for upwards of six weeks, and for three months after its separation, and consequently after the death of the fœtus, comparing its size and appearance with the ascertained term of gestation.

Through the whole of this period there is an occasional discharge from the vagina, and often temporary disquietudes, and even contractile pains, in the uterus. But both are of a very different kind from those which occur antecedently to the separation of the ovum. The first pains are usually sharp and expulsory, with a free discharge of clotting arterial blood; sometimes, indeed, in an alarming, though rarely a dangerous profusion; in the last they are dull and heavy, and the discharge is smaller in quantity, dark

and fetid. We may also judge of the detachment of the ovum, and consequently the death of the fœtus, by the cessation of those sympathetic symptoms which have hitherto connected the stomach and the mammæ with the action of the uterus, as the morning sickness, and the increasing plumpness of the breasts, which, not unfrequently, are so stimulated as to secrete already a small quantity of milk. On the separation of the ovum from the fundus of the uterus, all these disappear; the stomach may be dyspeptic, but without the usual sickness, and the breasts become more than ordinarily flaccid.

The ovum, when at length discharged, comes away very differently in different cases. Sometimes the whole ovum is expelled at once; but more generally it is discharged in detached parts, the fœtus first escaping with the liquor amnii, or descending with its own proportion of the placenta, the maternal proportion following some hours, or even days, afterwards. And, where there are twins, one of the fetuses, naked or surrounded with its membranes, is usually expelled alone, and the other not till an interval of several hours, or even a day or two; the discharge of blood ceasing, and the patient appearing to be in a state of recovery: so that it is difficult to determine whether or not there are twins in cases of early abortion.

The causes of abortion are very numerous; and some of them are rather to be conjectured, than fully ascertained. They may depend upon the ovum itself, upon the uterus itself, or upon the uterus as affected by the nature of the maternal constitution, or accidental lesions.

"The imperfections observable in ova," remarks Dr. Denman, are of different kinds, and found occasionally in every part; and there is usually a consent between the fœtus and the shell of the ovum, as the placental part and membranes may be called, but not always. For examples have occurred in which the fœtus has died before the termination of the third month, yet the shell, being healthy, has increased to a certain size, has remained till the expiration of the ninth month, and then been expelled, according to the genius and constitution of the uterus, though frequently it has been found to have undergone great changes, as, for instance, in many cases of hydatids."

"It is remarkable," says the same author, "that women who are in the habit of miscarrying, go on in a very promising way to a certain time, and then miscarry, not once, but for a number of times, in spite of all the methods that can be contrived, and all the methods that can be given; so that, besides the force of habit, there is sometimes reason to suspect that the uterus is incapable of distending beyond such size, before it assumes its disposition to act, and that it cannot be quieted till it has excluded the ovum. What I am about to say, will not, I hope, be construed as giving a license to irregularity of conduct, which may often be justly assigned as the immediate cause of abortion, or lead to the negligent use of those means that are likely to prevent it. But from the examination of many ova after their expulsion, it has appeared that their longer retention could not have produced any advantage, the fœtus being decayed, or having ceased to grow long before it was expelled. Or the ovum has been in such a state as to become wholly unfit for the purpose it was assigned to answer: so that if we could believe there was a distinct intelligence existing in every part of the body, we should say it was concluded in council that this ovum can never come to perfection, and shall be expelled."

The causes of abortion of a constitutional or accidental kind are more obvious. They may be internal and depend upon a relaxed or debilitated state of the system generally, and consequently of the uterus as a part of it; or external, and depend on adventitious circumstances. Violent pressure, as that of tight stays, by preventing the uterus from duly enlarging, is an obvious cause, as is also that of a sudden shock by a fall, or a blow on the abdomen. Violent exertion of every kind is a cause not less obvious, as that of immoderate exercise in dancing, riding, or even walking; lifting heavy weights; great straining to evacuate the fæces, or too frequent evacuations from a powerful purgative. Violent excitement of the passions; as of terror, anxiety, sorrow, or joy. Violent excitement of the external senses by objects of disgust, whether of sight, sound, taste, or even smell; or whatever else tends to disturb or check the circulation suddenly, and hereby to produce fainting, will often prove a cause of abortion. And when once this affection has been produced, the organs with difficulty recover their elasticity, and it is extremely apt to recur upon the slightest causes. Plater gives us an account of fourteen miscarriages in succession; Werlhoff, of five within two years; and Werloschnig, of not less than eight in a single year. Wolfius relates the history of a woman, who, in the whole course of her life, suffered twenty-two distinct abortions; and Schultz, that of another, who, in spite of every remedy, miscarried twenty-three times, and uniformly in the third month, probably from an indisposition in the uterus to become distended further, as suggested in similar cases by Dr. Denman, in the passage just quoted from him.

Another, and a very frequent cause, is plethora, whether it be from increased or diminished energy. "The uterus," observes Mr. Burns, "being a large vascular organ, is obedient to the laws of vascular action, whilst the ovum is more influenced by those regulating new formed parts; with this differ-

ence, however, that new formed parts or tumours are united firmly to the part from which they grow by all kinds of vessels, and generally by fibrous or cellular substance; whilst the ovum is connected to the uterus only by very tender and fragile arteries and veins. If, therefore, more blood be sent to the maternal part of the ovum than it can easily receive, and circulate and act under, a rupture of the vessels will take place, and an extravasation and consequent separation be produced: or even where no rupture is occasioned, the action of the ovum may be so oppressed and disordered as to unfit it for continuing the process of gestation."

Now, in atonic plethora, or that commonly existing in high and fashionable life, among those who use little exercise, live luxuriously, and sleep in soft warm beds, although the action that accompanies the pressure is feeble compared with what occurs in the opposite state, the vessels themselves are feeble also, and their mouths and tunics are exceedingly apt to give way to even a slight impetus: and hence plethora becomes a frequent cause of abortion in women of a delicate habit and unrestrained indulgence.

Among the robust and the vigorous, however, its mode of operation is still more obvious and direct. An increased flow of blood is here forced urgently on the uterus, which participates irresistibly in the vehemence of the action; so that if the vessels do not suddenly give way, and hemorrhage instantly occur, the patient feels a tensive weight in the region of the uterus, and shooting pains about the pelvis. "This cause," observes Mr. Burns, "is especially apt to operate in those who are newly married, and who are of a salacious disposition, as the action of the uterus is thus much increased, and the existence of plethora rendered doubly dangerous. In these cases, whenever the menses have become obstructed, all causes tending to increase the circulation must be avoided, and often a temporary separation from the husband is indispensable."

The general treatment of abortion consists of two intentions:

1. That of preventing it when it threatens.

2. That of safely leading the patient through it when there is little doubt that it has taken place.

The chief symptoms menacing abortion are transitory pains in the back or hypogastric region, or a sudden hemorrhage from the vagina. In all these cases, the first step to be taken is a recumbent position; and when the patient is once placed in this state, we should deliberately examine into the nature of the cause. If there be symptoms of plethora, or oppression, if an accident, or a sudden emotion of the mind, or severe exercise, as of dancing, riding, or even walking, have produced them, by disturbing the equilibrium of the circulating system, blood should be immediately taken from the arm, and all irritation removed from the bowels by a gentle laxative or injection. In plethora, indeed, we may go beyond this, and empty the bowels more freely; yet even here our object should be to reduce without weakening. In every instance, except where plethora prevails, after abstracting blood, the next best remedy is a full dose of opium, consisting of thirty or forty drops of laudanum, or more if the symptoms be urgent, and repeated every three or four hours till the object is obtained. And where the system is so feeble or emaciated that bleeding is counter-indicated, we must content ourselves with giving sulphuric acid with small doses of digitalis, unless, indeed, there be much tendency to sinking at the stomach, and, in this case, we must limit our practice to the mineral acid and opium, and gently relieving the bowels.

By this plan the pains originating from incidental causes are often checked, and the partial separation of the ovum that has commenced is put a stop to. But the remedial process is thus far merely begun; the patient, for some weeks, must be peculiarly attentive to her diet, which should be light and sparing, and if exercise of any kind be allowed, it should be that of swinging, or of an easy carriage. Cold bathing, and especially cold sea-bathing, is of great importance; and where these cannot conveniently be had, a cold hip or shower bath may be employed in their stead; and if there should still be the slightest issue of blood from the vagina, injections of cold water, or of a solution of alum, or sulphate of zinc, should be thrown up the passage two or three times a-day; or an icicle or a snow-ball be employed as a pessary.

If the habit be peculiarly vigorous and robust, stimulants and softness of bed-clothes must be carefully avoided, and the downy couch be exchanged for a hard mattress. But if the constitution be delicate and emaciated, two or three glasses of wine may be allowed daily, and a course of cascarilla, cusparia, or cinchona, columba, or some other bitter tonic should be entered upon. In either case, however, it is absolutely necessary that sexual connection should be abstained from for ten days or a fortnight.

It has of late been very much the custom to confine women of a very delicate frame, and especially after they have once miscarried, to a recumbent position, from the first symptom of conception, through the whole term of gestation. In a few cases this may be a right and advantageous practice, but in the present day it is employed far too indiscriminately. Among the causes of abortion we have just enumerated, there are many it can never touch, as where the ovum itself is at fault, or there is a natural indisposition in the uterus to expand beyond a certain diameter. In this last case, if we could be sure of it, a tepid hip-bath employed every evening

about the time the abortion is expected would be a far more likely means of preventing it: for we should act here as in all other affections where our object is to relax and take off tension, in which states we uniformly employ warmth and moisture, commonly, indeed, a bread and water poultice. And hence, in the instance before us, one of the best applications we could have recourse to would be a broad swathe of flannel, moistened with warm water, and applied round the loins and lower belly every night on going to bed, surrounded externally with a dry swathe of folded linen. This should be worn through the whole night, and continued for a fortnight about the time we have reason to expect a periodical return of abortion from the cause now alluded to.

In the case of a delicate and relaxed frame, and of a mind that has no objection to confinement, it is well worth consideration whether the ordinary means of augmenting the general strength and elasticity by such tonics as are found best to agree with the system, and such exercises as may be taken without fatigue; particularly any of those kinds of motion which the Greeks denominated æora, as swinging or sailing, riding in a palanquin, or in a carriage with a sofa-bed or hammock, which, instead of exhausting, tranquillise and prove sedative, retard the pulse, produce sleep, and calm the irregularities of every irritable organ, — may not be far more likely to carry the patient forward, than a life of unchanging indolence and undisturbed rest, which cannot fail to add to the general weakness, how much soever the posture it inculcates may favour the quiet of the uterus itself.

We have thus far supposed that there is a mere danger of abortion, and that the symptoms are capable of being suppressed. But if the pains, instead of being local and irregular, should have become regular and contractile before medical assistance is sought for, or should have extended round the body, and been accompanied with strong expulsory efforts, and particularly if, in conjunction with those, there should have been a considerable degree of hemorrhage, our preventive plan will be in vain, a separation has unquestionably taken place, and to check the descent of the detached ovum would be useless if not mischievous. Even though the pains should have ceased we can give no encouragement, for such a cessation only affords a stronger proof that the effect is concluded.

If the discharge continue, but in small quantity, it is best to let it take its course; to confine the patient to a bed lightly covered with clothing, and give her five and twenty or thirty drops of laudanum. Bleeding is often had recourse to with a view of affecting a revulsion: it is uncalled for, however, and may do mischief by augmenting the weakness.

But the practitioner often arrives when the discharge is in great abundance and amounts to a flooding; and the patient is faint and sinking, and appears ready to expire.

To the inexperienced these symptoms are truly alarming, and, in a few instances, sudden death appears to have ensued from the exhaustion that accompanies them. But these are very uncommon cases, for it rarely happens that the patient does not recover in an hour or two from the deliquium: and even the syncope itself is one of the most effectual means of putting a check to the discharge, by the sudden interruption it gives to all vascular action. Cold, both external and internal, is here of the utmost importance; the bed-curtains should be undrawn, the windows thrown open, and a sheet alone flung over the patient; while linen wrung out in cold water, or ice-water, should be applied to the lower parts of the body, and renewed as its temperature becomes warm: withholding the application, however, as soon as hemorrhage ceases.

Injections should, in this case, be desisted from; for the formation of clots of blood around the bleeding vessels should be encouraged as much as possible, instead of being washed away. And for this reason it is now a common practice to plug the vagina as tight as possible with sponge or folds of linen, or what is better, a silk handkerchief, smeared over with oil, that they may be introduced the more easily, and afterwards to confine the plug with a T bandage. This plan has been long recommended by Dr. Hamilton, and has been extensively followed with considerable success. Here, also, Dr. Hamilton prescribes large doses of opium as an auxiliary, beginning with five grains, and continuing it in doses of three grains every three hours, till the hemorrhage has entirely ceased. Opium, however, is given with most advantage where the flooding takes place after the expulsion of the ovum; for if this have not occurred, its advantage may be questioned, since it has a direct tendency to interrupt that muscular contraction without which the ovum cannot be expelled. And it should be farther observed, that where opium is had recourse to in such large doses as are above produced, it must not be dropped suddenly, for the most mischievous consequences would ensue; but must be continued in doses, gradually diminishing, till it can at length be omitted with prudence.

If the flooding occur after the sixth or seventh month, and the debility be extreme, the hand should be introduced into the uterus as soon as its mouth is sufficiently dilated, and the child turned and brought away. And if, before this time, a considerable degree of irritation be kept up in the womb from a retention of the fœtus, or any considerable part of the ovum after its separation, one or two fingers should also be introduced for the purpose of hooking hold of what remains, and bringing it away at once. Such a retention

is often exceedingly distressing, the dead parts continuing to drop away in membranous or filmy patches for several weeks, intermixed with a bloody and offensive mucus. And not unfrequently some danger of a typhus fever is incurred from the corrupt state of the unexpelled mass. In this case, the strength must be supported with a nutritious diet, a liberal allowance of wine, and the use of the warm bitters, and mineral acids. It is also of great importance that the uterus itself be well and frequently washed with stimulant and antiseptic injections, as a solution of alum or sulphate of zinc, a decoction of cinchona or pomegranate bark, a solution of myrrh or benzoin, or, what is better than any of them, negus made with rough port wine. The injection must not be wasted in the vagina, but pass directly into the uterus; and, on this account, the syringe must be armed with a pipe made for the purpose, and of sufficient length.

The application of cold, then, plugging the vagina, opium, and perfect quiet, and where the pulse is full, venesection, are the chief remedies to be employed in abortions, or threatenings of abortion, accompanied with profuse hemorrhage; and where these do not succeed, and especially after the sixth month, immediate delivery should be resorted to. The process, however, of applying cold should not be continued longer than the hemorrhage demands; for cold itself, when in extreme, is one of the most powerful sources of sensorial exhaustion we are acquainted with.

We have said that the hemorrhage which takes place in abortions, however profuse, is rarely accompanied with serious effects. This, however, must be limited to the first time of their taking place; for if they recur frequently in the course of a single gestation, or form a habit of recurrence in subsequent pregnancies, the blood, from such frequent discharges, loses its proper crasis; the strength of the constitution is broken down; the sensorial fluid is secreted in less abundance, perhaps in less energy; and all the functions of the system are of consequence performed with a considerable degree of languor. The increasing sensorial weakness produces increasing irritability: and hence slighter external impressions occasion severer mischief, and the patient becomes subject to frequent fits of hysteria, and other spasmodic affections. Nor is this all; for the stomach cannot digest its food, the intestines are sluggish, the bile is irregularly secreted, the heart acts feebly; and the whole of this miserable train of symptoms is apt to terminate in dropsy. — *Good.*

ABORTIVE. (*Abortivus*; from *aborior*, to be sterile.) 1. In *Pathology*, that which is capable of occasioning an abortion, or miscarriage.

2. In *Botany.* Barren. Flowers or florets which produce no perfect seeds.

The abortive flowers are generally such as have stamens, but no pistils; these are also called male flowers. Flowers which have only pistils are sometimes abortive, owing to the absence of other flowers which bear the stamens. In the umbelliferous, it is not uncommon to have several of the florets barren, though they are furnished both with stamens and pistils; perhaps owing to some imperfection in the pistils. — *Withering.*

ABORTUS. (*us, ûs.* m.) A miscarriage.

ABRA'SION. (*Abrasio, onis.* f.; from *abrado*, to tear off.) This word is generally employed to signify the destruction of the natural mucus of any part, as the stomach, intestines, urinary bladder, &c. It is also applied to any part slightly torn away by attrition, as the skin, &c.

ABRASITE. A mineral, called also *Zeagonite* and *Gismondine*, of a greyish white colour, found in semiglobular masses in the cavities of volcanic rocks, with calcareous spar, at Cape de Bovi, near Rome.

A'BRATHAN. Corrupted from abrotanum, southernwood. See *Artemisia abrotanum.*

A'BRETTE. See *Hibiscus abelmoschus.*

A'BRIC. An Arabic term for sulphur.

ABRO'MA. (*a, atis.* n.; from α, neg. and βρωμα, food: *i. e.* not fit to be eaten.) The name of a genus of plants in the Linnæan system. Class, *Polyadelphia;* Order, *Dodecandria.* — There are two species of *abroma*, which are but little known.

ABRO'TANOIDES. (From Αϐροτανον, and ειδος, resemblance.) Abrotanum-like.

1. Applied to the Artemisia, Protea, Seriphium, and those plants which resemble southernwood.

2. The name of the *Madepora muricata* of Linnæus.

ABRO'TANUM. (*um, i.* n.; from α, neg. and βροτος, mortal; because it never decays: or from αϐρος, soft, and τονος, extension; from the delicacy of its texture.) Common southernwood. See *Artemisia.*

ABROTANUM MAS. See *Artemisia.*

ABROTONI'TES. (From *abrotanum.*) A wine mentioned by Dioscorides, impregnated with *abrotanum*, or southernwood, in the proportion of about one hundred ounces of the dried leaves to seven gallons of must.

ABRUM. Amber.

ABRUPTUS. Abrupt: applied to pinnate leaves which terminate without an odd leaf or lobe.

ABRUS. (*us, i.* m.; from αϐρος, soft or delicate: so named from the extreme tenderness of the leaves.) 1. The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

2. The name of the seed of a species of *Phaseolus*, called the Angola seed.

ABSCEDE'NS. (From *abscedo*, to separate.) A decayed part of the body which is separated from the sound.

ABSCESS. (*Abscessus, ûs.* m.; from *abscedo*, to depart: so called, because the parts

which were before contiguous become separated, or depart from each other. — See *Apostema*.) An abscess, called likewise *Abscessio, Imposthuma, Apostasis,* begins by an inflammation in the cellular membrane, or fleshy parts, which is attended by obtuse or acute pain; the part soon becomes tumid, and the tumour spreads, becomes painful to the touch, pus forms in it, and a fluctuation is perceived. In whatever part an abscess is seated, it will sometimes spread to a wonderful extent, and be loaded with a prodigious quantity of pus. In all such cases, the first stage of inflammation must have been overshot by the violence of the action, or from some other cause, and the suppurative and ulcerative have commenced simultaneously from the first. For otherwise the coagulable, or, as Mr. Hunter prefers to call it, the coagulat*ing* lymph thrown forth, into the cellular membrane in the earliest stage of the inflammation, would have formed a boundary wall by the production of new vessels and reticulations, much nearer to the salient point of the inflammatory action, and confined the secretion of pus to a much narrower limit.

The secretion of coagulable lymph, and the reticulate adhesion and formation of new vessels which issue from it, is indeed designed to prevent the necessity of the suppurative and ulcerative stages of inflammation; and the natural cure of the adhesive stage is by resolution.

When, therefore, an abscess takes place in a healthy frame, or, in other words, when the inflammation passes into the two ensuing stages of the suppurative and ulcerative, and pus is formed, and a cavity scooped out for its reception, we are to take it for granted that the instinctive and remedial power of nature is incapable of producing a cure by the first intention; that some dead part or extrinsic substance is required to be removed; and that the two ensuing stages of inflammation are had recourse to for this purpose.

In the formation, then, of an abscess in a healthy constitution, we are to suppose that some part of the organ in which inflammation occurs, as, for example, some cellular membrane, or piece of a muscle, is become dead, and an incumbrance to the living parts that surround it, instead of assisting in their office. In effecting, therefore, the important object of a cure, it is obvious that two distinct actions are necessary; the dead part must be carried off, and its part must be filled up by a substitute of new matter possessing the precise properties of the old. And in the process which takes place to accomplish these two purposes, we meet with another clear and striking instance of that wonderful instinctive power which pervades every portion, both of the animal and the vegetable world, and which is perpetually stimulating them to a repair of whatever evils they may encounter, by the most skilful and definite methods.

In order to comply with this double demand, of carrying off the dead matter, and of providing a substitute of new, the absorbent and the secernent vessels in the living substance that immediately surrounds that which requires to be removed, commence equally, and nearly at the same time, a new mode and a new degree of action. A boundary line is first instinctively drawn between the dead and useless, and the living and active parts; and the latter retract and separate themselves from the former. This process being completed, the mouths of the surrounding absorbent vessels set to work with new and increased power, and imbibe and carry off whatever the material may be of which the dead part consists, whether fat, muscle, ligament, cartilage, or bone; the whole is equally sucked up and taken away, and a hollow is produced where the dead substance existed.

While this is proceeding, the mouths of the corresponding secernent vessels from the first, and perhaps somewhat antecedently, commence a similar increase and newness of action; and, instead of the usual fluid, pour forth into the hollow a soft, bland, creamy, and inodorous material, which progressively fills up the cavity, presses gradually against the superincumbent skin in the gentlest manner possible, distends and attenuates it, and at length bursts it, and exposes the interior to the operation of the gases of the atmosphere. From this period the process of incarnation commences: granulations of new living matter pullulate on every side, assimilating themselves to the nature of the different substances that are lost, till the hollow is sufficiently filled up, and the organisation completely regenerated.

On the bursting of an abscess externally, we occasionally find that a portion of the dead matter still remains, which is, afterwards, gradually sloughed away, or is thrown off by a separation at its base. This is particularly the case in furuncles or boils; and still more strikingly so in large abscesses that include bones or the tendinous parts of muscles which are more difficult of absorption, though even these are sometimes absorbed, and completely carried off.

The attenuation of the superincumbent integuments of an abscess appears to be produced by the stimulus of distension occasioned by the pressure of the accumulating pus. And it is to the same stimulus that Mr. Hunter resolves the absorption of the dead matter itself, conceiving that for this purpose the secretion of the pus commences somewhat earlier than the absorbent process.

The formation of pus, and consequently the existence of an abscess, is evidenced by a cessation of the pain of distension, which gives way to a throbbing pain, synchronous

with the dilatation of the arteries; and by irregular shiverings, and sometimes rigor. After a few days, a weight is felt in the part, the throbbing pain itself subsides, the tumour becomes soft, and if it point sufficiently towards the surface, fluctuates to the touch.

There is some doubt to whom we are indebted for the first insight into this wonderful process; for it was taught at the same time, or nearly so, on the Continent, by De Haen, Plenciz, and Schreder, and in our own country by Hewson, Hunter, Home, Cruikshank, and Professor Morgan: but, upon the whole, Mr. Hewson appears to have taken the lead, and the rest to have followed closely in his steps. Antecedently to which period, pus, instead of being a peculiar secretion, was supposed to consist in a dissolution of the blood-vessels, nerves, muscles, and other solids, in the ordinary exhaling fluid, when augmented by effusion; or in a conversion of the serum, thrown forth on the occasion, into the new matter, by a change effected in its gluten during its state of stagnation: the first of which hypotheses was that of Boerhaave, Platner, and almost all who practised antecedently to their time; and the second that of M. Gaber and Sir John Pringle.

These conjectures were ingenious, but they were nothing more; and their errors are sufficiently pointed out in the "Experimental Inquiries" of Mr. Hewson, to whom physiology, and especially the science of morbid anatomy, is almost as much indebted as to any person whatever. He travelled with a comprehensive mind, and a zealous and indefatigable step, in what was at that time new and untried ground; and though he was mistaken in a few points, he correctly explored much, and, by the course he laid down, indicated to his successors the truest methods both of confirming his facts and correcting his misconceptions.

He proved decidedly that pus is a peculiar secretion, and that it is often, indeed, secreted where there is no abscess or breach of surface; and he ingeniously accounted for its production by supposing it to be formed out of the coagulable lymph by a new power given to the secernent vessels in consequence of the inflammatory action. "And if pus," says he, 'in these cases, is produced merely by a secretion, so likewise it would seem probable, that, even in abscesses, where there is a loss of substance, it is not the melting down of the solids that gives rise to the pus, but the pus being secreted into the cellular membrane from its pressure, and from other causes, *deadens the solids, and then dissolves* them."

This idea of the solids contained in an abscess being deadened and dissolved by the pus which surrounds them, in the ordinary sense of the expression (for in one sense, as will appear hereafter, they may be said to be dissolved), was one of the erroneous opinions of Mr. Hewson, and originated from too close an adherence to the earlier and still more mistaken hypotheses just noticed.

And hence, with all his ingenuity, Mr. Hewson advanced not much more than half way in explaining the entire economy of suppurative inflammation. It remained for the exploring eye and commanding genius of Mr. Hunter to penetrate through a considerable portion of the remaining half of this curious process, and to prove that the solid parts contained in the area of an abscess, instead of being deadened by the pressure of the surrounding pus, are dead beforehand, destroyed indeed by the violence of the accident, or of the inflammation; and that, instead of being merely dissolved in the circumambient pus, they are absorbed and carried off by a new and increased action of the circumambient absorbents; thus showing, that even ulceration itself, when of a healthy kind, is only another link in the restorative chain of nature made use of on this occasion.

The greater part of this nice fabrication is rendered so clear in Mr. Hunter's admirable work on inflammation, and his arguments and his facts have been so fully confirmed, and so abundantly exemplified by later physiologists, and particularly by Mr. Cruikshank, in his valuable treatise on the absorbents, as to remove every doubt upon the subject in the minds of the great body of the profession.

That pus, instead of being a mere solution of dead animal matter, is a distinct and peculiar secretion, is now known to most practitioners from personal observation; who must have witnessed it repeatedly in situations in which there has been no ulceration or breach of structure, and consequently where there could be no dead animal matter to dissolve.

It was noticed in this form by De Haen so far back as the middle of last century; and was pointed out by Mr. Hewson as frequently found, on dissections, on the surface of the pleura, the peritoneum, the pericardium, in a perfectly genuine state. A very decided case, to which both Dr. Hunter and Mr. J. Hunter were witnesses, was published by Mr. Samuel Sharp, about the same time that De Haen first brought the subject before the public. Nothing is more common or more copious than the secretion of pus without ulceration in the first stage of purulent ophthalmy, and in purulent inflammation of the mucous membrane of the glans penis.

Genuine pus is peculiary distinguished by its consisting of white globules swimming in a fluid, which to the eye has the appearance of serum, but possesses characters of its own, equally different from those of serum and of every other secretion we are acquainted with; and which render

it coagulable in a saturated solution of muriate of ammonia, which is its specific test. Pus, however, is not globular at its first formation, but a transparent fluid of a consistence in some sort resembling jelly; the globules are produced while it lies on the surface of the sore, usually, when not exposed to external air, in about fifteen minutes after its secernment. The perfection of pus seems to depend upon the large proportion which its globules bear to its other parts. It is specifically heavier than water, and approaches nearly to that of blood. It has a sweetish, mawkish taste, very different from that of most other secretions. After putrefaction, it evinces an acid. Dr. Bruggmans, who has analysed it with much care, asserts that it has an acid also before putrefaction; but this has been denied by Sir Everard Home. For a further account of its chemical properties, the reader may consult Dr. Pearson's elaborate paper on this subject in the Philosophical Transactions.

In the process of the natural cure of an abscess, we find that the stage of granulation, and consequently of incarnation, immediately succeeds that of ulceration, or the removal of the dead matter. "The vessels," says Mr. Hunter, "forming themselves into a certain structure which fits them for secreting pus, it is so ordered that the same structure also fits them for producing granulations; and thus these two processes are concomitant effects of the same cause, which cause is a peculiar organisation superadded to the vessels of the part."

The idea of a change of organisation is hypothetical, but ingenious, and perhaps correct. Change of action and change of effect we know; but at the rest we can at present only give a guess, and must leave it to future times to ascertain.

The obvious design of granulation or incarnation, as it is often called, is that of repairing the loss the parts have sustained by the injury done: it is that of producing new flesh. Granulation, like vegetation, takes place from the centre below, in a direction upwards towards the skin; and hence exactly contrary to the course of ulceration, which always begins in the superior part of an abscess. The process commonly succeeds best upon exposure to the air, or at least after an opening externally; though there are instances of its having occurred where there has been no exposure whatever. The granulating pullulations, according to Mr. Hunter's explanation, consist of exudations of coagulating lymph from the vessels. He conceives it probable not only that the old vessels extend into these pullulations and become elongated, but that new vessels also form in them, and, like the old, still continue to secrete pus. The granulations, as they become formed, mutually and readily unite; inosculation, or the attraction of cohesion, is established between them; and their vessels, thus joined, are transformed from secreting into circulating tubes. Immediately upon their formation, cicatrisation seems to be in view. The parts which had receded, in consequence of a breach being made into them, begin now, from their natural elasticity, and probably from muscular contraction, to be brought together by the new-created substance; and the contraction of the sore proves a sign that cicatrisation is speedily about to follow. This contraction takes place in every point, but principally from edge to edge, which brings the circumference of the sore towards the centre: so that the exposed surface becomes smaller and smaller, even before there is any formation of a new skin.

There are two parts, at least, of this wonderful economy that still demand explanation. The first is the real use of the pus after it is secreted; and the second, the means by which the absorbents carry off the dead matter. The same explanation may perhaps apply to both.

That pus is a peculiar secretion distinguished by peculiar properties, and not a solution of the dead animal matter which it is the design of nature to remove, has already been sufficiently shown. "But I am apt to believe," says Mr. Hunter, "that we are not yet well, or perhaps not at all, acquainted with its use; for it is common to all sores; takes place in the most perfect degree in those sores which may be said to be the most healthy, and especially in those where the constitution is most healthy." It forms, indeed, an exit to foreign bodies; is supposed by many to carry off humours from the constitution, or convert general into local complaints; and by others to act as a preventive of numerous diseases. Yet all these services, even admitting them to exist, are but secondary, and the final intention still remains to be accounted for.

In like manner, since the dead matter of an abscess does not constitute the pus that is found in it, and hence can only be carried off by absorption, we have yet also to learn by what means it becomes prepared for an entrance into the delicate mouths of the absorbent vessels. There is no small difficulty in conceiving how these very minute mouths can apply themselves with sufficient activity to the various tough and hard substances they have to remove, as tendon and bone, when in close contact with them; but, as soon as the dead part becomes separated from the living, they are often no longer in close contact with them, except at the base, where there is little or no absorption at all; and in many cases, as in boils, carbuncles, and other imperfectly suppurating tumours, possessing cores or tenacious sloughs, are at a considerable distance from them, with the entire body of the contained pus placed intermediately in the hollow.

In the last case it seems impossible for

them to act except through the medium of the pus; in reality, except through a solvent power possessed by the pus, and exercised upon the matter to be removed. And if such be the nature of the action in this case, it is doubtless the nature of the action in all other cases: and hence we arrive at one immediate and direct use of pus, which is, that of becoming a solvent of the dead animal matter that requires to be carried off; not, indeed, by converting the whole substance at once into a fluid mass, and still less into a fluid mass of its own nature, as supposed by Sir John Pringle, but only the surface of the substance to which it is applied, and which hereby is rendered fit for absorption, carried forward to the mouths of the imbibing vessels, and absorbed accordingly. And as the same power is exerted in succession upon every fresh surface of the dead matter that becomes exposed to its action, the whole is at length carried away, and a cavity produced where before was solid substance.

That pus first kills and then dissolves the organised matter of an abscess, was, as we have already seen, the opinion of Mr. Hewson. In the first part of this opinion he was completely mistaken; for, as we have already observed, the organised matter is dead before the process of suppuration even commences; in the second, he seems to a certain extent to have been correct, though he still erred in supposing the dead substance to be melted down into its own nature, and was unacquainted with the important process of its absorption. But in advancing his own full and more elaborate hypothesis against the mistakes of Mr. Hewson's, Mr. Hunter ran into the opposite extreme; and contended, that pus is not designed to be a solvent at all, and that animal substances are decomposed in it with very great difficulty: thus leaving us totally at a loss to account for its use; and equally so to explain the manner in which the mouths of the absorbents of an abscess can operate upon, or even, in many instances, get at the material they are to remove.

Mr. Hunter, however, with the candour that so peculiarly belonged to him, made this question a subject of experiment, and the experiment, as he conceived, fully established his preconceived opinion: and gave proof that the pus of an abscess does not act as a solvent. This conclusion of his only shows how difficult it is for the most honourable mind, when biassed by a favourite hypothesis, to weigh with an even hand the evidence that lies before it. "To see," says he, "how far the idea was just, that dead animal matter was dissolved by pus, I put it to the trial of experiment, because I could put a piece of dead animal matter of a given weight into an abscess, and which could at stated times be weighed. To make it still more satisfactory, a similar piece was put into water, kept to nearly the same heat. They both lost in weight; but *that in the abscess most.* And there was also a difference in the manner, for that in the water *became soonest putrid.*" There is nothing in animal chemistry, strictly so called, that decomposes animal substances so rapidly as putrefaction. And yet, in the present instance, the pus of an abscess evinced a more active decomposing power than the fluid of water, though aided by the accessions of putrefaction. It is not very wonderful that Mr. Hunter, though regarding this result as in his favour, should not be disposed to "rely on its accuracy;" and he refers us, therefore, for a further proof, to a more competent experiment of Home, which consisted in immersing a portion of muscle weighing exactly one drachm, "in the matter of a compound fracture in the arm of a living man, and a similar portion into some of the same matter out of the body; also a third portion into fluid calfs-foot jelly, in which the animal substance was pure, having neither wine nor vegetables mixed with it. These portions of muscle were taken out every twenty-four hours, washed in water, weighed, and returned again."

The result of this experiment is still more in favour of the solvent power of pus than the preceding. At the end of forty-eight hours there was indeed no great difference, as the muscle in the abscess was reduced to thirty-eight grains, and that in the other two fluids to thirty-six. But from this period to ninety-six hours the muscle in the jelly continued the same, while that in the abscess was reduced to twenty-five grains, and that in the exposed pus dissolved; the power of putrefaction, as Mr. Hunter observes, being in this last case superadded to that of the pus itself.

We hardly stand in need of other experiments. The solvent power of pus above that of water, of animal jelly, and hence we may conclude of animal fluids in general, is sufficiently established by the very evidence that is advanced in opposition to this power. And it should hence seem, that one at least of the direct uses of pus is to reduce, surface after surface, the dead animal matter which is exposed to its action, to that state in which it may be rendered fit for absorption, and at the same time conveyed to the mouths of the absorbent vessels.

But it has also another equally important use; that of assisting in the process of granulation: and a late article of Sir Everard Home in the Philosophical Transactions, containing the observations of Mr. Bauer upon the germination of plants, and his application of those observations to the growth of the new vessels in animals, seems, if not to have settled the question, at least to have very considerably favoured this view of it.

Having sown a quantity of wheat for the purpose of noticing the changes which occurred from the first, Mr. Bauer took up

every day several grains or plants for examination, till they were ripe; and in the course of his attention, was much struck with the rapid increase of the tubular hair of the root of a young plant of wheat in its earliest stage of vegetation; and, fixing his view entirely to that part of the plant, he observed small pustules of a slimy substance arising under the epidermis in the surface of the young root, and in a few seconds a small bubble of gas bursting from the root into the slimy matter which it extended in a moment to the length the hair was to acquire, when the slimy matter surrounding the gas immediately coagulated and formed a canal. He repeated his observations on another plant, whose pubescence consisted of a jointed hair, and observed the same effect; a bubble issued from the young stalk, and extended the slimy mucus to a short distance, forming the first joint, which immediately coagulated and became transparent; and at its extremity a new pustule of the same slimy matter accumulated, into which, in a short time, the gas from the first joint rushed: and thus, in a moment, a second joint was formed. In the same manner he observed the formation of the hairs of ten or twelve joints take place.

Impressed with the importance of these facts, Sir Everard Home immediately began to enquire how far the same course is pursued in the production of new animal matter. He first ascertained, by experiments of Mr. Brande, that blood in a state of circulation contains a considerable proportion of air, which, in the process of its coagulating, escapes in the form of carbonic acid gas, and in its escape produces bubbles as in the slime of plants; and that it escapes equally from the coagulating blood of veins and arteries from effused serum and from pus. And in pursuing the subject, he found that, on the coagulation of a drop of blood placed in the field of a microscope, an intestine motion occurred, and a disengagement of a something took place in different parts of the coagulum; beginning to show itself where the greatest number of globules were collected, and from thence passing in every direction with considerable rapidity through the serum, but not at all interfering with the globules themselves, which had all discharged their colouring matter. Wherever this extricated colouring matter was carried, a network immediately formed, anastomosing with itself on every side through every part of the coagulum. When the parts became dry, the appearance of a net-work remained unaltered. In some instances, bubbles were seen to burst through the upper surface of the coagulum: this however did not prevent the ramifications that have been described from taking place. "When this happens," continues Sir Everard, "in living animal bodies, from whatever cause, and in whatever circumstances it takes place, no difficulty remains in accounting for its afterwards becoming vascular, since all that is necessary for this purpose is the red blood being received into the channels of which this network is formed." He next proceeded to the subject immediately before us. "As the globules of pus," says he, "are similar to those of blood, I made experiments upon the fluid in which they are suspended, and found inspissation produce the same effect on it as coagulation does on the other; that a similar net-work is formed and apparently by the same means, since, if pus be deprived of its carbonic acid gas (of which it contains a large quantity) by exhaustion in the air-pump, no such net-work takes place."

Additional experiments are still necessary upon this interesting subject; but so far as they go, they seem very clearly to indicate the important and double use to which pus is subservient; that it acts as a solvent upon the dead matter, preparing it for absorption, and as a fomes for granulation and the production of new vessels.

Nor let it be observed, in opposition to this conclusion, that we are thus endowing it with incongruous and contrary qualities; and that if it be erosive in the one instance, it cannot be nutrient in the other; for the animal economy presents us with various examples of like effects, contrary, indeed, but not contradictory, produced by one and the same secretion on dead and on living matter, for which we need go no further than to the very common operation of the gastric juice, which, while the most powerful solvent of dead animal matter in the whole range of animal chemistry, is a healthy stimulant to the living stomach, and even to other living organs, and has successfully been applied externally for this purpose by surgeons to weak and ill-conditioned ulcers, and employed by physicians as an internal tonic in cases of dyspepsy and cardialgia.

Abscessus adenosus. A hard gland-like abscess.

ABSCI'SSION. (*Abscissio;* from *ab*, and *scindo*, to cut.) 1. The cutting away some morbid, or superfluous part, by an edged instrument. The abscission of the prepuce is called circumcision.

2. Abscission was formerly used by medical writers to denote the sudden termination of a disease in death, before it arrives at its decline.

3. Celsus frequently uses the term *abscissa vox* to express a loss of voice.

Absco'nsio. (From *abscondo*, to hide.) A sinus or cavity of a bone, which receives and conceals the head of another bone.

Absence of mind. See *Alphexia.*

Absinthites. Absinthiac or absinthiated. Something tinged or impregnated with the virtues of absinthium.

ABSI'NTHIUM. (*um, ii.* n. Αψινθιον; from α, neg. and ψινθος, pleasant: so called

from the disagreeableness of the taste.) Wormwood. See *Artemisia.*

ABSINTHIUM COMMUNE. Common wormwood. See *Artemisia absinthium.*

ABSINTHIUM MARITIMUM. Sea wormwood. See *Artemisia maritima.*

ABSINTHIUM PONTICUM. Roman wormwood. See *Artemisia pontica.*

ABSINTHIUM ROMANUM. See *Artemisia pontica.*

ABSINTHIUM SANTONICUM. See *Artemisia santonica.*

ABSINTHIUM VULGARE. Common wormwood. See *Artemisia absinthium.*

ABSO'RBENT. (*Absorbens*; from *absorbeo*, to suck up.) Absorbent. 1. In *Anatomy*, the small, delicate, transparent vessels, which take up substances from the surface of the body, or from any cavity, and carry it to the blood, are termed absorbents, or absorbing vessels. They are denominated, according to the liquids which they convey, lacteals and lymphatics. See *Lacteal* and *Lymphatic.*

2. In *Pharmacy*, medicines which have no acrimony in themselves, and destroy acidities in the stomach and bowels; such are magnesia, prepared chalk, oyster-shells, crab's claws, &c.

3. In *Chemistry*, substances which have the faculty of withdrawing moisture from the atmosphere.

Absorbent earth. See *Absorbent.*

Absorbent vessels. See *Absorbent.*

ABSO'RPTION. (*Absorptio, onis.* f.; from *absorbeo*, to suck up.) 1. In *Anatomy*, a function in an animated body, arranged by physiologists under the head of natural actions. It signifies the taking up of substances applied to the mouths of absorbing vessels. The fluids which are secreted by the different secerning organs (see *Secretion*), and especially those thrown forth to lubricate internal surfaces, would necessarily accumulate, and become inconvenient, if there were not a correspondent set of vessels perpetually at work to carry off the surplus. But such a set of vessels is every where distributed over the entire range of the body, as well within as without, to answer this express purpose: and they are hence called *absorbents*; and from the limpidity of their contained fluid, *lymphatics.*

Their course has been progressively followed up and developed from the time of Asellius, who, in the year 1622, "reaped the first laurels in this field by his discovery of those vessels on the mesentery, which, from their carrying a milk-white fluid, he denominated lacteals," and whose researches were confirmed and extended by the valuable labours of Pecquet, Rudbeck, Jollyffe, Bartholine, Glisson, Nuck, and Ruysch, till, by the concurrent and finishing demonstrations of Hoffman and Mekel, and more especially of our own illustrious countrymen, Hewson, the elder Monro, both the Hunters, and Cruikshank, the whole of this curious and elaborate economy was completely explained and illustrated towards the close of the preceding century, and the opposition of Haller was abandoned.

The vessels of the absorbent system anastomose more frequently than either the veins or the arteries; for it is a general law of nature that the smaller the vessels of every kind, the more freely they communicate and unite with each other. We can no more trace their orifices, excepting, indeed, those of the lacteals, than we can the orifices of the exhalants; but we can trace their united branches from an early function, and can follow them up singly, or in the confederated form of conglobate glands, till, with the exception of a few that enter the right subclavian vein, they all terminate in the common trunk of the thoracic duct, which receives also the tributary streams, the anastomosing lacteals, or the absorbents which drink up the subacted food from the alvine canal, whose orifices are capable of being traced, and pours the whole of this complicated fluid, steadily and slowly, by means of a valve placed for this purpose at its opening, into the subclavian vein of the left side.

By this contrivance there is a prodigious saving of animalised fluids, which, however they may differ from each other in several properties, are far more easily reducible to genuine blood, than new and unassimilated matter obtained from without.

Yet, this is not all; for many of the secretions, whose surplus is thus thrown back upon the system, essentially contribute to its greater vigour and perfection. We have a striking example of this in absorbed semen, which gives force and firmness to the voice, and changes the downy hair of the cheeks into a bristly beard: insomuch, that those who are castrated in early life are uniformly deprived of these peculiar features of manhood. The absorption of the surplus matter secreted by the ovaria, at the same age of puberty, produces an equal influence upon the mammary glands, and finishes the character of the female sex, as the preceding absorption completes that of the male. So, absorption of fat from the colon, where, in the opinion of Sir Everard Home, it is formed in great abundance, carries on the growth of the body in youth.

Absorbents accompany every part of the general frame so closely, and with so much minuteness of structure, that Cruikshank has proved them to exist very numerously in the coats of small arteries and veins, and suspects them to be attendants on the vasa vasorum, and equally to enter into their fabric. Wherever they exist, they are peculiarly distinguished by their very numerous valves, with which they are enriched far more than any other sets of vessels whatever. "A lymphatic valve is a semicircular membrane, or rather of a parabolic shape, attached to the inside of the lymphatic vessels by its circular

edge, having its straight edge, corresponding to the diameter, loose or floating in the cavity: in consequence of this contrivance, fluids passing in one direction make the valve lie close to the side of the vessel, and leave the passage free; but attempting to pass in the opposite direction, raise the valve from the side of the vessel, and push its loose edge towards the centre of the cavity. But, as this would shut up little more than one half of the cavity, the valves are disposed in pairs exactly opposite to each other, by which means the whole cavity is accurately closed."

The distance at which the pairs of valves lie, varies exceedingly. The intervals are often equal, and measure an eighth or a sixteenth part of an inch; yet the interval is at times much greater. "I have seen a lymphatic vessel," says Cruikshank, "run six inches without a single valve appearing in its cavity. Sometimes the trunks are more crowded with valves than the branches, and sometimes I have seen the reverse of this."

In the absorbents, also, we meet with glands; their form is mostly oval, one end being turned to the thoracic duct, and the other from it; but we are in the same kind of uncertainty concerning their use, and, in some measure, concerning their organisation, as in respect to those of the secernent system. The vessel that conveys a fluid to one of these glands is called a *vas inferens*, and that which conveys it away a *vas efferens*. The vasa inferentia, or those that enter a gland, are sometimes numerous; they have been detected as amounting to fifteen or twenty, and are sometimes thrice or oftener as many. They are always, however, more numerous than the vasa efferentia, or those which carry on the fluid towards the thoracic duct. The last are consequently, for the most part, of a larger diameter, and sometimes consist of a single vessel alone. It is conceived by many physiologists, that the conglobate mass which forms the gland consists of nothing more than convolutions of the vasa inferentia; whilst others as strenuously contend that they are a congeries of cells, or acini, totally distinct from the absorbent vessels that enter into them. Whatever their structure may be, they seem to be powerfully auxiliary to the valves, by abating the back force they are unquestionably called at times to encounter from some morbid action, and there is reason to believe that, in this way, like the conglomerate glands of the secernents, they become basins or receptacles.

As in the case of the secernents, we are also unacquainted with the means by which the absorbents act. This, in both instances, is said to be a *vis a tergo*, — a term which gives us little information in either instance, and is peculiarly difficult of comprehension in the latter. In their most composite state they possess a very low degree of sensibility, and are but little supplied with branches from the larger trunks of nerves.

Abstruse, however, as the process of absorption is to us at present, we have sufficient proofs of the fact. Of six pints of warm water injected into the abdomen of a living dog, not more than four ounces remained at the expiration of six hours. The water accumulated in dropsy of the brain, and deposited in the ventricles, we have every reason to believe, is often absorbed from the cavities; for the symptoms of the disease have been sometimes marked, and, after having made their appearance, and been skilfully followed up by remedies, have entirely vanished: and the water in dropsy of the chest, and even, at times, in ascites, has been as effectually removed.

It has been doubted by some physiologists whether there be any absorbent vessels that open on the surface of the body; yet a multitude of facts seem sufficiently to establish the positive side of this question, though it is not fluids of every kind that can be carried from the skin into the circulating system, and hence their power is by no means universal. Sailors who, when in great thirst, put on shirts wetted with salt water, find considerable relief to this distressing sensation. Dr. Simpson, of St. Andrew's, relates the case of a rapid decrease of the water in which the legs of a phrenitic patient were bathed: and De Haen finding that his dropsical patients filled equally fast whether they were permitted to drink liquids or not, did not hesitate to assert that they must absorb from the atmosphere. Spirits, and many volatile irritants, seem to be absorbed more rapidly than water, and there can be no doubt that warmth and friction are two of the means by which the power of absorption is augmented. "A patient of mine," says Cruikshank, "with a stricture in the œsophagus, received nothing, either solid or liquid, into the stomach for two months: he was exceedingly thirsty, and complained of making no water. I ordered him the warm-bath for an hour, morning and evening, for a month: his thirst vanished, and he made water in the same manner as when he used to drink by the mouth, and when the fluid descended readily into the stomach." The aliment of nutritive clysters seems, in like manner, to be often received into the system; and it is said, though upon more questionable grounds, that cinchona, in decoction, has also been absorbed both from the intestines and the skin.

Narcotic fluids rarely enter to any considerable extent, and never so as to do mischief, respecting which, therefore, the power of the cutaneous absorbents is very limited: and there are few poisonous liquids, with the exception of the venereal, that may not be applied with safety to a sound skin.

The double process of secretion and absorption was supposed by the ancients to be

performed, not by two distinct sets of vessels expressly formed for the purpose, but by the peculiar construction of the arteries, or of the veins, or of both. These are sometimes represented as being porous; and hence, as letting loose contained fluids by transudation, and imbibing extraneous fluids by capillary attraction. There is, in fact, something extremely plausible in this view of the subject, which, in respect to dead animal matter, is allowed to be true, even in our own day. For, it is well known that a bladder filled with blood, and suspended in the air, from a cause we shall presently advert to, is readily permeated with oxygen gas, so as to transform the deep Modena hue of the surface of the blood that touches the bladder into a bright scarlet: and thin fluids injected into the blood-vessels of a dead body, transude very generally; insomuch, that glue dissolved in water, and thrown into the coronary veins, will permeate into the cavity of the pericardium, and, by jellying, even assume its figure. And hence it is that bile is often found, after death, to pass through the tunics of the gall-bladder, and tinge the transverse aorta of the colon, the duodenum or the pylorus, with a brown, yellow, or green hue, according to its colour at the time.

The doctrine of porosity or transudation was hence very generally supported, till the time of Hewson, by physiologists of the first reputation. Boyle hence speaks, as Cruikshank has justly observed, of the *porositas animalium*, and wonders that this property should have escaped the attention of Lord Bacon. Even Dr. Hunter and Professor Mekel believed it in respect to certain fluids, or certain parts of the body. The experiments of Hewson, J. Hunter, and Cruikshank, have, however, sufficiently shown that, while vessels, in losing life, lose the property of confining their fluids, they possess this property most accurately so long as the principle of life continues to actuate them.

There is, moreover, another method by which the ancients sometimes accounted for the inhalation and exhalation of fluids, making a much nearer approach to the modern doctrine, and that is by the mouths of vessels; still, however, regarding these vessels as arteries or veins, and particularly the latter. "The soft parts of the body," observes Hippocrates, "attract matter to themselves both from within and from without; a proof that the whole body exhales and inhales." Upon which passage Galen has the following comment: "For as the veins, by mouths placed in the skin, throw out whatever is redundant of vapour or smoke, so they receive, by the same mouths, no small quantity from the surrounding air: and this is what Hippocrates means when he says that the whole body exhales and inhales."

This hypothesis of the absorption of veins, without the interference of lymphatics, has been revived, within the last eight or ten years, by Magendie, and Flandrin, of Paris, who have made an appeal to experiments which appear highly plausible, and are entitled to a critical examination.

The doctrines hereby attempted to be established are, indeed, varied in some degree from those of the Greek schools; and are more complex. In few words, they may be thus expressed: that the only general absorbents are the veins; — that the lacteals merely absorb the food; — that the lymphatics have no absorbent power whatever; — and that the villi in the different portions of the intestinal canal are formed, in part, by venous twigs which absorb all the fluids in the intestines, with the exception of the chyle, which last is absorbed by the lacteals, and finds its way into the blood through the thoracic duct; and that these fluids are carried to the heart and lungs directly through the venæ portæ, whose function it is minutely to subdivide and mix with the blood the fluids thus absorbed, which subdivision and intermixture is necessary to prevent their proving detrimental.

Magendie further supposes that the cuticle has no power of absorption in a sound state, either by veins or lymphatics; but that, if abraided or strongly urged by the pressure of minute substances that enter into its perspirable pores, the mouths of its minute veins are thus rendered absorbent.

He supposes the function of the lymphatics to consist in conveying the finer lymph of the blood directly to the heart, as the veins convey the grosser and purple part: and that they rise, as the veins, from terminal arteries.

Proper lymph, in the system of Magendie, is that opaline, rose-coloured, sometimes madder-red, fluid which is obtained by puncturing the lymphatics or the thoracic duct *after a long fast*. It is every where similar to itself, and hence differs from the fluid of cavities, which is perpetually varying. He supposes the mistake of confounding the two to proceed from a want of attention to this fact.

One of the chief reasons urged for regarding veins as absorbents, is, that membranes which absorb actively have, in his opinion, no demonstrable lymphatics, as the arachnoid. But, according to Bichât, such membranes have no more demonstrable veins than lymphatics: veins are seen to creep on them, but never to enter.

The two principal experiments on which Magendie seems to rely in proof that the veins, and not the lymphatics, are absorbents, are the following: — First, Delille and himself separated the thigh from the body of a dog that had been previously rendered insensible by opium. They left the limb attached by nothing but the crural artery and vein. These vessels were isolated by the most cautious dissection, to an extent of nearly three inches, and their cellular coat was removed lest it might conceal some lymphatic vessels. Two grains of the *upas tieute* were then

forcibly thrust into the dog's paw. The effect of this poison was quite as immediate and intense as if the thigh had not been separated from the body: it operated before the fourth minute, and the animal was dead before the tenth. In the second experiment, a small barrel of a quill was introduced into the crural artery, and the vessel fixed upon it by two ligatures: the artery was immediately cut all round between the two ligatures. The same process took place with respect to the crural vein; yet the poison introduced into the paw produced its effect in the same manner, and as speedily. By compressing the crural vein between the fingers, at the moment the action of the poison began to be developed, this action speedily ceased: it reappeared when the vein was left free, and once more ceased if the vein were again compressed.

These experiments are very striking, and, on a cursory view, may be supposed to carry conviction with them: but the confidence of those who have studiously followed the concurrent experiments, and the clear and cautious deductions of our distinguished countrymen, Hewson, both the Hunters, and Cruikshank, will not so easily be shaken.

We have already observed that lymphatic absorbents, in the opinion of the last of these writers, probably in the opinion of all of them, enter as fully into the tunics of veins and arteries, and even into those of the vasa vasorum, as into any other part of the animal frame: and hence there can be no difficulty in conceiving that the poison employed in these experiments might *accompany* the veins by means of their lymphatics. We also observed that, while the lymphatics anastomose, or run into each other more frequently than any other set of vessels, their valves, which alone prevent a retrograde course, and direct the contained fluid towards the thoracic duct, are occasionally placed at a considerable distance from each other, in some instances not less than six inches, and that this length of interval occurs in the minute twigs as well as in the trunks. And hence, admitting that, in the veins that were cut or isolated in Magendie's experiments, such a vacuity of valves incidentally existed, there is also no difficulty in conceiving by what course the poisons that have already entered into their lymphatics from without, should, in consequence of this frequency of anastomosis and destitution of valves, be stimulated to a retrograde course by the violence made use of, and be thrown into the current of the blood from within, by the mouths of those lymphatics that enter into the tunics of the veins; and particularly as the separated vessels were only isolated to a distance of less than three inches, while the lymphatics are occasionally void of valves to double this distance.

In some cases, we have reason to believe that the lymphatics that enter into the tunics of the lacteals, which Magendie admits to be a system of absorbents altogether distinct from the veins, are equally destitute of valves in certain parts or directions, and communicate, by anastomosis, some portion of the chyle, and any substance contained in it, to the interior of the adjoining veins, and consequently to the blood itself: for the experiments of Sir Everard Home, upon rhubarb introduced into the stomach of an animal, after the thoracic duct has been secured by a double ligature, show that this substance, and consequently others as well, is capable of travelling from the stomach into the urinary bladder, notwithstanding this experiment. In the singular experiments made with prussiate of potash by Dr. Wollaston and Dr. Marcet, the blood which was drawn from the arm during the interval of the introduction of this substance into the stomach, and its detection in the urine, did not, indeed, on being tested, discover the smallest trace of the prussiate, though it was so obvious in the fluid of the urinary bladder. The difficulty of accounting for this is considerable, but may, perhaps, be explained by the very diffused state of the prussiate in the entire mass of the blood, and its greater concentration when secreted by the kidneys: by which the same test which was applied in vain, in the former instance, completely succeeded in the latter.

There is, however, another mode of accounting for the result of Magendie's experiments, without abandoning the well-established doctrine of absorption by the lymphatic system. It is a remark which ought never to be lost sight of, that experiments made upon animals in a state either of great pain or of great debility, can give us, by their result, no full proof of the line of conduct pursued by nature in a state of health. In the dead animal body, the valves of the lymphatic vessels very generally lose all elasticity and power of resistance, and transmit fluids in every direction; whence, in all probability, that porosity or transudation which we have already observed as manifest, occasionally, in the stomach and intestines, and in various other organs, on the use of anatomical injections. And hence there can be little doubt, that, as an organ makes an approach to the same state of insensibility and irritability by the severe, if not fatal, wounds inflicted on it in the course of such experiments as are here alluded to, the valves of its lymphatic vessels make an approach also to the same state of flaccidity, and allow the fluids, whose course they should resist, to pass in any direction.

This altered condition of many parts of the lymphatics in the dead body, was sufficiently shown by Cruikshank, in a course of numerous experiments made at Dr. Hunter's museum, in the spring of 1773. The organs chiefly injected were the kidney, liver, and lungs of adult human subjects. In one case, he pushed his injection from the artery

to the pelvis and ureter, without any rupture of the vessels. In another, he injected the pelvis and ureter *from the vein*, which he thought succeeded better than from the artery. In three different kidneys, he injected from the uterus the tubuli uriniferi for a considerable length along the mamillæ; and, in one case, a number of the veins on the external surface of the kidney were evidently filled with the injection. In all these experiments, the colouring matter of the injection was vermilion. In numerous instances, he filled the lymphatics of the lungs and liver with quicksilver; and from the lymphatics of the liver he was able, twice in the adult, and once in the fœtus, to fill the thoracic duct itself.

Dr. Mekel had already shown the same facts by a similar train of experiments, instituted only a year or two before, and the conclusion he drew from them is in perfect coincidence with the explanation now offered. Dr. Mekel's experiments consisted in injecting mercury with great care, but considerable force, into various lymphatics, and minute secreting cavities; and he found that a direct communication took place between such cavities and lymphatics, and the veins in immediate connection with them: and hence he contended, that the lymphatics and the veins are both of them absorbents under particular circumstances; the lymphatics acting ordinarily, and forming the usual channel for carrying off secreted fluids; and the veins acting extraordinarily, and supplying the place of the lymphatics where these are in a state of *morbid torpitude* or debility, or the cavity is overloaded. He traced this communication particularly in the breasts, in the liver, and in the bladder: and he thus accounts for the ready passage which bile finds into the blood, when the ductus choledochus is obstructed, as in jaundice; and the urinous fluid which is often thrown forth from the axillæ and other organs upon a suppression of the natural secretion.

It follows, therefore, that the experiments of Magendie, allowing them to be precisely narrated, are capable of explanation without abruptly overthrowing the established doctrines of preceding physiologists in the same line of pursuit: and we have still ample reason for believing that the economy of secretion and absorption is attested by two systems of vessels distinct from veins and arteries, and, in a state of health, continually holding a balance with each other.

2. In *Chemistry*, the passage of a gas, or fluid, into a liquid or solid substance; or of a liquid into the pores of a solid.

ABSTE'MIOUS. (*Abstemius*; from *ab*, from, and *temetum*, wine.) Refraining absolutely from all use of wine; but the term is applied to a temperate mode of living, with respect to food generally.

ABSTEMIOUSNESS. See *Abstemious*.

ABSTE'NTIO. Cœlius Aurelianus uses this word to express a suppression, or retention: thus, *abstentio stercorum*, a retention of the excrements, which he mentions as a symptom very frequent in a satyriasis. In a sense somewhat different, he uses the word *abstenta*, applying it to the pleura, where he seems to mean that the humour of the inflamed pleura is prevented, by the adjacent bones, from extending itself.

ABSTE'RGENT. (*Abstergens*; from *abstergo*, to cleanse away.) Abstersive. An application that cleanses or clears away foulness.

ABSTE'RSIVE. See *Abstergent*.

ABSTE'RTION. (*Abstertio*, *onis*. f.; from *abstergo*, to cleanse away.) The effect of an abstergent. See *Abstergent*.

ABSTINENCE. (*Abstinentia*, *æ*. f.; from *abstineo*, to abstain.) The act or habit of refraining from something to which we have a propensity, or in which we find pleasure; but it is more particularly used for a spare diet, or a slender parsimonious use of food.

ABSTRACTION. (*Abstractio*, *onis*. f.; from *abstraho*, to draw away.) 1. In *Chemistry*, the drawing off a fluid from a solid which is dissolved in it.

2. In *Physiology*. See *Mens*.

ABSTRA'CTIOUS. The same as abstractitius.

ABSTRACTI'TIUS. (From *abstraho*, to draw away.) Abstractitious. An obsolete term formerly applied to any spirit not produced by fermentation.

A'BSUS. See *Cassia absus*.

ABUTILON. (From the Arabian word *butilon*, yellow.) The yellow mallow. The *Althæa theophrasti*.

ABVACUA'TIO. (From *abvacuo*, to empty.) A large evacuation of any fluid, as of blood from a plethoric person. This term is so used by some old writers.

ABYS. The same as *Abyssus*.

ABYSSUS. (From *α*, priv. and *βυσσος* or *βυθος*, *gurges profundus*, a deep whirlpool or gulf.) A mystic term of the followers of Paracelsus.

ACA'CA. (*Ακακος*; from *α*, neg. and *κακος*, bad.) Formerly applied to those diseases which are rather troublesome than dangerous.

ACACA'LIS. A name in some materia medicas for the *Siliqua sylvestris*. See *Ceratonia siliqua*.

ACA'CIA. (*a*, *æ*. f. *Ακακια*; from *ακαζω*, to sharpen.) The name of a genus of plants in the Linnæan system. Class, *Polygamia*; Order *Monœcia*. The Egyptian thorn.

ACACIA ALTERA TRIFOLIATA. The *Spartium spinosum* of Linnæus.

ACACIA CATECHU. The systematic name of the plant, which affords a drug, formerly supposed to be an earthy substance brought from Japan, and therefore called *terra Japonica*, or Japan earth. Afterwards it appeared to be an extract prepared in India, and supposed till lately, from the juice of the

Mimosa catechu, by boiling the wood and evaporating the decoction by the heat of the sun. But the shrub is now ascertained to be an acacia, and is called *Acacia catechu*. It grows in great abundance in the kingdom of Bahar, and catechu comes to us principally from Bengal and Bombay. Both the tree and the drug have received the following names, *Acachou, Faufel, Cætchu, Caschu, Catechu, Cadtchu, Cashow, Caitchu, Castjoe, Cachu, Cate*, and *Kaath*. The natives call it *Cutt*, the English who reside there *Cutch*. In its purest state catechu is a dry pulverable substance, outwardly of a reddish colour, internally of a shining dark brown, tinged with a reddish hue; in the mouth it discovers considerable astringency; succeeded by a sweetish mucilaginous taste. It may be advantageously employed for most purposes where an astringent is indicated; and is particularly useful in alvine fluxes, where astringents are required. Besides this, it is employed also in uterine profluvia, in laxity and debility of the viscera in general; and it is an excellent topical astringent, when suffered to dissolve leisurely in the mouth, for laxities and ulcerations of the gums, aphthous ulcers in the mouth, and similar affections. This extract is the basis of several formulæ in our pharmacopœias, particularly of a tincture; but one of the best forms under which it can be exhibited, is that of a simple infusion in warm water with a proportion of cinnamon, for by this means it is at once freed of its impurities, and approved by the addition of the aromatic.

Fourcroy says that catechu is prepared from the seeds of a kind of palm called areca. Sir Humphrey Davy has analysed catechu, and from his examination it appears, that from Bombay is of uniform texture, red-brown colour, and specific gravity 1·39; that from Bengal is more friable and less consistent, of a chocolate colour externally, but internally chocolate streaked with red brown, and specific gravity 1·28. The catechu from either place differs little in its properties. Its taste is astringent, leaving behind a sensation of sweetness. It is almost wholly soluble in water. Two hundred grains of picked catechu from Bombay afforded 109 grains of tannin, 66 extractive matter, 13 mucilage, 10 residuum, chiefly sand and calcareous earth. The same quantity from Bengal; tannin 97 grains, extractive matter 73, mucilage 16, residual matter, being sand, with a small quantity of calcareous and aluminous earths, 14. Of the latter, the darkest parts appeared to afford most tannin, the lightest most extractive matter. The Hindoos prefer the lightest coloured, which has probably most sweetness, to chew with the betel-nut.

Of all the astringent substances we know, catechu appears to contain the largest proportion of tannin; and Mr. Purkis found, that one pound was equivalent to seven or eight of oak bark for the purpose of tanning leather.

Acacia germanica. German acacia.

1. The name of the German black-thorn. or sloe-tree, the *Prunus spinosa* of Linnæus.

2. The name of the inspissated juice of the fruit as made in Germany; which, as well as the tree, is there called also *Acacia nostras*. It is now fallen into disuse.

Acacia gum. See *Acacia vera*.

Acacia indiana. See *Tamarindus*.

Acacia indica. See *Tamarindus indica*.

Acacia nostras. See *Acacia germanica*.

Acacia trefoil. The *Spartium spinosum* of Linnæus.

Acacia vera. I. The systematic name of the Egyptian thorn, or gum-arabic tree. *Acacia vera; — spinis stipularibus patentibus, foliis bipinnatis, partialibus extimis glandula interstinctis, spicis globosis pedunculatis*, of Wildenow. This tree was formerly supposed to be a species of mimosa. The gum which it affords has received many names: — *Gummi acanthinum; Gummi thebaicum; Gummi scorpionis; Gum-lamac; Gummi senega*, or *senica*, or *senegalense*.

It affords the gum acacia of the shops, which is imported into this country from Barbary and Morocco, packed in casks in drops or tears, in small fragments, of a pale straw colour, and more or less transparent. It is generally mixed with gum-senegal, and is most probably the indiscriminate collection from several trees. Cairo and Alexandria were the principal marts for gum-arabic till the Dutch introduced the gum from Senegal into Europe, about the beginning of the seventeenth century, and this source now supplies the greater part of the vast consumption of this article. The tree which yields the Senegal gum, grows abundantly on the sands, along the whole of the Barbary coast, and particularly about the river Senegal. There are several species, some of which yield a red astringent juice, but others afford only a pure, nearly colourless, insipid gum, which is the great article of commerce. These trees are from eighteen to twenty feet high, with thorny branches. The gum makes its appearance about the middle of November, when the soil has been thoroughly saturated with periodical rains. The gummy juice is seen to oose through the trunk and branches, and, in about a fortnight, it hardens into roundish drops, of a yellowish white, which are beautifully brilliant where they are broken off, and entirely so when held in the mouth for a short time, to dissolve the outer surface. No clefts are made, nor any artificial means used by the Moors, to solicit the flow of the gum. The lumps of gum-senegal are usually about the size of partridge eggs, and the harvest continues about six weeks. This gum is a very wholesome and nutritious food, thousands of the Moors supporting themselves entirely

upon it during the time of harvest. About six ounces is sufficient to support a man for a day; and it is, besides, mixed with milk, animal broths, and other victuals.

The acacia gum, or that which comes directly from Egypt and the Levant, only differs from the gum-senegal in being of a lighter colour, and in smaller lumps; and it is also somewhat more brittle. In other respects, they resemble each other perfectly.

Gum acacia is neither soluble in spirit nor in oil; but in twice its quantity of water it dissolves into a mucilaginous fluid, of the consistence of a thick syrup, and in this state answers many useful pharmaceutical purposes, by rendering oily, resinous, and pinguious substances miscible with water. The mucilaginous quality of gum-arabic renders it preferable to other gums and mucilages as a demulcent in coughs, hoarsenesses, and other catarrhal affections. It is also very generally employed in ardor urinæ, diarrhœas, and calculous complaints.

II. The name of the expressed juice of the immature pods of the tree, termed *Acacia veravel.* This inspissated juice is brought from Egypt in roundish masses, wrapped up in thin bladders. It is considered as a mild astringent medicine. The Egyptians gave it, in spitting of blood, in the quantity of a drachm, dissolved in any convenient liquor, and repeat this dose occasionally. They likewise employ it in collyria, for strengthening the eyes, and in gargles for quinsies. It is now seldom used as a medicine, being superseded by the use of catechu, or kino.

Acacia veravel. See *Acacia vera.*

Acacia zeylonica. See *Hæmatoxylum campechianum.*

Acacos. The Thrush. See *Aphtha.*

ACADEMY. (*Academia, æ.* f.; from *Academus*, or *Ecademus*, a citizen of Athens, who lived in the place which took his name.) An Academy. A regular society or company of learned persons, instituted generally under the protection of some royal person for the cultivation of the arts and sciences. There are for the medical profession: —

1. The *Academy of Surgery, of Paris*, instituted in 1731; the members of which not only publish their own and correspondents' observations and improvements, but give an account of all that is published in surgery. A surgical question is proposed annually, and a prize gold medal, of 500 livres value, given to him who furnishes the best answer.

2. *Academy of Surgery at Vienna.* Three prize medals are given annually to those who send best theses on proposed questions.

3. *Academy of Naturæ Curiosorum*, founded in Germany in 1652, by Bausch, a physician, who invited medical men to furnish extraordinary cases. Their work is entitled "Ephemerides."

4. *Academy Royal of Sciences.* This was instituted about the year 1660, in Paris, and was abolished by the Convention, with all royal institutions. This academy has greatly contributed to the diffusion of learning and knowledge, and published 139 volumes 4to. It was followed by,

5. The *National Institute*, which was organised by a decree of the French National Assembly, and is considered as one of the most learned and best conducted societies of the present day.

6. *Academy Royal of Sciences at Stockholm.* This originated principally with Linnæus, the celebrated botanist, in the year 1739, and received the royal sanction in 1741, by the title of *Swedish Royal Academy.*

7. *Academy Royal of Sciences at Copenhagen.*

8. *Academy of Arts and Sciences, American.* This was founded in 1780, and regularly publish their discoveries.

ACÆNA. The name of a genus of plants. Class, *Tetrandria;* Order, *Monogynia.*

Acajou. See *Anacardium.*

Aca'lai. (Arabian.) Common salt.

Aca'lcum. Tin.

Acalephe. The nettle.

Acapatli. See *Piper longum.*

ACALYCI'NUS. (From *a*, priv. and *calyx*, a flower-cup.) Acalycine, or without a calyx.

ACALY'CIS. (From *a*, priv. and *calyx*, a flower-cup.) Without a calyx or flower-cup: applied to plants which have no calyx.

ACA'MATOS. (From *α*, neg. and *καμνω*, to grow weary.) A perfect rest of the muscles, or that disposition of a limb which is equally distinct from flexion and extension.

Aca'nor. (Hebrew.) A furnace.

ACA'NTHA. (*a, æ.* f. *Ακανθα*; from *ακη*, a point.) 1. A thorn or prickle: applied to plants with thorns.

2. Sometimes applied to the spina dorsi.

3. The spine or quill of certain fishes, as that of the sea hedge-hog.

Acantha'bolus. (From *ακανθα*, a thorn, and *βαλλω*, to cast out.) An instrument, or forceps, for taking out or removing thorns, or whatever may stick in the flesh. — *Paulus Ægineta.*

ACANTHACEUS. Acanthaceous, prickly: applied to those plants which are prickly, as the thistle tribe.

Aca'nthe. The name of the artichoke in ancient authors.

ACANTHICE. A mastich-like gum.

ACA'NTHINUM. (*um, i.* n.; from *ακανθα*, a thorn.) Gum acacia was called *Gummi acanthinum*, because it is produced from a thorny tree. See *Acacia vera.*

Aca'nthulus. (From *ακανθα*, a thorn.) A surgical instrument to draw out thorns or splinters, or to remove any extraneous matter from wounds.

ACA'NTHUS. (*us, i.* m. *Ακανθος*; from *ακανθα*, a thorn: so named from being rough and prickly.) The name of a genus of

plants in the Linnæan system. Class, *Didynamia;* Order, *Angiospermia*. Bears-breech.

Acanthus mollis. The systematic name of the bears-breech, or brank-ursine. *Acanthus—foliis sinuatis inermibus*, of Linnæus. *Branca ursina* of the shops. The leaves and root abound with a mucilage, which is readily extracted by boiling or infusion. The roots are the most mucilaginous. Where this plant is common, it is employed for the same purposes to which althæa and other vegetables possessing similar qualities are applied among us. The herb-women often sell the leaves of bears foot, and of cow's parsnip, for the bears-breech. It is fallen into disuse.

ACANTICONE. See *Epidote*.

Aca'pnon. (From α, priv. and καπνος, smoke.) 1. Common wild marjoram.

2. Unsmoked honey.

Acarois resinifera. A name of the tree which affords the Botany Bay gum. See *Botany Bay*.

A'CARUS. (*us, i.* m.; from ἀκαρης, small.) The tick, or mite. The name of a very numerous genus of insects. Those which are found on the human body are,

1. The *acarus domesticus*, or domestic tick. This species is observed in the head, in considerable numbers; near gangrenous sores; and on dead bodies.

2. The *acarus scabiei*, or itch tick. This animal is white, with reddish legs. It burrows not in, but near the exulcerations of the itch, and in the neighbourhood of other ulcers, and adds considerably to their irritation. It is seldom found in the itch of this country; but in warmer climates, and especially in the island of Madeira, it is easily detected.

3. The *acarus autumnalis*, or harvest bug. The sting or bite of this little animal produces inflammation and swelling, accompanied by much itching. The harvest bug is a globular ovate insect, with an abdomen bristly behind. From the wheals which its bite produces, it has been sometimes called *wheal worm*.

Besides these there is a multitude of other species known to most people; as the *acarus ricinus*, or dog tick; the *acarus siro*, or mite; the *acarus dysenteriæ*, or dysentery tick.

The wounds inflicted by these vermin are to be relieved by a lotion composed of equal parts of the aromatic spirit of ammonia and water.

ACATALE'PSIA. (From α, neg. and καταλαμβανω, to apprehend.) Acatalepsy.

1. Incomprehensibility.

2. Uncertainty in the prognosis or judgment of diseases.

ACA'TALIS. (From α, neg. and χατεω, to want.) The juniper tree: so named from the abundance of its seeds.

ACATA'POSIS. (From α, neg. and καταπινω, to swallow.) Difficult deglutition.

ACATA'STATOS. (From α, neg. and καθιστημι, to determine.)—*Acastatos*. Inconstant.

1. Fevers were so called which were irregular in their paroxysms.

2. Turbid urine without sediment.

ACATHARSIA. (From α, and καθαιρω, to cleanse.) An impurity of the blood and humours.

ACAU'LIS. (From α, priv. and *caulis*, a stem.) Stemless: without stem. Applied to plants destitute of stem; as *Cypripedium acaule*, and *Carduus acaulus*. This term must not be too rigidly understood.

Aca'zdir. Tin.

ACCELERA'TION. (*Acceleratio, onis*. f.; from *ad*, and *celero*.) An acceleration or augmentation of the motion of bodies in general. In physiology and pathology it is applied to the action of the several functions, but particularly to the circulation of the blood, and to the respiration.

ACCELERA'TOR. (From *accelero*, to hasten or propel.) That which propels or drives forward.

Accelerator urinæ. A muscle of the penis. *Ejaculator seminis; Bulbo-cavernosus* of Winslow. It arises fleshy from the sphincter ani and membranous part of the urethra, and tendinous from the crus, near as far forwards as the beginning of the corpus cavernosum penis; the inferior fibres run more transversely, and the superior descend in an oblique direction. It is inserted into a line in the middle of the bulbous part of the urethra, where each joins with its fellow; by which the bulb is completely closed. The use of these muscles is to drive the urine or semen forward, and by grasping the bulbous part of the urethra, to push the blood towards its corpus cavernosum, and the glans, by which they are distended.

ACCENSION. See *Combustion*.

ACCESSION. (*Accessio, onis*, f.; from *accedo*, to approach.) The accession or commencement of a disease, mostly applied to a fever which has paroxysms or exacerbations: thus the accession of fever means the commencement of the paroxysm, or approach of the febrile period.

ACCESSO'RIUS. (From *accedo*, to approach: so called from the course it takes.) Connected by contact or approach.

Accessorius lumbalis. A muscle of the loins. See *Sacro-lumbalis*.

Accessorius nervus. The name given by Willis to two nerves which ascend, one on each side, from the second, fourth, and fifth cervical pairs of nerves, through the great foramen of the occipital bone, and pass out again from the cranium through the foramina lacera, with the par vagum, to be distributed on the trapezius muscle.

ACCESSUS. (*us, i.* m.; from *accedo*, to approach.) An accession: applied in the same way as *accessio*.

A'CCIB. An obsolete term for lead.

ACCIDENT. (*Accidens.*) That which happens by chance: applied in pathology to a disease, or to symptoms which come by chance in the progress of a disease, which are not necessarily connected with the disease, as titanic spasms after amputation.

ACCIDENTAL. *Accidentalis.* That which takes place by accident: applied to symptoms. See *Adventitious.*

ACCI'PITER. (*er, ris.* m.; from *accipio*, to take.) 1. The hawk: so named from its rapacity.

2. A bandage which was put over the nose: so called from its likeness to the claw of a hawk, or from the tightness of its grasp.

Accipitres. (The plural of *accipiter.*) The name of an order in the Linnæan system of birds, which includes all that are rapacious.

ACCIPITRI'NA. (*a, æ.* f.; from *accipiter*, the hawk: so called, Pliny remarks, because hawks are used to scratch it, and apply the juice to their eyes to prevent blindness.) The herb hawk-weed.

ACCLI'VIS. A muscle of the belly, so named from the oblique ascent of its fibres. See *Obliquus internus abdominis.*

ACCOUCHEMENT. The French for the act of delivery.

ACCOUCHEUR. The French for a midwife.

ACCRETION. (*Accretio, onis.* f.; from *ad*, and *cresco*, to increase.) Accretion.

1. Growth. See *Nutritio.*

2. The growing together of parts naturally separate, as the fingers or toes.

ACCUBA'TIO. (From *accumbo*, to recline.) Childbed; reclining.

ACE'DIA. (From α, priv. and κηδος, care.) 1. Carelessness, neglect in the application of medicines.

2. Hippocrates sometimes uses this word, in his Treatise on the Glands, to signify fatigue or trouble.

ACEPHALOCYSTIS. (*is, idis.* f.; from ακεφαλη, without a head, and κυστις, a bladder: so called because it resembles a bladder without head and body.) The acephalocyst, or headless cyst. The name given by Laennec to what Linnæus denominated the visceral hydatid. See *Vermes.*

ACE'PHALOUS. (*Acephalus, i.* m.; Ακεφαλος; from α, priv. and κεφαλη, a head.) Without a head: applied to a lusus naturæ, or monster, born without a head.

A'CER. (*er, eris* n.; from *acer*, sharp, because of the sharpness of its juice.) The name of a genus of plants in the Linnæan system. Class, *Polygamia*; Order, *Monœcia.*

Acer campestre. The systematic name of the common maple. This tree yields a sweetish, soft, milky sap, which contains a salt with basis of lime, possessed, according to Sherer, of peculiar properties. It is white, semitransparent, not altered by the air, and soluble in one hundred parts of cold, or fifty of boiling water. It is from the juices of this plant, and those also of the *Acer pseudoplatanus*, that chemists have obtained an acid which they call the *Aceric acid.*

Acer pseudoplatanus. The systematic name of the maple-tree, falsely named sycamore. It is also called *Platanus traga.* This tree is common in England, though not much used in medicine. The juice, if drunk while fresh, is said to be a good antiscorbutic. All its parts contain a saccharine fluid; and if the root or branches be wounded in the spring, a large quantity of liquor is discharged, which, when inspissated, yields a brown sort of sugar and syrup like molasses.

Acer saccharinum. The systematic name of the sugar maple-tree. Large quantities of sugar are obtained from this tree in New England and Canada, which is much used in France, where it is commonly known by the name of *Saccharum canadense* or *Saccharum acernum*, maple sugar. It has been supposed that all Europe might be supplied from the maple of America, which grows in great quantities in the western counties of all the middle States of the American Union. It is as tall as the oak, and from two to three feet in diameter; puts forth a white blossom in the spring, before any appearance of leaves; its small branches afford sustenance for cattle, and its ashes afford a large quantity of excellent potash. Twenty years are required for it to attain its full growth. Tapping does not injure it; but, on the contrary, it affords more syrup, and of a better quality, the oftener it is tapped. A single tree has not only survived, but flourished, after tapping, for forty years. Five or six pounds of sugar are usually afforded by the sap of one tree; though there are instances of the quantity exceeding twenty pounds. The sugar is separated from the sap either by freezing, by spontaneous evaporation, or by boiling. The latter method is the most used. Dr. Rush describes the process; which is simple, and practised without any difficulty by the farmers.

From frequent trials of this sugar, it does not appear to be in any respect inferior to that of the West Indies. It is prepared at a time of the year when neither insect, nor the pollen of plants, exist to vitiate it, as is the case with common sugar. From calculations, grounded on facts, it is ascertained that America is now capable of producing a surplus of one-eighth more than its own consumption.

Acer virginianum odoratum. An old name of the liquid amber.

ACERATE. (*Aceras, atis.* m.) A salt formed of the aceric acid, with an alkaline, earthy, or metallic base.

ACE'RATOS. (From α, neg. and κεραω, or κεραννυμι, to mix.) Unmixed; uncorrupted. This term is applied sometimes to the humours of the body by Hippocrates. Paulus Ægineta mentions a plaster of this name.

ACE'RBITY. (*Acerbitas;* from *acer*, sharp.) See *Acerbus.*

ACERBUS. (From *acer*, sharp.) A species of taste which consists in a degree of acidity, with an addition of roughness; properties common to many immature fruits.

ACERIC. (*Acericus;* from *Acer*, the maple-tree.) Appertaining to the *Acer* or maple-tree.

ACERIC ACID. A peculiar acid, said to exist in the juice of the common maple, *Acer campestre* of Linnæus. It is decomposed by heat, like the other vegetable acids.

ACERIDES. (Ακηριδες; from α, neg. and κηρος, wax.) An old name for plasters made without wax.

ACERNUS. Acerne: belonging to the *Acer* or maple-tree.

ACEROSE. (*Acerosus;* from *acus*, a needle.) 1. Having the shape of a needle: applied to leaves which are so shaped; as in *Pinus sylvestris*, and *Juniperus communis.*

2. (From *acus*, chaff.) Chaffy: applied to coarse bread, &c.

3. The name of a species of talc.

ACE'RUS. (From α, priv. and κερος, wax.) Without wax. A soft plaster made without wax.

ACERVULUS. The name in some writers given to the gritty concretions found in the pineal gland, and sometimes in the pituitary.

ACESCENT. (*Acescens;* from *acesco*, to be sour or tart.) Acescent, turning sour or acid. Substances which readily run into the acid fermentation, are so said to be when that change is about to take place, as some vegetable and animal juices and infusions. The suddenness with which this change is effected during a thunder-storm, even in corked bottles, has not been accounted for. In some morbid states of the stomach, also, it proceeds with astonishing rapidity.

A'CESIS. (*is, is.* f.; from ακεομαι, to cure.) 1. A remedy or cure.

2. The herb water-sage was so called from its supposed healing qualities.

ACE'STIS. Borax.

ACE'STORIS. (From ακεομαι, to cure.) A term formerly applied to a female physician or midwife.

ACESTRIDES. Midwifes were so called by the Greeks.

ACE'STUS. (From ακεομαι, to cure.) A disease that is easily cured.

ACETA'BULUM. (*um, i.* n.; from *acetum*, vinegar: so called because it resembles the *acetabulum* or old saucer, in which vinegar was held for the use of the table.)

1. The cup-like cavity of the os innominatum, which receives the head of the thigh-bone. See *Innominatum os.*

2. A glandular substance found in the placenta of some animals.

3. *Acetabulum alterum*, is an old name of the *Sedum telephium.*

ACETAR. A sallad of crude vegetables to be eaten with oil and vinegar.

ACETA'RIUM. (*um, ii.* m.; from *acetum*, vinegar, because it is mostly made with vinegar.) A salad or pickle.

ACETARIUM SCORBUTICUM. A kind of pickle directed by Dr. Bates for scorbutic persons, and made of the *Cochlearia anglica*, a salt prepared from it and sugar. Thus: ℞. Fol. cochlear. marin. ℥iij. Sacchar. alb. ℥vj. Sal cochlear. ℈j. Bene contunduntur simul, dein. adde Succi aurantii, ℥vj.

ACE'TAS. (*as, atis.* f.; from *acetum*, vinegar.) An acetate. A salt formed by the union of the acetic acid, with a salifiable base. Acetates are characterised by —

1. Their pungent smell of vinegar, which they exhale on the effusion of sulphuric acid.

2. Their yielding, on distillation in a moderate red heat, a very light, odorous, and combustible liquor, called *pyroacetate.*

3. Their being all soluble in water: many of them so much so as to be uncrystallisable.

The acetates employed in the cure of diseases are:

1. The acetate of potash.
2. ———— ammonia.
3. ———— soda.
4. ———— lead.
5. ———— zinc.
6. ———— mercury.
7. ———— morphia.

ACETAS AMMONIÆ. Acetate of ammonia. See *Ammoniæ acetatis liquor.*

ACETAS HYDRARGYRI. See *Hydrargyri acetas.*

ACETAS MORPHIÆ. See *Opium.*

ACETAS PLUMBI. See *Plumbi acetas*, and *Plumbi acetatis liquor.*

ACETAS POTASSÆ. See *Potassæ acetas.*

ACETAS SODÆ. See *Sodæ acetas.*

ACETAS ZINCI. Acetate of zinc. A salt composed of zinc and acetic acid. It is used by some as an astringent against inflammation of the eyes, urethra, and vagina, diluted in the same proportion as the sulphate of zinc.

Acetate. See *Acetas.*

Acetate of Ammonia. See *Ammoniæ acetatis liquor.*

Acetate of Potash. See *Potassæ acetas.*

Acetate of Zinc. See *Acetas zinci.*

Acetated vegetable Alkali. See *Potassæ acetas.*

Acetated volatile Alkali. See *Ammoniæ acetatis liquor.*

ACETIC. (*Aceticus;* from *acetum*, vinegar.) Of or belonging to vinegar or acetic acid.

ACETIFICATION. (*Acetificatio;* from *acetum*, vinegar, and *fio*, to make.) The action or operation by which vinegar is made.

ACETOMETER. An instrument for estimating the strength of vinegars. In

the acetometer invented by Messrs. J. and P. Taylor, which has been adopted by the Excise, for determining the rate of duty on vinegar, hydrate of lime is employed to saturate the acid, and the specific gravity of the resulting solution of acetate of lime is made the measure of the strength of the acid. Vinegar, containing 5 parts of real acid in 100 parts, by weight, or saturating 14·5 of crystals of carbonate of soda (the kind called by the London vinegar-makers, No. 24.), is taken as a standard; and, when neutralised by hydrate of lime, an hydrometer stands in it at the mark on the stem which is called *proof*. To keep the stem of the instrument at the same mark, when immersed in stronger acids saturated with lime, it is loaded with a series of weights, each of which indicates 5 per cent. of acid above proof, up to 35, which of course contains $5 + 35 = 40$ per cent. of real acetic acid. (*Quart. Journ.* vi. 255.) This is the greatest strength at which the duty is levied by the gallon; that on stronger acids being regulated in a different manner.

ACETO'SA. (*a, æ.* f.; from *acesco*, to be sour.) Sorrel. See *Rumex acetosa*.

ACETOSE'LLA. (*a, æ.* f.; from *acetosa*, sorrel: so called from the acidity of its leaves.) See *Oxalis acetosella*.

ACETOUS. (*Acetosus;* from *acetum*, vinegar.) Of or belonging to vinegar.

Acetous Acid. See *Acetum*.

Acetous Fermentation. See *Fermentation*.

ACE'TUM. (*um, i.* n.; from *acer*, sour.) Vinegar. A sour liquor obtained from many vegetable substances dissolved in boiling water, and from fermented and vinous liquors, by exposing them to heat and contact with air; under which circumstances they undergo the acid fermentation, and afford the liquor called vinegar.

Common vinegar consists of acetic acid combined with a large portion of water, and with this are in solution portions of gluten, mucilage, sugar, and extractive matter from which it derives its colour, and frequently some of the vegetable acids, particularly the malic and the tartaric.

The same acid is found combined with potash in the juices of a great many plants; particularly the *Sambucus nigra*, *Phœnix dactylifera*, *Galium verum*, and *Rhus typhinus*.

Sweat, urine, and even fresh milk, contain this acid. It is frequently generated in the stomachs of dyspeptic patients. Almost all dry vegetable substances, and some animal, subjected in close vessels to a red heat, yield it copiously. It is the result likewise of a spontaneous fermentation, to which liquid, vegetable, and animal matters are liable. It was long supposed, on the authority of Boerhaave, that the fermentation which forms vinegar is uniformly preceded by the vinous. This is a mistake: cabbages sour in water, making sour crout; starch, in starchmakers' sour waters; and dough itself without any previous production of wine.

There are four varieties of acetic acid known in commerce:

1. Wine vinegar.
2. Malt vinegar.
3. Sugar vinegar.
4. Wood vinegar.

Wine vinegar. — The following is the plan of making vinegar at present practised in Paris. The wine is mixed in a large tun with a quantity of wine lees, and the whole being transferred into cloth-sacks, placed within a large iron-bound vat, the liquid matter is extruded through the sacks by superincumbent pressure. What passes through is put into large casks, set upright, having a small aperture in their top. In these it is exposed to the heat of the sun in summer, or to that of a stove in winter. Fermentation supervenes in a few days. If the heat should then rise too high, it is lowered by cool air and the addition of fresh wine. In the skilful regulation of the fermentative temperature consists the art of making good vinegar. In the former, the process is generally completed in a fortnight: in winter double the time is requisite. The vinegar is then run off into barrels, which contain several chips of birch-wood. In about a fortnight it is found to be clarified, and is then fit for the market. It must be kept in close casks.

The manufacturers at Orleans prefer wine of a year old for making vinegar. But if by age the wine has lost its extractive matter, it does not readily undergo the acetous fermentation. In this case, acetification, as the French term the process, may be determined, by adding slips of vines, bunches of grapes, or green woods.

To make vinegar for domestic use. — Two large casks are worked together, as is described long ago by Boerhaave, thus: —

Take two large wooden vats, or hogsheads; and in each of these place a wooden grate or hurdle at the distance of a foot from the bottom. Set the vessel upright; and on the grate, place a moderately close layer of green twigs, or fresh cuttings of the vine. Then fill up the vessel with the footstalks of grapes, commonly called the rape, to the top of the vessel, which must be left quite open.

Having thus prepared the two vessels, pour into them the wine to be converted into vinegar, so as to fill one of them quite up, and the other but half full. Leave them thus for twenty-four hours, and then fill up the half-filled vessel with liquor from that which is quite full, and which will now in its turn only be left half full. Four-and-twenty hours afterwards, repeat the same operation; and thus go on, keeping the vessels alternately full and half-full during twenty-four hours, till the vinegar be made. On the second or third day, there will arise in the half-filled vessel a fermentative motion, ac-

companied with a sensible heat, which will gradually increase from day to day. On the contrary, the fermenting motion is almost imperceptible in the full vessel; and as the two vessels are alternately full and half-full, the fermentation is by this means in some measure interrupted, and is only renewed every other day in each vessel.

When this motion appears to have entirely ceased, even in the half-filled vessel, it is a sign that the fermentation is finished; and therefore the vinegar is then to be put into casks close stopped, and kept in a cool place.

A greater or less degree of warmth accelerates or checks this, as well as the spirituous fermentation. In France, it is finished in about fifteen days, during the summer: but if the heat of the air be very great, and exceed the twenty-fifth degree of Réaumur's thermometer ($88\frac{1}{4}^{\circ}$ Fahr.), the half-filled vessel must be filled up every twelve hours; because, if the fermentation be not so checked in that time, it will become violent, and the liquor will be so heated, that many of the spirituous parts, on which the strength of the vinegar depends, will be dissipated, so that nothing will remain after the fermentation but a vapid liquor, sour indeed, but effete. The better to prevent the dissipation of the spirituous parts, it is a proper and usual precaution to close the mouth of the half-filled vessel in which the liquor ferments, with a cover made of oak wood. As to the full vessel, it is always left open, that the air may act freely on the liquor it contains; for it is not liable to the same inconveniences, because it ferments but very slowly.

Beer vinegar.— At Gand, a vinegar from beer is made, in which the following proportions of grain are found to be most advantageous: —

1880	Paris lbs. malted	barley.
700	——	wheat.
500	——	buck wheat.

These grains are ground, mixed, and boiled, along with twenty-seven casks-full of river water, for three hours. Eighteen casks of good beer for vinegar are obtained. By a subsequent decoction, more fermentable liquid is extracted which is mixed with the former. The whole brewing yields 3000 English quarts.

In this country, vinegar is usually made from malt. By mashing with hot water, 100 gallons of wort are extracted in less than two hours from 1 boll of malt. When the liquor has fallen to the temperature of 75° Fahr. 4 gallons of the barm of beer are added. After thirty-six hours it is racked off into casks, which are laid on their sides, and exposed, with their bung-holes loosely covered, to the influence of the sun in summer; but in winter they are arranged in a stove-room.

Sugar vinegar. — Good vinegar may be made from a weak syrup, consisting of 18 oz. of sugar to every gallon of water. The yeast and rape are to be here used. Whenever the vinegar (from the taste and flavour) is considered to be complete, it ought to be decanted into tight barrels or bottles, and well-secured from access of air. A momentary ebullition before it is bottled is found favourable to its preservation. In a large manufactory of malt vinegar, a considerable revenue is derived from the sale of yeast to the bakers.

Vinegar obtained by the preceding methods has more or less of a brown colour, and a peculiar but rather grateful smell. By distillation in glass vessels, the colouring matter which resides in a mucilage is separated, but the fragrant odour is generally replaced by an empyreumatic one. The best French wine vinegars, and also some from malt, contain a little alkohol, which comes over early with the watery part, and renders the first product of distillation scarcely denser, sometimes even less dense, than water. It is accordingly rejected. Towards the end of the distillation, the empyreuma increases. Hence only the intermediate portions are retained as distilled vinegar. Its specific gravity varies from 1·005 to 1·015, whilst that of common vinegar of equal strength varies from 1·010 to 1·025.

Wood vinegar.—A crude vinegar has been long prepared for the calico printers, by subjecting wood in iron retorts to a strong red heat.

This mode of obtaining what is called white vinegar, is now extensively practised. The wood is subjected to destructive distillation in an apparatus properly constructed for the purpose: under which circumstances it affords a large quantity of gaseous and liquid products, the latter consisting chiefly of tar water and acetic acid. From this an impure acetate of lime is manufactured, which, after having been, to a certain extent, purified, is mixed with sulphate of soda; a double decomposition is thus effected, and sulphate of lime and acetate of soda are formed. The latter salt, being very soluble, is easily separated from the very difficultly soluble sulphate of lime, purified by solution and crystallisation, and decomposed in a proper distillatory apparatus, by sulphuric acid; a very pure and concentrated acetic acid passes over, and sulphate of soda remains, which is used up in the former part of the process.

The purified wood vinegar, which is used for pickles and culinary purposes, has commonly a specific gravity of about 1·009; when it is equivalent in acid strength to good wine or malt vinegar of 1·014. It contains about $\frac{1}{20}$ of its weight of absolute acetic acid, and $\frac{19}{20}$ of water.

Pure acetic acid. — The acetic acid of the chemist may be prepared in the following modes: 1st, Two parts of fused acetate of potash, with one of the strongest oil of vitriol, yield, by slow distillation from a glass retort into a refrigerated receiver, concen-

trated acetic acid. A small portion of sulphurous acid, which contaminates it, may be removed, by re-distillation, from a little acetate of lead. 2dly, Or four parts of good sugar of lead, with one part of sulphuric acid treated in the same way, afford a slightly weaker acetic acid. 3dly, Gently calcined sulphate of iron, or green vitriol mixed with sugar of lead in the proportion of 1 of the former to $2\frac{1}{2}$ of the latter, and carefully distilled from a porcelain retort into a cooled receiver, may be also considered a good economical process. Or without distillation, if 100 parts of well-dried acetate of lime be cautiously added to 60 parts of strong sulphuric acid, diluted with 5 parts of water, and digested for 24 hours, and strained, a good acetic acid, sufficiently strong for every ordinary purpose, will be obtained.

The distillation of acetate of copper, or of lead *per se*, has also been employed for obtaining *strong acid*. Here, however, the product is mixed with a portion of the fragrant pyro-acetic spirit, which it is troublesome to get rid of. Undoubtedly the best process for the strong acid is that first described, and the cheapest the second or third. When of the utmost possible strength, its sp. gravity is 1·062. At the temperature of 50° F. it assumes the solid form, crystallising in oblong rhomboidal plates. It has an extremely pungent odour, affecting the nostrils and eyes even painfully, when its vapour is incautiously snuffed up. Its taste is eminently acid and acrid. It excoriates and inflames the skin.

A glass hydrometer of Fahrenheit's construction is used for finding the specific gravities. It consists of a globe of about 3 inches' diameter, having a little ballast ball drawn out beneath, and a stem above of about 3 inches long, containing a slip of paper with a transverse line in the middle, and surmounted with a little cup for receiving weights or poises.

An acetic acid of very considerable strength may also be prepared by saturating perfectly dry charcoal with common vinegar, and then distilling. The water easily comes off, and is separated at first; but a stronger heat is required to expel the acid. Or by exposing vinegar to very cold air, or to freezing mixtures, its water separates in the state of ice, the interstices of which are occupied by a strong acetic acid, which may be procured by draining. The acetic acid or radical vinegar of the apothecaries, in which they dissolve a little camphor, or fragrant essential oil, has a specific gravity of about 1·070. It contains fully 1 part of water to 2 of the crystallised acid. The pungent smelling salt consists of sulphate of potash moistened with that acid.

Acetic acid acts on *tin, iron, zinc, copper,* and *nickel;* and it combines readily with the *oxides* of many *other metals,* by mixing a solution of their sulphates with that of an acetate of lead. It dissolves *resins, gum-resins, camphire,* and *essential oils.*

Acetic acid and common vinegar are sometimes fraudulently mixed with sulphuric acid to give them strength. This *adulteration* may be detected by the addition of a little chalk, short of their saturation. With pure vinegar the calcareous base forms a limpid solution, but with sulphuric acid a white insoluble gypsum. Muriate of barytes is a still nicer test. British fermented vinegars are allowed by law to contain a little sulphuric acid, but the quantity is frequently exceeded. Copper is discovered in vinegars by supersaturating them with ammonia, when a fine blue colour is produced; and lead by sulphate of soda, hydrosulphurets, sulphuretted hydrogen, and gallic acid. None of these should produce any change on genuine vinegar. See *Lead.*

Salts consisting of the several alkaline, earthy, and metallic bases, united to definite proportions of this acid, are called acetates. See *Acetas.*

With *potash* this acid forms a deliquescent salt, scarcely crystallisable, called formerly *foliated earth of tartar,* and *regenerated tartar.* The solution of this salt, even in closely stopped vessels, is spontaneously decomposed: it deposits a thick, mucous, flocculent sediment, at first grey, and at length black; till at the end of a few months nothing remains in the liquor but carbonate of potassa, rendered impure by a little coaly oil. See *Potassæ acetas.*

With *soda* it forms a crystallisable salt, which does not deliquesce. This salt has very improperly been called *mineral foliated earth.*

The salt formed by dissolving *chalk* or other calcareous earth in distilled vinegar, is called *salt of chalk,* or *fixed vegetable sal ammoniac,* and by Bergman *calx acetata.*

Of the *acetate of strontian* little is known.

The salt formed by uniting vinegar with *ammonia,* is called by the various names of *spirit of Mindererus, liquid sal ammoniac, acetous sal ammoniac,* and by Bergman *alkali volatile acetatum.*

With *magnesia* the acetic acid forms a viscid saline mass, like a solution of gum-arabic.

Glucine is readily dissolved by acetic acid.

Yttria dissolves readily in acetic acid, and the solution yields by evaporation crystals of acetate of yttria.

Alumine is dissolved by distilled vinegar in a very inconsiderable quantity.

Acetate of zircone may be formed by pouring acetic acid on newly precipitated zircone. It has an astringent taste.

Vinegar dissolves the true gums, and partly the gum-resins, by means of digestion.

Boerhaave observes, that vinegar, by long boiling, dissolves the flesh, cartilages, bones, and ligaments of animals.

Moderately rectified pyroligneous acid has been recommended for the preservation of

animal food; but the empyreumatic taint it communicates to bodies immersed in it, is not quite removed by the subsequent ebullition in water. See *Pyroligneous acid.*

The utility of vinegar, as a condiment for preserving and seasoning both animal and vegetable substances in various articles of food, is very generally known. It affords an agreeable beverage, when combined with water in the proportion of a table spoonful of the former to half a pint of the latter. It is often employed as a medicine in inflammatory and putrid diseases, when more active remedies cannot be procured. Relief has likewise been obtained in hypochondriacal and hysteric affections, in vomiting, fainting, and hiccough, by the application of vinegar to the mouth. If this fluid be poured into vessels and placed over the gentle heat of a lamp in the apartments of the sick, it greatly contributes to disperse foul or mephitic vapours, and consequently to purify the air. Its anticontagious powers are now little trusted to, but its odour is employed to relieve nervous headache, fainting fits, or sickness occasioned by crowded rooms.

As an external application, vinegar proves highly efficacious when joined with farinaceous substances, and applied as a cataplasm to sprained joints; it also forms an eligible lotion for inflammations of the surface, when mixed with alkohol and water in about equal proportions. Applied to burns and scalds, it is said to be highly serviceable, whether there is a loss of substance or not, and to quicken the exfoliation of carious bone. (Gloucester Infirmary.) Mixed with an infusion of sage, or with water, it forms a popular and excellent gargle for an inflamed throat, also for an injection to moderate the fluor albus. Applied cold to the nose in cases of hæmorrhage, also to the loins and abdomen in menorrhagia, particularly after parturition, it is said to be very serviceable. An imprudent use of vinegar internally is not without considerable inconveniences. Large and frequent doses injure the stomach, coagulate the chyle, and produce not only leanness, but an atrophy. When taken to excess by females, to reduce a corpulent habit, tubercles in the lungs, and a consumption, have been the consequence.

Acetum aromaticum. Aromatic vinegar. A preparation of the Edinburgh Pharmacopœia, thought to be an improvement of what has been named *thieves' vinegar.*

Take of the dried tops of rosemary, the dried leaves of sage, of each four ounces; dried lavender flowers, two ounces; cloves, two drachms; distilled vinegar, eight pounds. Macerate for seven days, and strain the expressed juice through paper. Its virtues are antiseptic, and it is a useful composition to smell at in crowded courts of justice, hospitals, &c. where the air is offensive.

Acetum colchici. Vinegar of meadow-saffron. Take of fresh meadow-saffron root sliced, an ounce; acetic acid, a pint; proof spirit, a fluid-ounce. Macerate the meadow-saffron root in the acid, in a covered glass vessel, for three days; then press out the liquor and set it by, that the feculencies may subside; lastly, add the spirit to the clear liquor. The dose is from ʒss to ʒiss.

Acetum distillatum. See *Acidum aceticum dilutum.*

Acetum prophylacticum. Vinegar of the four thieves: so called because, during the plague of Marseilles, four persons, by the use of it, attended many of the sick unhurt. Under colour of their service, they robbed the sick and the dead. One of them being apprehended, saved himself from the gallows by discovering this remedy. For the best formula of it, see *Acetum aromaticum.*

Acetum scillæ. Vinegar of squills. Take of squills recently dried, one pound; dilute acetic acid, six pints; proof spirit, half a pint. Macerate the squills with the vinegar in a glass vessel, with a gentle heat for twenty-four hours; then express the liquor, and set it aside until the fæces subside. To the decanted liquor add the spirit. This preparation of squills is employed as an attenuant, expectorant, and diuretic. Dose, xv. to lx. drops.

Achaova. The name of a plant much esteemed by the ancients in the cure of diseases. It is of the chamomile kind, and probably the *Teucrium marum.*

Achariston. (From α, priv. and χαρις, value.) A name given by Galen to that compound which cured very soon, and was not sufficiently valued.

ACHE. 1. An old name of the smallage. 2. Pain. See *Dolor.*

A'CHEIR. (From α, neg. and χειρ, hand.) Without hands.

Achi'colum. By this word Cælius Aurelianus, *Acut.* lib. iii. cap. 17. expresses the sudatorium of the ancient baths, which was a hot room where they used to sweat, and which was also called *Architholus.*

ACHILLE'A. (*a, æ.* f. Αχιλλεια: from Achilles, who is said to have made his tents with it, or to have cured Telephus with it.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua.*

2. The pharmaceutical name of the milfoil. See *Achillea millefolium.*

Achillea ageratum. The systematic name of maudlin, or maudlin tansy. This plant, the *ageratum* of the shops, called also *Balsamita fœmina*; *Eupatorium mesues*, is described by Linnæus as *Achillea—foliis lanceolatis, obtusis, acutoserratis.* It is esteemed in some countries as anthelmintic and alterative, and is given in hepatic obstructions. It possesses the virtues of tansy.

Achillea foliis pinnatis. See *Genipi verum.*

Achillea millefolium. The systematic name of the common yarrow, or milfoil.

Its synonymes are, *Achillea*, *Myriophyllon*, *Chiliophyllon*, *Lumbus veneris*, *Militaris herba*, *Stratiotes*, *Carpentaria*, and *Speculum veneris*.

Achillea —foliis bipinnatis nudis; laciniis linearibus dentatis; caulibus superne sulcatis, of Linnæus. The leaves and flowers of this indigenous plant have an agreeable, weak, aromatic smell, and a bitterish, rough, and somewhat pungent taste. They are both directed for medicinal use, in the Edinburgh Pharmacopœia; in the present practice, however, they are almost wholly neglected.

Achillea ptarmica. The systematic name of the sneeze-wort or bastard pellitory, called also *Pseudopyrethrum*, *Pyrethrum sylvestre*, *Draco sylvestris*, *Tarchon sylvestris*, *Sternutamentoria*, and *Dracunculus pratensis*. The flowers and roots of this plant, *Achillea—foliis lanceolatis, acuminatis, argute serratis*, have a hot biting taste, approaching to that of pyrethrum, with which they also agree in their pharmaceutical properties. Their principal use is as a masticatory and sternutatory.

ACHI'LLES. The son of Peleus and Thetis, one of the most celebrated Grecian heroes. A tendon is named after him, because, as fable reports, Thetis held him by that part when she dipped him in the river Styx, to make him invulnerable; and also a plant with which he is said to have cured Telephus.

Achillis tendo. The tendon of the gastrocnemii muscles. Homer describes this tendon, and some writers suppose it was thus named by the ancients, from their custom of calling every thing *Achillean* that had any extraordinary strength or virtue. Others say it was named from its action in conducing to swiftness of pace, the term importing so much. The tendon of Achilles is the strong and powerful tendon of the heel which is formed by the junction of the gastrocnemius and soleus muscles, and which extends along the posterior part of the tibia from the calf to the heel. See *Gastrocnemius externus*, and *Gastrocnemius internus*.

When this tendon is unfortunately cut or ruptured, as it may be in consequence of a violent exertion, or spasm of the muscles of which it is a continuation, the use of the leg is immediately lost; and unless the part be afterwards successfully united, the patient must remain a cripple for life. When the tendon has been cut, the division of the skin allows the accident to be seen. When the tendon has been ruptured, the patient hears a sound like that of the smack of a whip, at the moment of the occurrence. In whatever way the tendon has been divided, there is a sudden incapacity, or at least an extreme difficulty, either of standing or walking. Hence the patient falls down, and cannot get up again. Besides these symptoms, there is a very palpable depression between the ends of the tendon; which depression is increased when the foot is bent, and diminished, or even quite removed, when the foot is extended. The patient can spontaneously bend his foot, none of the flexor muscles being interested. The power of extending the foot is still possible, as the peronei muscles, the tibialis posticus, and long flexors, remain perfect, and may perform this motion. The indications are to bring the ends of the divided parts together, and to keep them so, until they have become firmly united. The first object is easily fulfilled by putting the foot in a state of complete extension; the second, namely, that of keeping the ends of the tendon in contact, is more difficult. It seems unnecessary to enumerate the various plans devised to accomplish these ends. The following is Desault's method: After the ends of the tendon had been brought into contact by moderate flection of the knee, and complete extension of the foot, he used to fill up the hollows on each side of the tendon with soft lint and compresses. The roller applied to the limb, made as much pressure on these compresses as on the tendon, and hence this part could not be depressed too much against the subjacent parts. Desault next took a compress about two inches broad, and long enough to reach from the toes to the middle of the thigh, and placed it under the foot, over the back of the leg and lower part of the thigh. He then began to apply a few circles of a roller round the end of the foot, so as to fix the lower extremity of the longitudinal compress; after covering the whole foot with the roller, he used to make the bandage describe the figure of 8, passing it under the foot and across the place where the tendon was ruptured, and the method was finished by encircling the limb upward with the roller as far as the upper end of the longitudinal compress.

ACHIMENUS. A genus of plants, formed by Vahl, among the *Didynamiæ Angiospermæ*, in the family of the *Personatæ*.

ACHIOTTE. A red drug from America, used for dyeing, and in preparing chocolate.

A'CHLYS. Αχλυς. Darkness; cloudiness. 1. Generally applied to a close foggy air, or a mist.

2. Hippocrates, *De morbis mulierum*, lib. ii. signifies by this word air, condensed air in the womb.

3. Galen interprets it of those, who, during sickness, lose that lustre and loveliness observed about the pupil of the eye in health.

4. Others express it by an ulcer on the pupil of the eye, or the scar left there by an ulcer.

5. It means also an opacity of the cornea; the same as the caligo cornea of Dr. Cullen.

Achma'dium. Antimony.

ACHME'LLA. See *Spilanthus acmella*.

ACHMIT. A mineral of a brownish

black or reddish brown colour, considered by Berzelius as a bisilicate of soda, combined with a bisilicate of iron.

A'CHNE. (Αχνη. *Achne, es.* f.; chaff.) An obsolete term applied to,

1. Chaff.
2. Scum or froth of the sea.
3. A white mucus in the fauces, thrown up from the lungs, like froth.
4. A whitish mucilage in the eyes of those who have fevers, according to Hippocrates.
5. It signifies also lint.

ACHOAVAN. A species of chamomile mentioned by Prosper Alpinus. Avicenna seems to have meant by it the *marum*.

A'CHOLUS. (From α, priv. and χολη, bile.) Deficient in bile.

A'CHOR. (*or, oris.* m. Αχωρ, qu. αχνωρ; from αχνη, bran. According to Blanchard it is derived from α, priv. and χωρος, space, as occupying but a small compass.) A species of scald-head, called also *Lactumen, Abas, Cerion, Favus,* and *Crusta lactea.* It is called *acor,* from the branny scales thrown off it. It attacks the hairy scalp of the head, for the most part, of young children, forming soft and scaly eruptions. Dr. Willan, in his description of different kinds of pustules, defines the achor, a pustule of intermediate size between the *phlyzacium* and *psydracium,* which contains a straw-coloured fluid, having the appearance and nearly the consistence of strained honey. It appeared most frequently about the head, and is succeeded by a dull white or yellowish scab. Pustules of this kind, when so large as nearly to equal the size of phlyzacia, are termed *ceria* or *favi,* being succeeded by a yellow, semi-transparent, and sometimes cellular, scab, like a honeycomb. The achor differs from the favus and tinea only in the degree of virulence. It is called favus when the perforations are large; and tinea when they are like those which are made by moths in cloth: but generally by tinea is understood a dry scab on the hairy scalp of children, with thick scales and an offensive smell. When this disorder affects the face, it is called *Crusta lactea,* or milk-scab.

ACHORISTOS. Inseparable. This term was applied by the ancients to symptoms, or signs, which are inseparable from particular things. Thus, softness is inseparable from humidity; hardness from fragility; and a pungent pain in the side is an inseparable symptom of a pleurisy.

ACHRAS. The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia.* The sapota plum-tree.

ACHRAS SAPOTA. The systematic name of the tree which affords the oval-fruited sapota, seeds of which are sometimes given in the form of emulsion in calculous complaints. It is a native of South America, and bears a fruit like an apple, which has, when ripe, a luscious taste, resembling that of the marmalade of quinces, whence it is called natural marmalade. The bark of this, and the *Achras mammosa,* is very astringent, and is used medicinally under the name of *Cortex jamaicensis.*

ACHREI'ON. Useless. Applied by Hippocrates to the limbs, which, through weakness, become useless.

ACHROI'A. A paleness.

A'CHYRON. Αχυρον. This properly signifies bran, or chaff, or straw. Hippocrates, *De morbis mulierum,* most probably means by this word, bran. Achyron also signifies a straw, hair, or any thing that sticks upon a wall.

A'CIA. (From ακη, a point.) 1. A needle with thread in it for chirurgical operations.

2. A method of healing wounds among the ancients, which is now not understood.

ACICULA. (*a, æ.* f.; diminutive of *acus.*) A small spike or needle-like prickle.

ACICULAR. (*Acicularis;* from *acicula,* a pin or needle.) Acicular; shaped like a small needle: applied in botany to designate form of leaf and species of plant.

A'CICYS. Weak, infirm, or faint. In this sense it is used by Hippocrates, *De morb.* lib. iv.

ACID. (*Acidum, i.* n.; from *aceo,* to be sour.) 1. That which impresses upon the organs of taste a sour sensation. The word *sour,* which is usually employed to denote the simple impression, or lively and sharp sensation produced on the tongue by certain bodies, may be regarded as synonymous to the word *acid.* The only difference which can be established between them, is, that the one denotes a weak sensation, whereas the other comprehends all the degrees of force, from the least perceptible to the greatest degree of causticity: thus we say, that verjuice, gooseberries, or lemons, are *sour;* but we use the word acid to express the impression which the nitric, sulphuric, or muriatic acids make upon the tongue.

2. Acids are an important class of chemical compounds. Every acid results from the union of a peculiar combustible base called the *radical,* with a common principle technically called oxygen, or the *acidifier.* This general position is founded chiefly on the phenomena exhibited in the formation and decomposition of sulphuric, carbonic, phosphoric, and nitric acids; and is extended by a plausible analogy to other acids, the radicals of which are unknown.

"I have already shown," says Lavoisier, "that phosphorus is changed by combustion into an extremely light, white, flaky matter. Its properties are likewise entirely altered by this transformation; from being insoluble in water, it becomes not only soluble, but so greedy of moisture as to attract the humidity of the air with astonishing rapidity.

By this means it is converted into a liquid, considerably more dense, and of more specific gravity than water. In the state of phosphorus before combustion, it had scarcely any sensible taste; by its union with oxygen, it acquires an extremely sharp and sour taste: in a word, from one of the class of combustible bodies, it is changed into an incombustible substance, and becomes one of those bodies called acids.

"This property of a combustible substance, to be converted into an acid by the addition of oxygen, we shall presently find belongs to a great number of bodies. Wherefore, strict logic requires that we should adopt a common term for indicating all these operations which produce analogous results. This is the true way to simplify the study of science, as it would be quite impossible to bear all its specific details in the memory if they were not classically arranged. For this reason we shall distinguish the conversion of phosphorus into an acid by its union with oxygen, and in general every combination of oxygen with a combustible substance, by the term *oxygenation*; from this I shall adopt the verb to oxygenate; and of consequence shall say, that in oxygenating phosphorus, we convert it into an acid.

"Sulphur also, in burning, absorbs oxygen gas; the resulting acid is considerably heavier than the sulphur burnt; its weight is equal to the sum of the weights of the sulphur which has been burnt, and of the oxygen absorbed; and, lastly, this acid is weighty, incombustible, and miscible with water in all proportions.

"I might multiply these experiments, and show, by a numerous succession of facts, that all acids are formed by the combustion of certain substances; but I am prevented from doing so in this place by the plan which I have laid down, of proceeding only from facts already ascertained to such as are unknown, and of drawing my examples only from circumstances already explained. In the mean time, however, the examples above cited may suffice for giving a clear and accurate conception of the manner in which acids are formed. By these it may be clearly seen that oxygen is an element common to them all, and which constitutes or produces their acidity; and that they differ from each other according to the several natures of the oxygenated or acidified substances. We must, therefore, in every acid, carefully distinguish between the acidifiable base, which De Morveau calls the radical, and 'the acidifying principle or oxygen.'" —*Elements*, p.1 15.

Berthollet maintains, that Lavoisier had given too much latitude to the idea of oxygen being the universal acidifying principle. "In fact," says he, "it is carrying the limits of analogy too far to infer, that all acidity, even that of the muriatic, fluoric, and boracic acids, arises from oxygen, because it gives acidity to a great number of substances. Sulphuretted hydrogen, which really possesses the properties of an acid, proves directly that acidity is not in all cases owing to oxygen. There is no better foundation for concluding that hydrogen is the principle of alkalinity, not only in the alkalies, properly so called, but also in magnesia, lime, strontian, and barytes, because ammonia appears to owe its alkalinity to hydrogen.

"These considerations prove that oxygen may be regarded as the most usual principle of acidity, but that this species of affinity for the alkalies may belong to substances which do not contain oxygen; that we must not therefore always infer, from the acidity of a substance, that it contains oxygen, although this may be an inducement to suspect its existence in it; still less should we conclude, because a substance contains oxygen, that it must have acid properties: on the contrary, the acidity of an oxygenated substance shows that the oxygen has only experienced an incomplete saturation in it, since its properties remain predominant."

This generalisation of the French chemists concerning oxygen, was first experimentally combated by Sir Humphry Davy, in a series of dissertations published in the Philosophical Transactions.

His first train of experiments were instituted with the view of operating by voltaic electricity on muriatic and other acids freed from water. Substances which are now known by the names of chlorides of phosphorus and tin, but which he then supposed to contain dry muriatic acid, led him to imagine that intimately combined water was the real acidifying principle, since acid properties were immediately developed in the above substances by the addition of that fluid, though previously they exhibited no acid powers. In July, 1810, however, he advanced those celebrated views concerning acidification, which, in the opinion of the best judges, display an unrivalled power of scientific research. The conclusions to which these led him, were incompatible with the general hypothesis of Lavoisier. He demonstrated that oxymuriatic acid is, as far as our knowledge extends, a *simple* substance, which may be classed in the same order of natural bodies as oxygen gas, being determined like oxygen to the positive service in voltaic combinations, and like oxygen combining with inflammable substances, producing heat and light. The combinations of oxymuriatic acid with inflammable bodies were shown to be analogous to oxides and acids in their properties and powers of combination, but to differ from them in being, for the most part, decomposable by water: and, finally, that oxymuriatic acid has a stronger attraction for most inflammable bodies than oxygen. His preceding decomposition of the alkalies and earths having evinced the absurdity of that nomenclature, which gives to the general and essential constituent of alkaline nature the term oxygen or acidi-

fier, his new discovery of the simplicity of oxymuriatic acid showed the theoretical system of chemical language to be equally vicious in another respect. Hence this philosopher most judiciously discarded the appellation oxymuriatic acid, and introduced in its place the name chlorine, which merely indicates an obvious and permanent character of the substance, its greenish-yellow colour. The more recent investigations of chemists on fluoric, hydriodic, and hydrocyanic acids, have brought powerful analogies in support of the chloridic theory, by showing that hydrogen alone can convert certain undecompounded bases into acids well characterised, without the aid of oxygen.

After these observations on the nature of acidity, we shall now state the general properties of the acids.

1. The taste of these bodies is for the most part sour, as their name denotes ; and in the stronger species it is acrid and corrosive.

2. They generally combine with water in every proportion, with a condensation of volume and evolution of heat.

3. With a few exceptions they are volatilised or decomposed at a moderate heat.

4. They usually change the purple colours of vegetables to a bright red.

5. They unite in definite proportions with the alkalies, earths, and metallic oxides, and form the important class of salts. This may be reckoned their characteristic and indispensable property.

Thénard has lately succeeded in communicating to many acids *apparently* a surcharge of oxygen, and thus producing a supposed new class of bodies, the *oxygenised acids*, which are, in reality, combinations of the ordinary acids with oxygenised water, or with the deutoxide of hydrogen.

The class of acids has been distributed into three orders, according as they are derived from the mineral, the vegetable, or the animal kingdom. But a more specific distribution is now requisite. They have also been arranged into those which have a single, and those which have a compound basis or radical. This arrangement is not only vague, but liable in other respects to considerable objections. The chief advantage of a classification is to give general views to beginners in the study, by grouping together such substances as have analogous properties or composition. These objects will be tolerably well attained by the following divisions and subdivisions:

1st, Acids from inorganic nature, or which are procurable without having recourse to animal or vegetable products.

2dly, Acids elaborated by means of organisation.

The first group is subdivided into three families: 1st, Oxygen acids; 2dly, Hydrogen acids; 3dly, Acids destitute of both these supposed acidifiers.

FAMILY 1st. — Oxygen Acids.

Section 1st, Non-metallic.

1. Boracic.	12. Iodic.
2. Bromic.	13. Iodo-sulphuric.
3. Carbonic.	14. Hypophosphorous.
4. Chloric.	15. Phosphorous.
5. Perchloric ?	16. Phosphatic.
6. Chloro-carbonic.	17. Phosphoric.
7. Iodous	18. Hyposulphurous.
8. Nitrous.	19. Sulphurous
9. Hyponitric.	20. Hyposulphuric.
10. Nitric.	21. Sulphuric.
11. Hyponitrous.	22. Cyanic ?

Section 2d, Oxygen acids. — Metallic.

1. Arsenic.	6. Columbic.
2. Arsenious.	7. Molybdic.
3. Antimonious.	8. Molybdous.
4. Antimonic.	9. Titanic.
5. Chromic.	10. Tungstic.

FAMILY 2d. — Hydrogen Acids.

1. Fluoric.	7. Hydro-selenic.
2. Hydriodic.	8. Hydro-prussic, or Hydro-cyanic.
3. Hydrochloric, or Muriatic.	9. Hydro-sulphurous.
4. Ferro-prussic.	10. Hydro-tellurous.
5. Fluotitanic.	11. Hydroxanic.
6. Hydro-bromic.	12. Sulphuro-prussic.

FAMILY 3d. — Acids without oxygen or hydrogen.

1. Chloriodic.	3. Fluoboric.
2. Chloroprussic, or Chlorocyanic.	4. Fluosilicic.

Division 2d. — Acids of Organic Origin.

1. Abietic	29. Meconic.
2. Aceric.	30. Menispermic.
3. Acetic.	31. Margaric.
4. Amniotic.	32. Melassic ?
5. Benzoic.	33. Mellitic.
6. Boletic.	34. Moroxylic.
7. Butyric.	35. Mucic.
8. Camphoric.	36. Nanceic ?
9. Capric, Caproic.	37. Nitro-leucic.
10. Caseic.	38. Nitro-saccharic.
11. Cevadic.	39. Oleic.
12. Cholesteric.	40. Oxalic.
13. Citric.	41. Pectic.
14. Croconic.	42. Phocinic.
15. Delphinic.	43. Pinic.
16. Ellagic ?	44. Pirocitric.
17. Formic.	45. Purpuric.
18. Fulminic.	46. Pyrolithic,
19. Fungic.	47. Pyromalic.
20. Gallic.	48. Pyrotartaric.
21. Hydroxantic.	49. Rosasic.
22. Igasuric.	50. Saclactic.
23. Kinic.	51. Sebacic.
24. Laccic.	52. Suberic.
25. Lactic.	53. Succinic.
26. Lampic.	54. Sulphonaphthalic.
27. Lithic or Uric.	55. Sulphovinic ?
28. Malic.	56. Tartaric.

The acids of the last division are all decomposable at a red heat, and afford generally carbon, hydrogen, oxygen, and, in some few cases, also nitrogen. The mellitic is found like amber in wood coal, and, like it, is undoubtedly of organic origin. — *Ure.*

Acid, abietic. See *Abietic acid.*
Acid, aceric. See *Acer campestre.*
Acid, acetic. See *Acetum.*
Acid acetous. See *Acetum.*
Acid, aerial. See *Carbonic acid.*
Acid, ætherial. See *Æther.*
Acid, aluminous. The sulphuric acid.
Acid, amniotic. See *Amniotic acid.*
Acid, animal. Those which are component parts of animal substances, or are found by treating them with chemical agents, are: —

1. Uric.	6. Sebacic.
2. Rosacic.	7. Hydrocyanic.
3. Amniotic.	8. Zoonic.
4. Lactic.	9. Formic.
5. Saccholactic.	10. Laccic.

Other acids have been discovered to enter into the composition of animal substances, as the phosphoric, sulphuric, muriatic, carbonic, benzoic, acetic, and malic.

Acid, antimonic. See *Antimonium.*
Acid, antimonous. See *Antimonium.*
Acid of ants. See *Formic acid.*
Acid, arsenical. See *Arsenicum.*
Acid, arsenious. See *Arsenicum.*
Acid bath. See *Bath.*
Acid, benzoic. See *Benzoic acid.*
Acid, boletic. See *Boletic acid.*
Acid, boracic. See *Boracic acid.*
Acid bromic. See *Brome.*
Acid camphoric. See *Camphoric acid.*
Acid, capric. See *Capric acid.*
Acid, carbonic. See *Carbonic acid.*
Acid, caseic. See *Caseic acid.*
Acid, cetic. See *Cetic acid.*
Acid, chloric. See *Chloric acid.*
Acid, chloriodic. See *Chloriodic acid.*
Acid, chloro-carbonic. See *Chloro-carbonous acid* and *Phosgene.*
Acid, chloro-cyanic. See *Chloro-cyanic acid.*
Acid, chloro-prussic. See *Chloro-cyanic acid.*
Acid, chlorous. See *Chlorous acid.*
Acid, chromic. See *Chromic acid.*
Acid, citric. See *Citric acid.*
Acid, columbic. See *Columbic acid.*
Acid, croconic. See *Croconic acid.*
Acid cyanic. See *Prussic acid.*
Acid, dephlogisticated muriatic. See *Chlorine.*
Acid, dulcified. Now called æther.
Acid, ellegic. See *Ellagic acid.*
Acid, ferro-chyazic. See *Ferro-chyazic acid.*
Acid, ferro-prussic. See *Ferro-prussic acid.*
Acid, ferruretted chyazic. See *Ferro-prussic acid.*
Acid, fluoboric. See *Fluoboric acid.*
Acid fluoric. See *Fluoric acid.*
Acid fluoric, silicated. See *Fluoric acid.*
Acid, fluosilicic. See *Fluoric acid.*
Acid, fluotitanic. See *Fluotitanic acid.*
Acid, formic. See *Formic acid.*
Acid, fulminic. See *Fulminic acid.*
Acid, fungic. See *Fungic acid.*
Acid, gallic. See *Gallic acid.*
Acid, hydriodic. See *Hydriodic acid.*
Acid, hydrochloric. See *Muriatic acid.*
Acid, hydrocyanic. See *Prussic acid.*
Acid, hydrofluoric. See *Fluoric acid.*
Acid, hydrophosphorous. See *Phosphorous acid.*
Acid, hydrophtoric. See *Fluoric acid.*
Acid, hydrosulphuric. See *Sulphuretted hydrogen.*
Acid, hydrothionic. See *Sulphuretted hydrogen.*
Acid, hydroxanthic. See *Hydroxanthic acid.*
Acid, hyponitrous. See *Hyponitrous acid.*
Acid, hypophosphorus. See *Hypophosphorous acid.*
Acid, hyposulphuric. See *Hyposulphuric acid.*
Acid, hyposulphurous. See *Hyposulphurous acid.*
Acid, igasuric. See *Igasuric acid.*
Acid, imperfect. Acids which are not fully saturated with oxygen. Their names are ended in Latin by *osum*, and in English by *ous*: e. g. *acidum nitrosum*, or nitrous acid. See *Acid perfect.*
Acid, iodic. See *Iodic acid.*
Acid, iodous. See *Iodous acid.*
Acid, iodosulphuric. See *Iodosulphuric acid.*
Acid, kinic. See *Kinic acid.*
Acid, krameric. See *Krameric acid.*
Acid, laccic. See *Laccic acid.*
Acid, lactic. See *Lactic acid.*
Acid, lampic. See *Lampic acid.*
Acid, lethic. See *Lethic acid.*
Acid, malic. See *Malic acid.*
Acid, manganesic. See *Manganesic acid.*
Acid, margaritic. See *Margaritic acid.*
Acid, meconic. See *Meconic acid.*
Acid, mellitic. See *Mellitic acid.*
Acid, menispermic. See *Menispermic acid.*
Acid of milk. See *Mucic acid.*
Acid, mineral. Those which are generally produced from minerals.

1. Sulphuric.	7. Fluoric.
2. Muriatic.	8. Boracic.
3. Nitric.	9. Iodic.
4. Chloric.	10. Molybdic.
5. Chromic.	11. Carbonic, &c.
6. Columbic.	

Acid, molybdic. See *Molybdic acid.*
Acid, molybdous. See *Molybdous acid.*
Acid, moroxylic. See *Moroxylic acid.*
Acid, mucic. See *Mucic acid.*
Acid, mucous. See *Mucic acid.*
Acid, muriatic. See *Muriatic acid.*
Acid, muriatic, dephlogisticated. See *Chlorine.*
Acid, nanceic. See *Nanceic acid.*

Acid of nitre. See *Nitric acid.*
Acid, nitric. See *Nitric acid.*
Acid, nitro-leucic. See *Nitro-leucic acid.*
Acid, nitro-muriatic. See *Nitro-muriatic acid.*
Acid, nitro-saccharine. See *Nitro-saccharic acid.*
Acid, nitro-sulphuric. See *Nitro-sulphuric acid.*
Acid, nitrous. See *Nitrous acid.*
Acid, œnothionic. See *Œnothionic acid.*
Acid, oleic. See *Oleic acid.*
Acid, oxalic. See *Oxalic acid.*
Acid, oxiodic. See *Iodic acid.*
Acid, oxychloric. See *Perchloric acid.*
Acid, oxymuriatic. See *Chlorium.*
Acid, perchloric. See *Perchloric acid.*
Acid, perfect. An acid completely saturated with oxygen. The names are ended in Latin by *icum*, and in English by *ic*; e. g. *Acidicum nitricum*, or *nitric acid.*
Acid, perlate. See *Perlate acid.*
Acid, pernitrous. See *Hyponitrous acid.*
Acid, pictic. See *Pictic acid.*
Acid, pinic. See *Pinic acid.*
Acid, phocenic. See *Phocenic acid.*
Acid, phosphatic. See *Phosphatic acid.*
Acid, phosphoric. See *Phosphoric acid.*
Acid, phosphorous. See *Phosphorous acid.*
Acid, prussic. See *Prussic acid.*
Acid, purpuric. See *Purpuric acid.*
Acid, pyro-acetic. See *Pyro-acetic acid.*
Acid, pyrocitric. See *Pyrocitric acid.*
Acid, pyroligneous. See *Pyroligneous acid.*
Acid, pyromucous. See *Pyromucic acid.*
Acid, pyrotartarous. See *Pyrotartaric acid.*
Acid, rheumic. See *Rheumic acid.*
Acid, saccho-lactic. See *Mucic acid.*
Acid, saclactic. See *Mucic acid.*
Acid, sebacic. See *Sebacic acid.*
Acid, selenic. See *Selenic acid.*
Acid, silicated fluoric. See *Fluoric acid.*
Acid, sorbic. See *Sorbic acid.*
Acid, stannic. See *Stannic acid.*
Acid, stibic. See *Stibic acid.*
Acid, stibious. See *Stibious acid.*
Acid, suberic. See *Suberic acid.*
Acid, succinic. See *Succinic acid.*
Acid of sugar. See *Oxalic acid.*
Acid, sulpho-cyanic. See *Sulphuro-prussic acid.*
Acid, sulpho-naphthalic. See *Sulpho-naphthalic acid.*
Acid, sulphovinous. See *Sulphovinic acid.*
Acid, sulphureous. See *Sulphureous acid.*
Acid, sulphuretted chyazic. See *Sulphuro-prussic acid.*
Acid, sulphuric. See *Sulphuric acid.*
Acid of tartar. See *Tartaric acid.*
Acid, tartaric. See *Tartaric acid.*
Acid, telluric. See *Telluric acid.*
Acid, titanic. See *Titanic acid.*
Acid, tungstic. See *Tungstic acid.*
Acid, uric. See *Lithic acid.*
Acid of vinegar. See *Acetum.*
Acid of vinegar, concentrated. See *Acetum.*
Acid of vitriol. See *Sulphuric acid.*
Acid, vitriolic. See *Sulphuric acid.*
Acid, zumic. See *Zumic acid.*
Acids, native vegetable. Such as are ready formed, in plants or fruits, and require for their extraction only pressure and other simple processes, which can scarcely be supposed to produce any change in their nature or properties. The following are the principal ones hitherto discovered: —

1. Citric.	6. Benzoic.
2. Gallic.	7. Acetic.
3. Mallic.	8. Prussic.
4. Tartaric.	9. Phosphoric.
5. Oxalic.	

There are other acids considered as vegetable which are doubtful, and some also which result from complicated processes, and produced by a new arrangement of the vegetable elements; as the succinic, camphoric, &c.

ACIDIFIABLE. *Acidifiabilis.* Capable of being converted into an acid by an acidifying principle. Substances possessing this property are called *radicals* and *acidifiable bases.*

ACIDIFICA'TION. (*Acidificatio*; from *acidum*, an acid.) The formation of an acid; also the impregnating of any thing with acid properties.

ACIDIFYING. 1. That which combines with an acidifiable substance, and forms with it an acid, is called the acidifying principle.

2. The act of forming an acid. See *Acid.*

ACIDIMETRY. The measurement of the strength of acids. This is effected by saturating a given weight of them with an alkaline base; the quantity requisite for the purpose is the measure of their power.

ACIDITY. See *Acid.*

ACIDULOUS. *Acidulosus.* Somewhat acid: subacid. Applied to salts in which the base is combined with such an excess of acid, that they manifestly exhibit acid properties, as the supertartrate and the supersulphate of potassa; and also to mineral waters, which contain so great a quantity of carbonic acid gas, as to render them acidulous, or gently tart to the taste. See *Mineral Waters.*

ACIDULUS. Acidulate. Any thing blended with an acid juice in order to give it a coolness and briskness.

ACIDUM. (*um, i.* n.; from *aceo*, to be sour.) An acid. See *Acid.*

ACIDUM ABIETIS. An old and not now used preparation; a peculiar acid liquor yielded, along with the essential oil, in distillation of the fresh branches or fruit of the *Pinus sylvestris* of Linnæus.

ACIDUM ACETICUM. See *Acidum aceticum dilutum.*

ACIDUM ACETICUM CONCENTRATUM. When the acid of vinegar is greatly concentrated, that is, deprived of its water, it is called concentrated acid of vinegar, and radical vinegar.

Distilled vinegar may be concentrated by

freezing: the congelation takes place at a temperature below 28 degrees, more or less, according to its strength; and the congealed part is merely ice, leaving, of course, a stronger acid. If this be exposed to a very intense cold, it shoots into crystals; which, being separated, liquefy, when the temperature rises; and the liquor is limpid as water, extremely strong, and has a highly pungent acetous odour. This is the pure acid of the vinegar; the foreign matter remaining in the uncongealed liquid.

Other methods are likewise employed to obtain the pure and concentrated acid. The process of Westendorf, which has been often followed, is to saturate soda with distilled vinegar; obtain the acetate by crystallisation; and pour upon it, in a retort, half its weight of sulphuric acid. By applying heat, the acetic acid is distilled over; and, should there be any reason to suspect the presence of any sulphuric acid, it may be distilled a second time, from a little acetate of soda. According to Lowitz, the best way of obtaining this acid pure, is to mix three parts of the acetate of soda with eight of supersulphate of potash; both salts being perfectly dry, and in fine powder, and to distil from this mixture in a retort, with a gentle heat.

It may also be obtained by distilling the verdigris of commerce with a gentle heat. The concentrated acid procured by these processes, was supposed to differ materially from the acetous acids obtained by distilling vinegar; the two acids were regarded as differing in their degree of oxygenisement, and were afterwards distinguished by the names of acetous and acetic acids. The acid distilled from verdigris was supposed to derive a quantity of oxygen from the oxide of copper, from which it was expelled. The experiments of Adet have, however, proved the two acids to be identical; the acetous acid, therefore, only differs from the acetic acid in containing more water, rendering it a weaker acid, and of a less active nature. There exists, therefore, only one of acid vinegar, which is the acetic; its compounds are termed *acetates*.

Acidum aceticum dilutum. Dilute acetic acid. This liquor is the *acetum distillatum*; the *acidum acetosum* of the London Pharmacopœia of 1787, and the *acidum aceticum* of that of 1822, and the *acidum aceticum dilutum* of the present.

Take of vinegar, a gallon. Distil the acetic acid in a sand-bath, from a glass retort into a receiver also of glass, and kept cold; throw away the first pint, and keep for use the six succeeding pints, which are distilled over.

In this distillation, the liquor should be kept moderately boiling, and the heat should not be urged too far, otherwise the distilled acid will have an empyreumatic smell and taste, which it ought not to possess. If the acid be prepared correctly, it will be colourless, and of a grateful, pungent, peculiar acid taste. One fluid ounce ought to dissolve at least ten grains of carbonate of lime or white marble.

Distilled vinegar is not always prepared in glass vessels, but generally in a copper alembic, to which a worm of pewter is attached as refrigerator; hence the impurities sometimes found in this acid. An earthenware condensing pipe is preferable, but there is a difficulty in keeping it sufficiently cool, in consequence of its bad conducting power in regard to heat: it might be made of silver, very thin, and would then be liable to no objection, as that metal is not acted on by acetic acid of any strength. A considerable improvement in the distillation of vinegar consists in using the heat of high-pressure steam for the purpose, instead of that of an ordinary open fire. The risk of empyreuma, which often takes place at an early period of the process, is thus prevented, and a larger portion may usually be distilled off before any foreign flavour is perceptible.

The usual specific gravity of distilled vinegar is from 1007 to 1009: in the latter case 1000 grains require 145 grains of crystallised carbonate of soda for their saturation, and it may be regarded as composed of one part by weight of the *acidum aceticum fortius* of the materia medica, and five of water. Dilute acetic acid thus prepared is, in all respects, preferable to that obtained by the distillation of vinegar, especially for pharmaceutical purposes.

The compounds of this acid, directed to be used by the new London Pharmacopœia, are *acetum colchici, acetum scillæ, ceratum plumbi acetatis, liquor ammoniæ acetatis, liquor plumbi acetatis, liquor plumbi acetatis dilutus, oxymel, oxymel scillæ, potassæ acetas*, and the *cataplasma sinapis*.

Acidum acetosum. See *Acetum*.

Acidum æthereum. See *Sulphuric acid*.

Acidum aluminosum. The sulphuric acid.

Acidum arsenicum. See *Arsenic acid*.

Acidum benzoicum. See *Benzoic acid*.

Acidum boracicum. See *Boracic acid*.

Acidum carbonicum. See *Carbonic acid*.

Acidum catholicon. See *Sulphuric acid*.

Acidum citricum. See *Citric acid*.

Acidum formicum. See *Formic acid*.

Acidum muriaticum. See *Chlorium* and *Chloric acid*.

Acidum muriaticum oxygenatum. See *Muriatic acid, oxygenated*.

Acidum nitricum. See *Nitric acid*.

Acidum nitricum dilutum. Take of nitric acid a fluid ounce; distilled water nine fluid ounces. Mix them.

Acidum nitrosum. See *Nitrous acid*.

Acidum phosphoricum. See *Phosphoric acid*.

Acidum pingue. A fancied acid, which Meyer substituted to explain the causticity of lime.

ACIDUM PRIMIGENIUM. See *Sulphuric acid.*

ACIDUM SUCCINICUM. See *Succinic acid.*

ACIDUM SULPHUREUM. See *Sulphurous acid.*

ACIDUM SULPHURICUM. See *Sulphuric acid.*

ACIDUM SULPHURICUM DILUTUM. Take of sulphuric acid, a fluid ounce and a half; distilled water, fourteen fluid ounces and a half. Add the water gradually to the acid.

ACIDUM TARTARICUM. See *Tartaric acid.*

ACIDUM VITRIOLICUM. See *Sulphuric acid.*

ACIDUM VITRIOLICUM DILUTUM. See *Acidum sulphuricum dilutum.*

A'CIES. Iron or steel.

ACIESIS. (*is, is.* f.; from α, priv. and κυειν, to conceive.) Sterility.

ACINACIFORMIS. (From *acinaces,* a Persian scimitar or sabre, and *forma,* resemblance.) Acinaciform; shaped like a sabre: applied to leaves, as those of the *Mysembryanthemum acinaciforme.*

ACINE'SIA. (*a, æ.* f.; from ακινησια, immobility.) 1. A loss of motion and strength.

2. Applied by Galen to the period of rest between the contraction and dilatation of the heart.

ACINIFORMIS. (From *acinus,* a grape, and *forma,* a resemblance.) Aciniform. 1. A name given by the ancients to some parts which resembled the colour and form of an unripe grape, as the uvea of the eye, which was called *tunica acinosa,* and the choroid membrane of the eye, which they named *tunica aciniforma.*

A'CINOSUS. (From *acinus,* a grape.) Acinose, or grape-like. See *Aciniformis.*

A'CINUS. (*us, ni.* m.; a grape.)

1. In *anatomy,* glands which grow together in clusters as grapes do, are called *Acini glandulosi.*

2. A granulation of flesh.

3. In *botany,* a small berry, which, with several others, composes the fruit of the mulberry, blackberry, &c.

ACINUS BILIOSUS. The small glandiform bodies of the liver, which separate the bile from the blood, were formerly called *acini biliosi.* See *Liver.*

ACIPENSER. (*er, eris.* m.) The name of a genus of fish, of the order *Chondropterygii.* The following species only is eaten as food:

ACIPENSER STURIO. The sturgeon. A well-known large fish, of a fine flavour, caught in many places, and sometimes in the Thames, being one of those fishes which spend a part of their time in the sea and a part in rivers. It is much esteemed for the delicacy and firmness of its flesh, which is as white as veal, and extremely good when roasted. It is not a proper food for weak stomachs, being more difficult of digestion than the flat fishes. It is often pickled and potted, and well prepared at Pillau. The sturgeon grows to a great size, and are often caught 18 or 20 feet long, and weighing 400 or 500 pounds. It is from this fish that cavear and isinglass are prepared. See *Ichthyocolla.*

ACMA'STICOS. A species of fever, wherein the heat continues of the same tenour to the end. — *Actuarius.*

A'CME. (*e, es.* f.; from ακμη, a point.) The height or crisis. A term applied by physicians to that period or state of a disease in which it is at its height. The ancients distinguished diseases into four stages: 1. *Arche,* the beginning. 2. *Anabasis,* the growth. 3. *Acme,* the height. 4. *Paracme,* the decline of the disease.

ACME'LLA. See *Spilanthus acmella.*

A'CNE. (Ἀκνη. *Acna, æ.* f.) Foësius says it is a small pustule or pimple, which arises usually about the time that the body is in full vigour. It is the same as the *ionthos* and *varus* of some writers. An eruption of papulæ on the face, especially the forehead and chin, as well as on the shoulders, neck, and breast; it seldom descends to the lower part of the trunk, or to the extremities. It consists essentially in its original form of an obstruction to the free passage of the sebaceous matter from the follicles to the surface of the skin; in consequence of which that substance accumulates, hardens and distends the follicles which contain it, and ultimately causes inflammation and small abscesses. It is very frequent from the age of puberty to the twenty-fifth year of life, and sometimes long after. It is common to both sexes, but the most severe forms of it are seen in young men. Persons labouring under it, enjoy, for the most part, good health, and are mostly unable to refer the complaint to any obvious or known cause. The eruption occasionally recedes for a time, and recurs, more especially after violent exercise, great heat of the weather, a more liberal use of wine, or any unusual excitement of the cutaneous circulation. It is not often that medicines are resorted to for this complaint, except in females. It is altogether a local disease, and not much influenced by any plan of diet, medicines, or local applications. The best local applications are sea water, or water impregnated with muriate of soda, in the proportion of a drachm to half a pint. I have known a very dilute oxygenated muriatic acid beneficial. Thus:

℞. Aquæ distillatæ, f. ℥vij.
Spiritus tenuioris, f. ℥j.
Acidi muriatici.
Acidi nitrici, singulorum, ♏.vj.
Misce pro lotione ter quaterve in dies subtepidè applicanda.

These applications are only beneficial when redness or a state of suppuration is present. With their use very small doses of mercurial alteratives are required, and gentle aperients of the saline kind.

ACNE'STIS. (From α, priv and κναω, to scratch.) That part of the spine of the

back, which reaches from the metaphrenon, which is the part betwixt the shoulder-blades to the loins. This part seems to have been originally called so in quadrupeds only, because they cannot reach it to scratch.

A′COE. Ακοη. The sense of hearing.

ACOE′LIUS. (From α, priv. and κοιλια, the belly.) Without belly: applied to those who are so wasted, as to appear as if they had no belly. — *Galen.*

ACOITUS. (Ακοιτος; from α, priv. and κολη, sediment: so called because it has no sediment.) An epithet for honey, mentioned by Pliny; because it has no sediment.

ACOLOGY. (*Acologia, æ.* f.; from ἄκος, a remedy, and λογος, a discourse.) The doctrine of remedies. See *Materia medica.*

ACONDYLUS. (From α, priv. and κονδυλος, a joint.) Without a joint: formerly applied to flowers, the stalks of which are without a joint.

ACO′NION. Ακονιον. A particular form of medicine among the ancient physicians, made of powders levigated, and probably like collyria for the disorders of the eyes.

ACO′NITA. (*a, æ.* f.; from *aconitum*, the name of a plant.) A poisonous vegetable principle, probably alkaline, recently extracted from the *Aconitum napellus*, or wolfs-bane, by Mons. Brandes.

ACONITE. See *Aconitum.*

Aconi′ton. (From α, neg. and κονια, lime or plaster.) Not plastered; said to be applied to vessels which appeared to be without a lining.

ACONI′TUM. (*um, i.* m. Of this name various derivations are given by etymologists; as, — ακονη, a *whetstone* or *rock*, because it is usually found in barren and rocky places: — ακονιτος, from the α neg. and κονις, *dust*, because it grows without earth, or on barren situations: — agreeable to Ovid's description, *Quæ quia nascuntur dura vivacia caute, Agrestes aconita vocant:* from ακοναω, *to sharpen*, because it was used in medicines intended to quicken the sight: — ακων, ακη, a *dart*, because they poison darts therewith: and from ακονιζομαι, to accelerate; for it hastens death.) Aconite.

1. A genus of plants in the Linnæan system, all the species of which have powerful effects on the human body. Class, *Polyandria*; Order, *Trigynia.*

2. The pharmacopœial name of the common, or blue, wolfs-bane. See *Aconitum napellus.*

Aconitum anthora. The root of this plant, *Aconitum—floribus pentagynis, foliorum laciniis linearibus* of Linnæus, is employed medicinally. Its virtues are similar to those of the *Aconitum napellus.*

Aconitum napellus. Monkshood. Aconite. Wolfs-bane. Called also *Camorum, Canicida,* and *Cynoctanum.* *Aconitum napellus — foliorum laciniis linearibus, supernè latioribus, lineâ exaratis,* of Linnæus. This plant is cultivated in our gardens as an ornament, but is spontaneously produced in Germany, and some other northern parts of Europe. Every part is strongly poisonous, and the root is unquestionably the most powerful. When first chewed, it imparts a slight sensation of acrimony; but afterwards an insensibility or stupor at the apex of the tongue, and a pungent heat of the lips, gums, palate, and fauces, are perceived, followed with a general tremour and sensation of chilliness. The juice, applied to a wound, seemed to affect the whole nervous system. Even by keeping it long in the hand, or on the bosom, we are told, unpleasant symptoms have been produced. The fatal symptoms brought on by this poison are, convulsions, giddiness, insanity, violent purgings, both upwards and downwards, faintings, cold sweats, and death itself. Dr. Stork appears to be the first who gave the wolfs-bane internally as a medicine; and since his experiments were published, 1762, it has been generally and successfully employed in Germany and the northern parts of Europe, particularly as a remedy for obstinate rheumatisms; and many cases are related where this disease was of several years' duration, and had withstood the efficacy of other powerful medicines, as mercury, opium, antimony, hemlock, &c. yet, in a short time, was entirely cured by the aconitum. Instances are also given us of its good effects in gout, scrophulous swellings, venereal nodes, amaurosis, intermittent fevers, paralysis, ulceration, and scirrhus. This plant has been generally prepared as an extract or inspissated juice, after the manner directed in the Pharmacopœia: its efficacy is much diminished on being long kept. Like all virulent medicines, it should first be administered in small doses. Stoerk recommends two grains of the extract to be rubbed into a powder, with two drachms of sugar, and to begin with ten grains of this powder two or three times a day. We find, however, that the extract is often given from one grain to ten for a dose; and Stoll, Scherekbecker, and others, increased this quantity considerably. Instead of the extract, a tincture has been made of the dried leaves macerated in six times their weight of spirits of wine, and forty drops given for a dose. Some writers say, that the napellus is not poisonous in Sweden, Poland, &c.; but it should be noted that the species which is not poisonous, is the *Aconitum lycoctonum* of Linnæus.

Aco′nium. A little mortar.

Acopa. Dioscorides's name for the buckbean, or *Menyanthes trifoliata* of Linnæus.

A′COPON. (*on, i.* n.; from α, priv. and κοπος, weariness.) 1. A remedy against weariness, and is used in this sense by Hippocrates. Aph. viii. lib. ii.

2. But in time the word was applied to certain ointments.

3. According to Galen, and Paulus Ægineta, the *Acopa pharmaca* are remedies for indispositions of body which are caused by long or vehement motion.

Acopos. The name of a plant in Pliny, supposed to be the buck-bean, or *Menyanthes trifoliata* of Linnæus.

A'COR. (*or, oris.* m.; from *aceo*, to be sour.) Acidity and acrimony. It is sometimes used to express that sourness in the stomach contracted by indigestion, and from whence flatulencies and acid belching arise.

Acor'dina. Indian tutty.

ACO'RIA. (*a, æ.* f.; from α, priv. and κορεω, to satiate.) Insatiability. In Hippocrates, it means a good appetite and digestion.

ACORI'TES. (From ακορον, galangal.) *Acorites vinum.* A wine mentioned by Dioscorides, made with galangal, liquorice, &c. infused with wine.

ACORN. See *Quercus robur.*

ACORTINUS. A lupin.

A'CORUS. (*us, i.* m. Ακορον; from κορη, the pupil, because it was esteemed good for the disorders of the eyes.) The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Digynia.*

Acorus adulterinus. See *Iris.*

Acorus asiaticus. See *Acorus calamus.*

Acorus calamus. The systematic name of the sweet-flag, or acorus plant; which is also called, *Calamus aromaticus, Acorus verus, Acorus asiaticus, Calamus odoratus, Calamus vulgaris, Diringa, Jacerantatinga, Typha aromatica,* and *Clava rugosa. Acorus calamus — scapi mucrone longissimo foliaceo,* of Linnæus. The root has been long employed medicinally. It has a moderately strong aromatic smell; a warm, pungent, bitterish taste; and is deemed useful as a warm stomachic. Powdered, and mixed with some absorbent, it forms a useful and pleasant dentifrice.

Acorus palustris. See *Iris palustris.*

Acorus verus. See *Acorus calamus.*

Acorus vulgaris. See *Iris palustris.*

A'COS. (Ακος. *os, eos.* n.; from ακεομαι, to heal.) A remedy or cure.

ACO'SMIA. (*a, æ.* f.; from α, neg. and κοσμος, beautiful.) 1. Baldness; ill health; and applied to those who were bald, because they had lost their greatest ornament; and those in ill health, because they lost their beauty of countenance.

2. Κοσμος was applied to the regular order in fever: hence ακοσμος to irregularity, particularly of the critical days of fevers.

Aco'ste. (From ακοςη, barley.) An ancient food made of barley.

ACOTYLE'DON. (*on, onis.* f.; from α, priv. and κοτυληδων.) Without a cotyledon: applied in botany to a seed or plant which is not furnished with cotyledons or lobes; and, of course, when they vegetate, without seminal leaves. All the mosses are *plantæ acotyledones.*

ACOU'STIC. (*Acousticus;* from ακουω, to hear.) 1. Belonging to the ear or to sound.

2. That which is employed with a view to restore the sense of hearing, when wanting or diminished.

Acoustic duct. See *Meatus auditorius.*

Acoustic nerve. See *Portio mollis.*

Acral. (An Arabian word.) *Acra.*

1. Excessive venereal appetite.

2. The time of menstruation.

Acrai'palos. (Ακραιπαλος; from α, neg. and κραιπαλη, surfeit.) A remedy for the effects of a debauch.

Acra'sia. (From α, and κεραω, to mix.) Unhealthiness; intemperance.

Acra'tia. (From α, and κρατος, strength.) Weakness or intemperance.

Acrati'sma. (From ακρατον, unmixed wine. The derivation of this word is the same as *Acrasia*, because the wine used on the occasion was not mixed with water.) A breakfast among the old Greeks, consisting of a morsel of break, soaked in pure unmixed wine.

Acrato'meli. (From ακρατον, pure wine; and μελι, honey.) Wine mixed with honey.

ACRATOS. (From α, priv. and κεραννυμι, to mix.) Unmixed. A term often used by Hippocrates, and applied to the excretions and secretions.

A'CRE. (Ακρη, the top.) The extremity of the nose or any other part.

A'CREA. See *Acros.*

Acribei'a. (From ακριϐης, accurate.) An exact and accurate description and diagnosis, or distinction of diseases.

ACRID. See *Acris.*

ACRIFOLIUM. (From *acer*, sharp, and *folium*, a leaf.) A leaf which has prickles.

ACRIMONY. (*Acrimonia;* from *acris*, acrid.) A quality in substances by which they irritate, corrode, or dissolve others. It has been supposed, until very lately, there were acid and alkaline acrimonies in the blood, which produced certain diseases; and, although the humoral pathology is nearly exploded, the term venereal acrimony, and some others, are still and must be retained.

A'CRIS. 1. Acrid. A taste, the characteristic of which is pungency joined with heat. An acrid taste is not simply sour, or pungent, as there are bodies not acrid which, nevertheless, are pungent, as arum; nor is it simply hot, for there are many hot bodies which are not acrid, as zedoary and contrayerva. The characteristic, therefore, of acritude, consists in pungency joined with heat. Acrid bodies, applied to the skin, inflame and ulcerate it; when chewed, they produce saliva; and, when snuffed, sneezing.

2. Any fractured extremity.

3. The top of a mountain.

4. The locust.

Acri'sia. (From α, priv. and κρινω, to

judge or separate.) A turbulent state of a disease, which will scarcely suffer any judgment to be formed thereof.

ACRITAS. See *Acris.*

ACRITUS. (From α, neg. and κρινω, to judge.) A disease without a regular crisis, the event of which it is hazardous to judge.

ACROBY'STIA. (From ακρος, extreme, and βυω, to cover.) The prepuce which covers the extremity of the penis.

ACROCHEIRE'SIS. (From ακρος, extreme, and χειρ, a hand.) An exercise among the ancients. Probably a species of wrestling, where they held by the hands.

ACROCHEI'RIS. (From ακρος, extreme, and χειρ, a hand.) Gorræus says, it signifies the arm from the elbow to the ends of the fingers; χειρ signifying the arm, from the scapula to the fingers' end.

ACROCHO'RDON. (*um, i.* n.; from ακρος, extreme, and χορδη, a string.) A round excrescence on the skin, with a slender base; and which hath its name because of its situation on the surface of the skin. The Greeks call that excrescence an *achrochordon,* where something hard concretes under the skin, which is rather rough, of the same colour as the skin, slender at the base and broader above. Its size rarely exceeds that of a bean.

ACROCO'LON. (*on, i.* n.; from ακρος, extreme, and κωλον, a limb.) By this term the old writers express the extremities of animals, which are used in food, as the feet of calves, swine, sheep, oxen, or lambs, and of the broths of which jellies are frequently made. Castellus from Budæus adds, that the internal parts of animals are also called by this name.

ACROLENION. (From ακρος, the extremity, and ωλενη, the cubit.) See *Olecranon.*

ACROMA'NIA. (*a, æ.* f.; from ακρος, extreme, and μανια, madness.) Total or incurable madness.

ACROMIALIS. Acromial; appertaining to the acromion.

ACRO'MION. (*Acromium, i.* n.; from ακρον, extremity, and ωμος, the shoulder.) A process of the scapula or shoulder-blade. See *Scapula.*

ACRO'MPHALON. (*um, i.* n.; Ακρομφαλον; from ακρος, extreme, and ομφαλος, the navel.) The tip of the navel.

ACRON. This means, in general, the top of any thing; and is often applied, in a medical sense, to the best of its kind.

ACRO'NIA. (From ακρον, the extremity.) The amputation of an extremity, as a finger.

ACROPA'THUS. (Ακροπαθος. *us, i.* m.; from ακρος, extreme, and παθος, a disease.) A disease at the top or superior part. Hippocrates, *De Superfœtatione,* applies it to the internal orifice of the uterus; and in *Prædict.* lib. ii. to cancers, which appear on the surface of the body.

A'CROPIS. (From ακρον, the extremity, and οψ, the voice.) Imperfect articulation, from a fault in the tongue.

ACROPO'STHIA. (*a, æ.* f.; from ακρος, extreme, and ποσθη, the prepuce.) The extremity of the prepuce; or that part which is cut off in circumcision.

ACRO'PSILON. (*Acropsilus, i.* m.; from ακρος, extreme, and ψιλος, naked.) The extremity of the denuded glans penis.

ACROS. Ακρος. The top or extremity of a part: hence *acrea* and *acroteria* are the extremities, as the head, nose, legs, arms, ears, &c.

ACRO'SAPES. (From ακρος, extreme, and σηπω, to putrefy.) A term applied by Galen for good digestion, and adopted by those who considered the process of digesting the food was performed by a certain degree of putrefaction.

ACRO'SPELOS. (From ακρος, extreme, and πελος, black: so called because its ears, or tops, are often of a blackish colour.) *Acrospelus.* Wild oat grass, a species, most probably, of *Avena.*

ACROTE'RIA. See *Acros.*

ACROTERIA'SMUS. (From ακρος, extreme.) The amputation of an extremity.

ACROTHY'MION. (*Acrothymium, i.* n.; from ακρος, extreme, and θυμος, thyme.) *Acrothymia.* A wart, described by Celsus as hard, rough, with a narrow basis, and broad top; the top of the colour of thyme; it easily splits and bleeds.

ACROTICUS. (From ακρος, *summus;* whence ἀκρότης, ητος; *summitas; cacumen.*) Affecting the external surface.

ACROTISMUS. (From α, priv. and κροτος, *pulsus,* defect of pulse.) Acrotism or pulselessness.

ACT. MED. The abbreviation of Bartholius's *Acta Medica.*

ACT. PHILOS. The abbreviation of the Philosophical Transactions.

ACT. REG. SC. The abbreviation of the memoirs or acts of the Royal Academy of Sciences at Paris.

ACT. SOC. REG. The abbreviation of the Acts or Transactions of the Royal Society of London.

ACTÆ'A. (*Actea, æ.* f.; from αγω, to break.) *Acte.* The elder-tree: so called from its being easily broken. See *Sambucus nigra.*

A'CTINE. The herb *Bunias* or *Napus.*

ACTINOBOLI'SMUS. (From ακτιν, a ray, and βαλλω, to cast out.) *Diradiatio.* Irradiation. It is applied to the spirits, conveying the inclinations of the mind to the body.

ACTINOLITE. The name of a mineral which is found in primitive districts.

ACTION. (*Actio, onis.* f.; from *ago,* to act.) Action. I. The operation or exertion of an active power.

II. A faculty, power, or function. The actions or functions of the body are usually

divided by physiologists into vital, animal, or natural. 1. The *vital* functions, or actions, are those which are absolutely necessary to life, and without which animals cannot exist; as the action of the heart, lungs, and arteries. 2. The *natural* functions are those which are instrumental in repairing the several losses which the body sustains. Digestion, and the formation of chyle, &c. fall under this head. 3. The *animal* actions are those which we perform at will, through the medium of the mind. To this class belong the external and internal senses, the involuntary action of muscles, the voice, speech, watching and sleep.

Independently of these properties, each part may be said to have an action peculiar to itself: for instance, the liver, by virtue of a power which is peculiar to it, forms continually a liquid which is called bile: the same thing takes place in the kidneys with regard to the urine. The voluntary muscles, in certain states, become hard, change their form, and contract. These are, however, referrible to vitality. It is upon these the attention of the physiologist ought to be particularly fixed. Vital action depends evidently upon nutrition; and, reciprocally, nutrition is influenced by vital action. Thus, an organ that ceases to nourish, loses at the same time its faculty of acting: consequently, the organs, the action of which is oftenest repeated, possess a more active nutrition; and, on the contrary, those that act least possess a much slower nutritive motion.

The mechanism of vital action is unknown. There passes into the organ that acts an insensible molecular motion, which is as little susceptible of description as the nutritive motion. Every vital action, however simple, is the same in this respect.

ACTIVE. *Activus.* Having the property of acting with energy: thus we say, an active medicine, an active disease, as opposed to one that is passive.

ACTON. A village, four miles from London, where is a well that affords a purging water. This is one of the strongest purging waters near London; and has been drunk in the quantity of from one to three pints in a morning, against scorbutic and cutaneous affections. This medical spring is no longer resorted to by the public.

ACTUAL. (*Actualis*; from *αγω*, to act.) This word is applied to any thing endued with a property or virtue which acts by an immediate power inherent in it: it is the reverse of *potential.* Thus, a red-hot iron or fire is called an actual cautery, in contradistinction from caustics, which are called potential cauteries. Boiling water is actually hot; brandy, producing heat in the body, is potentially hot, though of itself cold.

Actual cautery. The red hot iron, or any red hot substance.

ACTUA'RIUS. This word was originally a title of dignity given to physicians at the court of Constantinople; but became afterwards the proper name of a celebrated Greek physician, John, (the son of Zachary, a Christian writer,) who flourished there about the 12th or 13th century. He is said to be the first Greek author who has treated of mild cathartics, as manna, cassia, &c. though they were long before in use among the Arabians. He appears also to have first noticed distilled waters. His works, however, are chiefly compiled from his predecessors.

ACTUA'TION. (*Actuatio*; from *ago*, to act.) That change wrought on a medicine, or any thing taken into the body, by the vital heat, which is necessary in order to make it act and have its effect.

ACTUS. (From *agor.*) An act, deed, transaction, or proceeding.

ACU'ITAS. Acrimony.

Acui'tio. (From *acuo*, to sharpen.) The sharpening an acid medicine by an addition of something more acid; or, in general, the increasing the force of any medicine, by an addition of something that hath the same sort of operation in a greater degree.

ACULEA'TUS. (From *aculeus*, a prickle.) Aculeate; prickly; covered with sharp-pointed bodies: applied to animals, fishes, and vegetables; as the sting of the bee, scorpion, and the prickles of the echini marini; and to stems covered with sharp-pointed bodies, the prickles of which separate with the epidermis, as in *Rosa centifolia.* See *Aculeus.*

ACU'LEUS. (*us, i.* m.; from *acus*, a needle; from *ἀκη*, or *ἀκις*; *cuspis*, a point.)

1. A prickle or sharp point.

2. A species of armature with which the stems, branches, and other parts of several plants are furnished; as in the rose, raspberry, goosebery. The *part* on which it grows is said to be aculeated, thus: —

Caulis aculeatus; as in the *Rosa canina.*

Folia aculeata; as in *Solanum marginatum.*

Calix aculeatus; as in *Solanum aculeatum.*

Stipula aculeata; as in *Rosa cinnamomia.*

Legumen aculeatum; as in *Scorpiurus muricata.*

From the *direction*: —

1. *Aculeus rectus*, not curved; as in *Rhamnus spina christi*, and *Rosa eglanteria.*

2. ——— *incurvus*, curved inward; as in *Mimosa cineraria.*

3. ——— *recurvus*, curved downward; as in *Rubus fruticosus*, and *Rosa rubiginosa.*

From the *number* in one place: —

1. *Aculeus solitarius*; as in *Rosa canina.*

2. ——— *bifidus*, or *gemidatus*, in pairs; there being two joined at the basis; as in *Rhamnus spina christi.*

3. ——— *trifidus*, three in one; as in *Barbaris vulgaris.*

A'culon. (Ακυλος. From *α*, neg. and *κυλοω*, to roll round: so called because its fruit is not involved in a cup, or sheath, like others.) The fruit or acorn of the ilex.

ACU'MEN. (*en*, *inis*. n.; from *acus*, a point.) 1. A point.

2. The extremity of a bone.

ACUMINATUS. (From *acuo*, to point.) Acuminate; or terminated by a point somewhat elongated. Applied by botanists to several parts of plants. An acuminate leaf is seen in the *Syringa vulgaris;* acuminate leaf-stalk, in that of *Saxifraga stellaris.*

ACUPUNCTU'RE. (*Acupunctura*, *æ*. f.; from *acus*, a needle, and *punctura*, a prick.) Acupuncture. Making small punctures with a needle in a part affected with pain. This method is practised in Siam, Japan, and other nations of the East, on all parts of the body, and had recourse to against headachs, lethargy, convulsions, &c. In some parts of America also, this practice is in use, but rather as an ornament than a remedy. Of late it has been tried in the cure of chronic rheumatism in this country, and, in some instances, with decided benefit.

A CUREB. Lead.

A'CURON. (From *α*, neg. and *κυρω*, to happen.) A name of the *Alisma*, because it produces no effect if taken internally.

ACUS. (*us*, *ûs*. f.; from *ακις*, a point.) A needle.

ACUS MOSCHATA. The *Geranium moschatum*, or musk geranium of Linnæus.

ACUS PASTO'RIS. See *Scandix anthriscus.*

ACUTANGULARIS. *Acutangulatus.* Acutangular: applied to parts of plants, as *Caulis acutangularis.*

ACU'TE. (*Acutus;* from *acuo*, to sharpen.) Sharp. 1. Used by naturalists to designate form: thus acute-leaved is one which tapers gradually to a slender, but not a prickly or thorny termination, as the leaves of the jessamine, and as in *Rumex acutus*, &c.

2. In *pathology*, it is applied to a sharp pungent pain; and to a disease which is attended with violent symptoms, terminates in a few days, and is attended with danger. It is opposed to a chronic disease, which is slow in its progress, and not so generally dangerous.

ACUTENA'CULUM. (*um*, *i*. n.; from *acus*, a needle, and *tenaculum*, a handle.) The handle for a needle, to make it penetrate easily when stitching a wound. Heister calls the *portaiguille* by this name.

ACY'ISIS. (*is*, *is*. f.; from *α*, neg. and *κυω*, to conceive.) A defect of conception, or barrenness in women.

A'CYRUS. (From *α*, priv. and *κυρος*, authority: so named from its little note in medicine.) See *Arnica montana.*

AD LIBITUM. At pleasure; without restraint.

ADÆMO'NIA. (From *α*, priv. and *δαιμων*, a genius of fortune, or divinity of fortune.) Hippocrates uses this word for uneasiness, restlessness, or anxiety, felt in acute diseases and some hysterical fits.

ADAIGES. Sal-ammoniac.

ADAM. *Adamus.* The first man whom God created, and the parent of the whole human race. Parts of animals and fruits are named after him; as Adam's apple, &c.

Adam's apple. See *Pomum Adami.*

Adam's needle. See *Yucca gloriosa.*

ADAMANTINE. Diamond-like, or appertaining to the diamond.

ADAMANTINE SPAR. A stone remarkable for its extreme hardness, which comes from the peninsula of Hither India, and also from China.

A'DAMAS. (*as*, *antis*. m.; from *α*, neg. and *δαμαω*, to conquer; as not being easily broken.) The adamant or diamond, the most precious of all stones, and which was formerly supposed to possess extraordinary cordial virtues.

ADAMI'TUM. A stone in the bladder.

ADANSO'NIA. (*a*, *æ*. fem.; from *Adanson* who first described the Æthiopian sour-gourd, a species of this genus.) The name of a genus of plants. Class, *Polyandria;* Order, *Monadelphia.* Monkies' bread.

ADANSONIA DIGITATA. This is the only species of the genus yet discovered. It is called the Ethiopian sour-gourd and monkies' bread, *Baobab* and *Bahobab.* It grows mostly on the west coast of Africa, from the Niger to the kingdom of Benin. The bark is called *lalo:* the negroes dry it in the shade, then powder and keep it in little cotton bags, and put two or three pinches into their food. It is mucilaginous, and generally promotes perspiration. The mucilage obtained from this bark is a powerful remedy against the epidemic fevers of the country that produces these trees; so is a decoction of the dried leaves. The fresh fruit is as useful as the leaves for the same purposes.

ADA'RCE. (From *α*, neg. and *δερκω*, to see.) A saltish concretion found about the reeds and grass in marshy grounds in Galatia, and so called because it hides them. It is used to clear the skin with in leprosies, tetters, &c. Dr. Plott gives an account of this production in his *Natural History of Oxfordshire.* It was formerly in repute for cleansing the skin from freckles.

ADARI'GES. An ammoniacal salt.

ADA'RNECK. Yellow orpiment.

ADARTICULA'TION. See *Arthrodia.*

ADCHER. The name in Avicenna and Dioscorides for the camel's hay. See *Andropogon schœnanthus.*

ADCORPORATIO. Adcorporation, or uniting in one body.

ADDEPHA'GIA. (*a*, *æ*. f.; from *αδην*, abundantly, and *φαγω*, to eat.) Insatiability. A voracious appetite.

ADDER. See *Coluber berus.*

ADDITAME'NTUM. (*um*, *i*. n.; from *addo*, to add.) An additament. An addition to any part, which, though not always, is sometimes found. A term formerly employed as synonymous with *epiphysis*, but now only applied to two portions of sutures

of the skull. See *Lambdoidal* and *Squamous sutures.*

ADDITAMENTUM COLI. See *Appendicula cæci vermiformis.*

ADDUCENS NUMERI. See *Pectoralis major.*

ADDUCENS OCULI. See *Rectus internus oculi.*

ADDUCENT. (*Adducens;* from *ad,* and *duco,* to draw.) Drawing together: applied to parts which draw those together to which they are connected.

ADDU'CTION. *Adductio.* The movement by which a part, or a body, moves towards another.

ADDU'CTOR. (From *ad* and *duco,* to draw.) A leader to, a drawer or contractor. The name of several muscles, the office of which is to bring forwards or draw together those parts of the body to which they are annexed.

ADDUCTOR AD MINIMUM DIGITUM. See *Adductor pollicis manus.*

ADDUCTOR AURIS. See *Retrahens auris.*

ADDUCTOR BREVIS ALTER. See *Abductor pollicis manus.*

ADDUCTOR BREVIS FEMORIS. A muscle of the thigh, which, with the *adductor longus* and *magnus femoris,* forms the *triceps adductor femoris. Adductor femoris secundus* of Douglas; *Triceps secundus* of Winslow. It is situated on the posterior part of the thigh, arising tendinous from the os pubis, near its joining with the opposite os pubis below, and behind the adductor longus femoris, and is inserted, tendinous and fleshy, into the inner and upper part of the linea aspera, from a little below the trochanter minor, to the beginning of the insertion of the adductor longus femoris. See *Triceps adductor femoris.*

ADDUCTOR FEMORIS PRIMUS. See *Adductor longus femoris.*

ADDUCTOR FEMORIS SECUNDUS. See *Adductor brevis femoris.*

ADDUCTOR FEMORIS TERTIUS. See *Adductor magnus femoris.*

ADDUCTOR FEMORIS QUARTUS. See *Adductor magnus femoris.*

ADDUCTOR INDICIS PEDIS. An external interosseous muscle of the fore-toe, which arises tendinous and fleshy, by two origins, from the root of the inside of the metatarsal bone of the fore-toe, from the outside of the root of the metatarsal bone of the great toe, and from the os cunieforme internum. It is inserted, tendinous, into the inside of the root of the first joint of the fore-toe. Its use is to pull the fore-toe inwards from the rest of the small toes.

ADDUCTOR LONGUS FEMORIS. A muscle situated on the posterior part of the thigh, which, with the *adductor brevis,* and *magnus femoris,* forms the *triceps adductor femoris. Adductor femoris primus* of Douglas; *Triceps minus* of Winslow. It arises by a pretty strong roundish tendon, from the upper and interior part of the os pubis, and ligament of its synchondrosis, on the inner side of the pectineus, and is inserted along the middle part of the linea aspera. See *Triceps adductor femoris.*

ADDUCTOR MAGNUS FEMORIS. A muscle which, with the *Adductor brevis femoris,* and the *Adductor longus femoris,* forms the *Triceps adductor femoris; Adductor femoris tertius et quartus* of Douglas. *Triceps magnus* of Winslow. It arises from the symphisis pubis, and all along the flat edge of the thyroid foramen, from whence it goes to be inserted into the linea aspera throughout its whole length. See *Triceps adductor femoris.*

ADDUCTOR MINIMI DIGITI PEDIS. An internal interosseous muscle of the foot. It arises, tendinous and fleshy, from the inside of the root of the metatarsal bone of the little toe. It is inserted, tendinous, into the inside of the root of the first joint of the little toe. Its use is to pull the little toe inwards.

ADDUCTOR OCULI. See *Rectus internus oculi.*

ADDUCTOR POLLICIS. See *Adductor pollicis manus.*

ADDUCTOR POLLICIS MANUS. A muscle of the thumb, situated on the hand. *Adductor pollicis; Adductor ad minimum digitum.* It arises, fleshy, from almost the whole length of the metacarpal bone that sustains the middle finger; from thence its fibres are collected together. It is inserted, tendinous, into the inner part of the root of the first bone of the thumb. Its use is to pull the thumb towards the fingers.

ADDUCTOR POLLICIS PEDIS. A muscle of the great toe, situated on the foot. *Antithenar* of Winslow. It arises, by a long thin tendon, from the os calcis, from the os cuboides, from the os cuneiforme externum, and from the root of the metatarsal bone of the second toe. It is inserted into the external os sesamoideum, and root of the metatarsal bone of the great toe. Its use is to bring this toe nearer to the rest.

ADDUCTOR PROSTATÆ. A name given by Sanctorini to a muscle, which he also calls *Levator prostatæ,* and which Winslow calls *Prostaticus superior.* Albinus, from its office, had very properly called it *Compressor prostatæ.*

ADDUCTOR TERTII DIGITI PEDIS. An external interosseous muscle of the foot, that arises, tendinous and fleshy, from the roots of the metatarsal bones of the third and little toe. It is inserted, tendinous, into the outside of the root of the first joint of the third toe. Its use is to pull the third toe outward.

ADDUCTOR THENAR RIOLANI. See *Abductor pollicis manus.*

A'DEC. Sour-milk, or butter-milk.

ADE'CIA. See *Adectos.*

ADE'CTOS. (From α, priv. and δακνω, to bite.) A medicine which relieves pain, by removing the uneasy situation caused by the stimulus of acrimonious medicines.

ADE'LPHIA. (Ἀδελφια, a relation.) Hip-

pocrates calls diseases by this name that resemble each other.

ADEMO'NIA. See *Adæmonia.*

A'DEN. (Αδην. *Aden, enis* m.; a gland.) 1. A gland. See *Gland.*

2. A bubo. See *Bubo.*

ADENDENS. An epithet applied to an ulcer which eats and destroys the glands.

ADE'NIA. (*a, æ.* f.) The name of a genus of plants. Class, *Hexandria;* Order, *Monogynia.*

ADENIA VENENATA. This plant, a native of Arabia, is a strong poison. Its antidote is the *Capparis spinosa.*

ADE'NIFORM. (*Adeniformis;* from *aden*, a gland, and *forma*, resemblance.) Glandiform; resembling a gland.

ADENO'GRAPHY. (*Adenographia, æ.* f.; from αδην, a gland, and γραφω, to write.) A treatise on the glands.

ADENOI'DES. (From αδην, a gland, and ειδος, resemblance.) Adenoid; glandiform; resembling a gland.

ADENO'LOGY. (*Adenologia, æ.* f.; from αδην, a gland, and λογος, a treatise.) The doctrine of the glands.

ADENO'SUS. (From αδην, a gland.) Adenous. Gland-like.

ADENOSUS ABSCESSUS. A hard abscess, resembling a gland.

ADEPHA'GIA. (*a, æ.* f.; from αδην, abundantly, and φαγω, to eat.) 1. Insatiable appetite. See *Bulimia.*

2. The goddess of gluttony.

ADEPHA'GUS. Adephagous. Voracious.

A'DEPS. (*s, is.* m. and f.) Fat. A concrete oily matter contained in the cellular membrane of animals, of a white or yellowish colour, with little or no smell or taste. It differs in different animals in solidity, colour, taste, &c., and likewise in the same animal at different ages. In infancy it is white, insipid, and not very solid; in the adult it is firm and yellowish; and in animals of an advanced age, its colour is deeper, its consistence various, and its taste in general stronger.

The fat appears to be useful in the animal economy, principally by its physical properties; it forms a sort of elastic cushion in the orbit upon which the eye moves with facility; in the soles of the feet, and in the hips, it forms a sort of layer, which renders the pressure exerted by the body, upon the skin and other soft parts, less severe; its presence beneath the skin concurs in rounding the outlines, in diminishing the bony and muscular projections, and in beautifying the form; and as all fat bodies are bad conductors of caloric, it contributes to the preservation of that of the body. Full persons, in general, suffer little in winter by the cold.

Age, and the various modes of life, have much influence upon the development of this fluid: very young children are generally fat. Fat is rarely abundant in the young man; but the quantity of it increases much towards the age of thirty years, particularly if the nourishment is succulent, and the life sedentary; the abdomen projects, the hips increase in size, as well as the breasts in women. The fat becomes more yellow in proportion as the age is more advanced. Fat meat is nourishing to those that have strong digestive powers. It is used externally, as a softening remedy, and enters into the composition of ointments and plasters.

Concerning the nature of this important product of animalisation, nothing definite was known, till Chevreuil devoted himself, with meritorious zeal and perseverance, to its investigation. He published, in the *Annales de Chimie*, seven successive memoirs on the subject, each of them surpassing its predecessor in interest. The following is a brief abstract of the whole: —

By dissolving fat in a large quantity of alkohol, and observing the manner in which its different portions were acted upon by this substance, and again separated from it, it is concluded that fat is composed of an *oily substance*, which remains fluid at the ordinary temperature of the atmosphere; and of another *fatty substance* which is much less fusible. Hence it follows, that fat is not to be regarded as a simple principle, but as a combination of the above two principles, which may be separated without alteration. One of these substances melts at about 45°, the other at 100°; the same quantity of alkohol which dissolves 3·2 parts of the *oily substance*, dissolves 1·8 only of the *fatty substance:* the first is separated from the alkohol in the form of an oil; the second in that of small silky needles.

Each of the constituents of natural fat was then saponified by the addition of potash; and an accurate description given of the compounds which were formed, and of the proportions of their constituents. The *oily substance* became saponified more readily than the *fatty substance;* the residual fluids in both cases contained the sweet oily principle; but the quantity that proceeded from the soap formed of the *oily substance* was four or five times as much as that from the *fatty substance*. The latter soap was found to contain a much greater proportion of the *pearly matter* than the former, in the proportion of 7·5 to 2·9; the proportion of the *fluid fat* was the reverse, a greater quantity of this being found in the soap formed from the oily substance of the fat.

When the principles which constitute fat unite with potassa, it is probable that they experience a change in the proportion of their elements. This change developes at least three bodies, *margarine, fluid fat*, and *the sweet principle;* and it is remarkable that it takes place without the absorption of any foreign substance, or the disengagement of any of the elements which are separated from each other. As this change is effected

by the intermedium of the alkali, we may conclude that the newly-formed principles must have a strong affinity for salifiable bases, and will, in many respects, resemble the acids; and, in fact, they exhibit the leading characters of acids, in reddening litmus, in decomposing the alkaline carbonates to unite to their bases, and in neutralising the specific properties of the alkalies.

Having already pointed out the analogy between the properties of acids and the principles into which fat is converted by means of the alkalies, the next object was to examine the action which other bases have upon fat, and to observe the effect of water, and of the cohesive force of the bases upon the process of saponification. The substances which the author subjected to experiment were soda, the four alkaline earths, alumina, and the oxides of zinc, copper, and lead. After giving a detail of the processes which he employed with these substances respectively, he draws the following general conclusions: — Soda, barytes, strontian, lime, the oxide of zinc, and the protoxide of lead, convert fat into *margarine, fluid fat, the sweet principle, the yellow colouring principle*, and *the odorous principle*, precisely in the same manner as potassa. Whatever be the base that has been employed, the products of saponification always exist in the same relative proportion. As the above-mentioned bases form, with margarine and the fluid fat, compounds which are insoluble in water, it follows, that the action of this liquid, as a solvent of soap, is not essential to the process of saponification. It is remarkable that the oxides of zinc and of lead, which are insoluble in water, and which produce compounds equally insoluble, should give the same results with potash and soda — a circumstance which proves that those oxides have a strong alkaline power. Although the analogy of magnesia to the alkalies is, in other respects, so striking, yet we find that it cannot convert fat into soap under the same circumstances with the oxides of zinc and lead.

It was found that 100 parts of hog's lard were reduced to the completely saponified state by 16·36 parts of potassa.

The properties of spermaceti were next examined: it melts at about 112°; it is not much altered by distillation; it dissolves readily in hot alkohol, but separates as the fluid cools; the solution has no effect in changing the colour of the tincture of litmus, a circumstance, as it is observed, in which it differs from margarine, a substance which, in many respects, it resembles. Spermaceti is capable of being saponified by potash, with nearly the same phenomena as when we submit hog's lard to the action of potash, although the operation is effected with more difficulty.

The author's general conclusion respecting the fatty matter of dead bodies is, that, even after the lactic acid, the lactates, and other ingredients which are less essential, are removed from it, it is not a simple, ammoniacal soap, but a combination of various fatty substances with ammonia, potash, and lime. The fatty substances which were separated from alkohol, had different melting points, and different sensible properties. It follows, from Chevreuil's experiments, that the substance which is the least fusible has more affinity for bases than those which are more so. It is observed, that adipocere possesses the characters of a saponified fat; it is soluble in boiling alkohol in all proportions, reddens litmus, and unites readily to potash, not only without losing its weight, but without having its fusibility or other properties changed.

Chevreuil has shown that hog's lard, in its natural state, has not the property of combining with alkalies; but that it acquires it by experiencing some change in the proportion of its elements. This change being induced by the action of the alkali, it follows that the bodies of the new formation must have a decided affinity for the species of body which has determined it. If we apply this foundation of the theory of saponification to the change into fat which bodies buried in the earth experience, we shall find that it explains the process in a very satisfactory manner. In reality, the fatty matter is the combination of the two adipose substances with ammonia, lime, and potash: one of these substances has the same sensible properties with margarine procured from the soap of hog's lard; the other, the orange-coloured oil, excepting its colour, appears to have a strong analogy with the fluid fat. From these circumstances, it is probable that the formation of the fatty matter may be the result of a proper saponification produced by ammonia, proceeding from the decomposition of the muscle, and by the potash and lime, which proceed from the decomposition of certain salts.

The author remarks, that he has hitherto made use of periphrases when speaking of the different bodies that he has been describing, as supposing that their nature was not sufficiently determined. He now, however, conceives that he may apply specific names to them, which will both be more commodious, and, at the same time, by being made appropriate, will point out the relation which these bodies bear to each other. The following is the nomenclature which he afterwards adopted: — The crystalline matter of human biliary calculi is named *cholesterine*, from the Greek words *χολη*, bile, and *στερεος*, solid; spermaceti is named *cetine*, from *κητος*, a whale; the fatty substance and the oily substance are named, respectively, *stearine* and *elaïne*, from the words *στεαρ*, fat, and *ελαιον*, oil; margarine, and the fluid fat obtained after saponification, are named *margaric acid* and *oleic acid*, while the term *cetic acid* is applied to what was named saponified

spermaceti. The *margarates, oleates,* and *cetates,* will be the generic names of the soaps or combinations which these acids are capable of forming by their union with salifiable bases.

Two portions of human fat were examined, one taken from the kidney, the other from the thigh. After some time, they both of them manifested a tendency to separate into two distinct substances, one of a solid, and the other of a fluid consistence: the two portions differed in their fluidity and their melting point. These variations depend upon the different proportions of stearine and elaïne; for the concrete part of fat is a combination of the two with an excess of stearine, and the fluid part is a combination with an excess of elaïne. The fat from the other animals was then examined, principally with respect to their melting point and their solubility in alcohol; the melting point was not always the same in the fat of the same species of animal.

Chevreuil next examines the change which is produced in the different kinds of fat respectively, by the action of potash. All the kinds of fat are capable of being perfectly saponified, when excluded from the contact of the air. In all of them there was the production of the saponified fat and the sweet principle; no carbonic acid was produced, and the soaps formed contained no acetic acid, or only slight traces of it. The saponified fats had more tendency to crystallise in needles than the fats in their natural state; they were soluble, in all proportions, in boiling alcohol of the specific gravity of ·821. The solution, like that of the saponified fat of the hog, contained both the margaric and the oleic acids. They were less fusible than the fats from which they were formed: thus, when human fat, after being saponified, was melted, the thermometer became stationary at 95°, when the fluid began to congeal; in that of the sheep, the thermometer fell to 118·5°, and rose to 122°; in that of the ox it remained stationary at 118·5°; and in that of the jaguar at 96·5°.

The method of analysis employed was to expose the different kinds of fat to boiling alcohol, and to suffer the mixture to cool. A portion of the fat that had been dissolved was then separated in two states of combination; one with an excess of stearine was deposited, the other with an excess of elaïne remained in solution. The first was separated by filtration; and, by distilling the filtered fluid, and adding a little water towards the end of the operation, we obtain the second in the retort, under the form of an alkoholic aqueous fluid. The distilled alkohol which had been employed in the analysis of human fat had no sensible odour; the same was the case with that which had served for the analysis of the fat of the ox, of the hog, and of the goose. The alkohol, which had been employed in the analysis of the fat of the sheep, had a slight odour of candle-grease.

All the soaps of stearine were analysed by the same process as the soap of the fat from which they had been extracted; there was procured from them the pearly super-margarate of potash and the oleate; but the first was much more abundant than the second. The margaric acid of the stearines had precisely the same capacity for saturation as that which was extracted from the soaps formed of fat. The margaric acid of the stearine of the sheep was fusible at 144°, and that of the stearine of the ox at 143·5°; while the margaric acids of the hog and the goose had nearly the same fusibility with the margaric acid of the fat of these animals.

Chevreuil technically calls spermaceti *cetine*. In the fifth memoir, in which we have an account of many of the properties of this substance, it was stated, that it is not easily saponified by potassa, but that it is converted by this reagent into a substance which is soluble in water, but has not the saccharine flavour of the sweet principle of oils; into an acid analogous to the margaric, to which the name of *cetic* was applied; and into another acid, which was conceived to be analogous to the oleic. Since he wrote the fifth memoir, the author has made the following observations on this subject: — 1. That the portion of the soap of cetine which is insoluble in water, or the cetate of potash, is in part gelatinous, and in part pearly; 2. That two kinds of crystals were produced from the cetate of potash which had been dissolved in alkohol; 3. That the cetate of potash, exposed, under a bell-glass, to the heat of a stove, produced a sublimate of a fatty matter, which was not acid. From this circumstance, Chevreuil was led to suspect that the supposed cetic acid might be a combination, or a mixture of margaric acid, and of a fatty body which was not acid. He accordingly treated a small quantity of it with barytic water, and boiled the soap which was formed in alkohol; the greatest part of it was not dissolved, and the alkoholic solution, when cooled, filtered, and distilled, produced a residuum of fatty matter which was not acid. The suspicion being thus confirmed, Chevreuil determined to subject cetine to a new train of experiments. Being treated with boiling alkohol, a cetine was procured, which was fusible at 120°, and a yellow fatty matter which began to become solid at 89.5°, and which, at 73·5° contained a fluid oil, which was separated by filtration. — *Ure's Chem. Dict.*

Adeps anserinus. Goose-grease.

Adeps præparata. Prepared lard. Cut the lard into small pieces, melt it over a slow fire, and press it through a linen cloth.

Adeps suillæ. Hog's lard. This forms the basis of many ointments, and is used extensively for culinary purposes.

ADEPT. (*Adeptus*; from *adipiscor*, to obtain.) 1. A skilful alchemist. Such are called so as pretend to some extraordinary skill in chemistry; but these have too often proved either enthusiasts or impostors.

2. The professors of the *Adepta Philosophia*, that philosophy the end of which is the transmutation of metals, and an universal remedy, were also called *Adepts*.

3. So Paracelsus calls that which treats of the diseases that are contracted by celestial operations, or communicated from heaven.

ADFLA'TUS. See *Erysipelas*.

ADHÆ'SION. (*Adhesio*; from *adhæreo*, to stick to.) 1. In a general sense, the state of two bodies which are joined or fastened together, either by mutual attraction, the interposition of their own parts, or the impulse or pressure of external bodies.

2. In *Chemistry*. The property which certain bodies have of attracting to themselves other bodies, or the force by which they adhere together; thus water adheres to the finger; mercury to gold, &c.

3. In *Surgery*. See *Inflammation*.

ADHÆSIVE. (*Adhæsivus*; from *adhæreo*, to stick to.) Having the property of sticking.

Adhæsive inflammation. See *Inflammation*.

Adhæsive plaster. See *Emplastrum resinæ*.

Adhato'da. (A Zeylanic term, signifying expelling a dead fœtus.) See *Justicia adhatoda*.

Adiachy'tos. (From α, neg. and διαχυω, to diffuse, scatter, or be profuse.) Decent in point of dress. Hippocrates thinks the dress of a fop derogatory from the physician, though thereby he hide his ignorance, and obtain the good opinion of his patients.

ADIA'NTUM. (*um*, *i*. n. Αδιαντον; from α, neg. and διαινω, to grow wet: so called, because its leaves are not easily made wet.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia*; Order, *Filices*. Maidenhair.

Adiantum æthiopicum. Cape of Good Hope maidenhair. This is used as an astringent and aromatic.

Adiantum album. See *Asplenium murale*.

Adiantum aureum. The golden maidenhair. See *Polytrichum commune*.

Adiantum canadense. See *Adiantum pedatum*.

Adiantum capillus veneris. Maidenhair. *Adiantum vulgare*. *Adiantum verum*. *Capillus veneris*. The leaves of this plant are somewhat sweet and austere to the palate, and possess mucilaginous qualities. A syrup. The *syrop de capillaire* is prepared from them, which is much esteemed in France against catarrhs. Orange-flower water, and a proportion of honey, it is said, are usually added. It acts chiefly as a demulcent, sheathing the inflamed sides of the glottis.

Adiantum nigrum. See *Asplenium adiantum nigrum*.

Adiantum pedatum. *Adiantum canadense*. *Capillus veneris canadensis*. Canada maidenhair. This plant is in common use in France, for the same purposes as the common *Adiantum capillus veneris* in this country, and appears to be far superior to it.

Adiantum rubrum. See *Asplenium trichomanes*.

Adiantum verum. See *Adiantum capillus veneris*.

Adiantum vulgare. See *Adiantum capillus*.

ADIAPHOROUS. *Adiaphorus*. A term which implies the same with neutral; and was formerly applied to some spirits and salts, which are neither of an acid nor alkaline nature.

ADIAPNEU'STIA. (*a*, *æ*. f.; from the privative participle α, and διαπνεω, *perspiro*.) A diminution or obstruction of natural perspiration, and that in which the ancients chiefly placed the cause of fevers.

Adiapto'tos. (From α, neg. and διαπιπτω, to stumble or slide.) Firm. This term is also applied to an electuary, composed of stone-parsley, henbane, white pepper, and given against colic.

ADIARRHŒ'A. (*a*, *æ*. f.; from α, priv. and διαῤῥεω, to flow out or through.) A suppression of the necessary evacuations from the bowels.

Adiathorosus. A spirit of tartar.

Adibat. Mercury.

A'DICE. Αδικη. A nettle.

ADIPOCERA. (*a*, *æ*. f.; from *adeps*, fat, and *cera*, wax.) Adipocere. A particular spermaceti, or fat-like substance, formed by the spontaneous conversion of animal matter, under certain conditions. This conversion has long been well known, and is said to have been mentioned in the works of Lord Bacon. On the occasion of the removal of a very great number of human bodies from the ancient burying-place des Innocens at Paris, facts of this nature were observed in the most striking manner. Fourcroy may be called the scientific discoverer of this peculiar matter, as well as the saponaceous ammoniacal substance contained in bodies abandoned to spontaneous destruction in large masses. This chemist read a memoir on the subject, in the year 1789, to the Royal Academy of Sciences, from which the general contents are here abstracted.

At the time of clearing the before-mentioned burying-place, certain philosophers were specially charged to direct the precautions requisite for securing the health of the workmen. A new and singular object of research presented itself, which had been necessarily unknown to preceding chemists. It was impossible to foretell what might be the contents of a soil overloaded, for successive ages, with bodies resigned to the putrefactive process. This spot differed from common burying-ground, where each individual object is surrounded by a portion of the soil.

It was the burying-ground of a large district, wherein successive generations of the inhabitants had been deposited for upwards of three centuries. The number of burials was supposed to be some thousands annually; the bodies were deposited in pits or trenches, about 30 feet deep, each capable of holding about from 1200 to 1500 bodies, which were then covered with a few feet of earth, so that the whole area, occupying about 7000 square yards, was converted into a mass, consisting principally of animal matter, rising several feet above the natural level of the soil. It could not be foreseen that the entire decomposition might be retarded for more than forty years; neither was there any reason to suspect that any remarkable difference would arise from the singularity of situation.

The remains of the human bodies immersed in this mass of putrescence, were found in three different states, according to the time they had been buried, the place they occupied, and their relative situations with regard to each other. The most ancient were simply portions of bones, irregularly dispersed in the soil, which had been frequently disturbed. A second state, in certain bodies which had always been insulated, exhibited the skin, the muscles, tendons, and aponeuroses, dry, brittle, hard, more or less grey, and similar to what are called mummies in certain caverns where this change has been observed, as in the catacombs at Rome, and the vault of the Cordeliers at Toulouse.

The third and most singular state of these soft parts was observed in the bodies which filled the common graves or repositories. By this appellation are understood cavities of thirty feet in depth, and twenty on each side, which were dug in the burying-ground of the Innocents, and were appropriated to contain the bodies of the poor; which were placed in very close rows, each in its proper wooden bier. The necessity for disposing a great number, obliged the men charged with this employment to arrange them so near each other, that these cavities might be considered, when filled as an entire mass of human bodies, separated only by two planks of about half an inch thick. Each cavity contained between one thousand and fifteen hundred. When one common grave of this magnitude was filled, a covering of about one foot deep of earth was laid upon it, and another excavation of the same sort was made at some distance. Each grave remained open about three years, which was the time required to fill it. According to the urgency of circumstances, the graves were again made on the same spot, after an interval of time, not less than fifteen years, nor more than thirty. Experience had taught the workmen that this time was not sufficient for the entire destruction of the bodies, and had shown them the progressive changes which form the object of Fourcroy's memoir.

The first of these large graves, opened in the presence of this chemist, had been closed for fifteen years. The coffins were in good preservation, but a little settled, and the wood had a yellow tinge. When the covers of several were taken off, the bodies were observed at the bottom, leaving a considerable distance between their surface and the cover, and flattened, as if they had suffered a strong compression. The linen which had covered them was slightly adherent to the bodies; and, with the form of the different regions, exhibited, on removing the linen, nothing but irregular masses of a soft, ductile matter, of a grey-white colour. These masses environed the bones on all sides, which had no solidity, but broke by any sudden pressure. The appearance of this matter, its obvious composition and its softness, resembled common white cheese; and the resemblance was more striking from the print which the threads of the linen had made upon its surface. This white substance yielded to the touch, and became soft when rubbed for a time between the fingers.

No very offensive smell was emitted from these bodies. The novelty and singularity of the spectacle, and the example of the grave-diggers, dispelled every idea either of disgust or apprehension. These men asserted that they never found this matter, by them called *gras* (fat), in bodies interred alone; but that the accumulated bodies of the common graves only were subject to this change. On a very attentive examination of a number of bodies passed to this state, Fourcroy remarked that the conversion appeared in different stages of advancement; so that, in various bodies, the fibrous texture and colour, more or less red, were discernible within the fatty matter; that the masses covering the bones were entirely of the same nature, offering indistinctly, in all the regions, a grey substance, for the most part soft and ductile, sometimes dry, always easy to be separated in porous fragments, penetrated with cavities, and no longer exhibiting any traces of membranes, muscles, tendons, vessels, or nerves. On the first inspection of these white masses, it might have been concluded that they were simply the cellular tissue, the compartments and vesicles of which they very well represented.

By examining this substance in the different regions of the body, it was found that the skin is particularly disposed to this remarkable alteration. It was afterwards perceived that the ligaments and tendons no longer existed, or at least had lost their tenacity; so that the bones were entirely unsupported, and left to the action of their own weight. Whence their relative places were preserved in a certain degree by mere juxtaposition; the least effort being sufficient to separate them. The grave-diggers availed themselves of this circumstance in the removal of the bodies; for they rolled them up from head to feet, and by that means

separated from each other the extremities of the bones, which had formerly been articulated. In all those bodies which were changed into the fatty matter, the abdominal cavity had disappeared. The teguments and muscles of this region being converted into the white matter, like the other soft parts, had subsided upon the vertebral column, and were so flattened as to leave no place for the viscera; and accordingly there was scarcely ever any trace observed in the almost obliterated cavity. This observation was for a long time matter of astonishment to the investigators. In vain did they seek, in the greater number of bodies, the place and substance of the stomach, the intestines, the bladder, and even the liver, the spleen, the kidneys, and the matrix in females. All these viscera were confounded together, and for the most part no traces of them were left. Sometimes only certain irregular masses were found, of the same nature as the white matter, of different bulks, from that of a nut to two or three inches in diameter, in the regions of the liver or of the spleen.

The thorax likewise offered an assemblage of facts no less singular and interesting. The external part of this cavity was flattened and compressed like the rest of the organs; the ribs, spontaneously luxated in their articulations with the vertebræ, were settled upon the dorsal column; their arched part left only a small space on each side between them and the vertebræ. The pleura, the mediastinum, the large vessels, the aspera arteria, and even the lungs and the heart, were no longer distinguishable; but for the most part had entirely disappeared, and in their place nothing was seen but some parcels of the fatty substance. In this case, the matter which was the product of decomposition of the viscera, charged with blood and various humours, differs from that of the surface of the body, and the long bones, in the red or brown colour possessed by the former. Sometimes the observers found in the thorax a mass irregularly rounded, of the same nature as the latter, which appeared to them to have arisen from the fat and fibrous substance of the heart. They supposed that this mass, not constantly found in all the subjects, owed its existence to a superabundance of fat in this viscus, where it was found. For the general observation presented itself, that, in similar circumstances, the fat parts undergo this conversion more evidently than the others, and afford a larger quantity of the white matter.

The external region in females exhibited the glandular and adipose mass of the breasts converted into the fatty matter, very white and very homogeneous.

The head was, as has already been remarked, environed with the fatty matter; the face was no longer distinguishable in the greatest number of subjects; the mouth disorganised, exhibited neither tongue nor palate; and the jaws, luxated and more or less displaced, were environed with irregular layers of the white matter. Some pieces of the same matter usually occupied the place of the parts situated in the mouth; the cartilages of the nose participated in the general alteration of the skin; the orbits, instead of eyes, contained white masses; the ears were equally dis organised; and the hairy scalp, having undergone a similar alteration to that of the other organs, still retained the hair. Fourcroy remarks incidentally, that the hair appears to resist every alteration much longer than any other part of the body. The cranium constantly contained the brain contracted in bulk; blackish at the surface, and absolutely changed like the other organs. In a great number of subjects which were examined, this viscus was never found wanting, and it was always in the above-mentioned state; which proves that the substance of the brain is greatly disposed to be converted into the fat matter.

Such was the state of the bodies found in the burial-ground des Innocens. Its modifications were also various. Its consistence in bodies lately changed, that is to say, from three to five years, was soft and very ductile, containing a great quantity of water. In other subjects converted into this matter for a long time, such as those which occupied the cavities which had been closed thirty or forty years, this matter is drier, more brittle and in denser flakes. In several which were deposited in dry earth, various portions of the fatty matter had become semitransparent. The aspect, the granulated texture, and brittleness of this dried matter, bore a considerable resemblance to wax.

The period of the formation of this substance had likewise an influence on its properties. In general, all that which had been formed for a long time was white, uniform, and contained no foreign substance, or fibrous remains; such, in particular, was that afforded by the skin of the extremities. On the contrary, in bodies recently changed, the fatty matter was neither so uniform nor so pure as in the former; but it was still found to contain portions of muscles, tendons, and ligaments, the texture of which, though already altered and changed in its colour, was still distinguishable. Accordingly, as the conversion was more or less advanced, these fibrous remains were more or less penetrated with the fatty matter, interposed as it were between the interstices of the fibres. This observation shows, that it is not merely the fat which is thus changed, as was natural enough to think at first sight. Other facts confirm this assertion. The skin, as has been remarked, becomes easily converted into very pure white matter, as does likewise the brain, neither of which has been considered by anatomists to be fat. It is true, nevertheless, that the unctuous parts, and bodies charged with fat, appear more easily and speedily to pass to the state under consideration. This

was seen in the marrow, which occupied the cavities of the longer bones. And again, it is not to be supposed but that the greater part of these bodies had been emaciated by the illness which terminated their lives; notwithstanding which, they were all absolutely turned into this fatty substance.

An experiment made by Poulletier de la Salle, and Fourcroy likewise, evinced that a conversion does not take place in the fat alone. Poulletier had suspended in his laboratory a small piece of the human liver, to observe what would arise to it by the contact of the air. It partly putrefied, without, however, emitting any very noisome smell. Larvæ of the dermestes and bruchus attacked and penetrated it in various directions; at last it became dry, and after more than ten years' suspension, it was converted into a white friable substance, resembling dried agaric, which might have been taken for an earthy substance. In this state it had no perceptible smell. Poulletier was desirous of knowing the state of this animal matter, and experiment soon convinced him and Fourcroy that it was far from being in the state of an earth. It melted by heat, and exhaled in the form of vapour, which had the smell of a very fetid fat; spirit of wine separated a concrescible oil, which appeared to possess all the properties of spermaceti. Each of the three alkalies converted it into soap; and, in a word, it exhibited all the properties of the fatty matter of the burial-ground of the Innocents exposed for several months to the air. Here then was a glandular organ, which in the midst of the atmosphere had undergone a change similar to that of the bodies in the burying-place; and this fact sufficiently shows, that an animal substance which is very far from being of the nature of grease, may be totally converted into this fatty substance.

Among the modifications of this remarkable substance in the burying-ground before mentioned, it was observed that the dry, friable, and brittle matter, was most commonly found near the surface of the earth, and the soft ductile matter at a greater depth. Fourcroy remarks, that this dry matter did not differ from the other merely in containing less water, but likewise by the volatilisation of one of its principles.

The grave-diggers assert, that near three years are required to convert a body into this fatty substance. But Dr. Gibbes of Oxford found, that lean beef secured in a running stream was converted into this fatty matter at the end of a month. He judges from facts, that running water is most favourable to this process. He took three lean pieces of mutton, and poured on each a quantity of the three common mineral acids. At the end of three days, each was much changed; that in the nitric acid was very soft, and converted into the fatty matter; that in the muriatic acid was not in that time so much altered; the sulphuric acid had turned the other black. Lavoisier thinks that this process may hereafter prove of great use in society. It is not easy to point out what animal substance, or what situation, might be the best adapted for an undertaking of this kind.

The result of Fourcroy's enquiries into the ordinary changes of bodies recently deposited in the earth, was not very extensive. The grave-diggers informed him, that these bodies interred do not perceptibly change colour for the first seven or eight days; that the putrid process disengages elastic fluid, which inflates the abdomen, and at length bursts it; that this event instantly causes vertigo, faintness, and nausea in such persons as unfortunately are within a certain distance of the scene where it takes place; but that when the object of its action is nearer, a sudden privation of sense, and frequently death, is the consequence. These men are taught by experience, that no immediate danger is to be feared from the disgusting business they are engaged in, excepting at this period, which they regard with the utmost terror. They resisted every inducement and persuasion which these philosophers made use of, to prevail on them to assist their researches into the nature of this active and pernicious vapour. Fourcroy takes occasion from these facts, as well as from the pallid and unwholesome appearance of the grave-diggers, to reprobate burials in great towns or their vicinity.

Such bodies as are interred alone, in the midst of a great quantity of humid earth, are totally destroyed by passing through the successive degrees of the ordinary putrefaction; and this destruction is more speedy, the warmer the temperature. But if these insulated bodies be dry and emaciated; if the place of deposition be likewise dry, and the locality and other circumstances such, that the earth, so far from receiving moisture from the atmosphere, becomes still more effectually parched by the solar rays; the animal juices are volatilised and absorbed, the solids contract and harden, and a peculiar species of mummy is produced. But every circumstance is very different in the common burying-grounds. Heaped together almost in contact, the influence of external bodies affects them scarcely at all, and they become abandoned to a peculiar disorganisation, which destroys their texture, and produces the new and most permanent state of combination here described. From various observations, it was found, that this fatty matter was capable of enduring in these burying-places for thirty or forty years, and is at length corroded and carried off by the aqueous putrid humidity which there abounds.

Among other interesting facts, afforded by the chemical examination of the substance, are the following from experiments by Fourcroy.

1. This substance is fused at a less degree

of heat than that of boiling water, and may be purified by pressure through a cloth, which disengages a portion of fibrous and bony matter. 2. The process of destructive distillation by a very graduated heat was begun, but not completed on account of its tediousness, and the little promise of advantage it afforded. The products which came over were water charged with volatile alkali, a fat oil, concrete volatile alkali, and no elastic fluid during the time the operation was continued. 3. Fragments of the fatty matter exposed to the air, during the hot and dry summer of 1786, became dry, brittle, and almost pulverulent at the surface. On a careful examination, certain portions were observed to be semitransparent, and more brittle than the rest. These possessed all the apparent properties of wax, and did not afford volatile alkali by distillation. 4. With water, this fatty matter exhibited all the appearances of soap, and afforded a strong lather. The dried substance did not form the saponaceous combination with the same facility or perfection as that which was recent. About two-thirds of this dried matter separated from the water by cooling, and proved to be the semitransparent substance resembling wax. This was taken from the surface of the soapy liquor, which being then passed through the filter, left a white soft shining matter, which was fusible and combustible. 5. Attempts were made to ascertain the quantity of volatile alkali in this substance, by the application of lime and of the fixed alkalies, but without success: for it was difficult to collect and appreciate the first portions which escaped, and likewise to disengage the last portions. The caustic volatile alkali, with the assistance of a gentle heat, dissolved the fatty matter, and the solution became perfectly clear and transparent at the boiling temperature of the mixture, which was at 185° F. 6. Sulphuric acid, of the specific gravity of 2·0, was poured upon six times its weight of the fatty matter, and mixed by agitation. Heat was produced, and a gas or effluvium of the most insupportable putrescence was emitted, which infected the air of an extensive laboratory for several days. Fourcroy says, that the smell cannot be described, but that it is one of the most horrid and repulsive that can be imagined. It did not, however, produce any indisposition either in himself or his assistants. By dilution with water, and the ordinary processes of evaporation and cooling, properly repeated, the sulphates of ammonia and of lime were obtained. A substance was separated from the liquor, which appeared to be the waxy matter, somewhat altered by the action of the acid. 7. The nitrous and muriatic acids were also applied, and afforded phenomena worthy of remark, but which for the sake of conciseness are here omitted. 8. Alkohol does not act on this matter at the ordinary temperature of the air; but by boiling it dissolves one-third of its own weight, which is almost totally separable by cooling as low as 55°. The alkohol, after this process, affords by evaporation a portion of that waxy matter which is separable by acids, and is therefore the only portion soluble in cold alkohol. The quantity of fatty matter operated on was 4 ounces, or 2304 grains, of which the boiling spirit took up the whole except 26 grains, which proved to be a mixture of 20 grains of ammoniacal soap, and 6 or 8 grains of the phosphates of soda and of lime. From this experiment, which was three times repeated with similar results, it appears that alkohol is well suited to afford an analysis of the fatty matter. It does not dissolve the neutral salts; when cold, it dissolves that portion of concrete animal oil from which the volatile alkali had flown off; and when heated, it dissolves the whole of the truly saponaceous matter, which is afterwards completely separated by cooling. And accordingly it was found, that a thin plate of the fatty matter, which had lost nearly the whole of its volatile alkali, by exposure to the air for three years, was almost dissolved by the cold alkohol.

The concrete oily or waxy substance obtained in these experiments constitutes the leading object of research, as being the peculiar substance with which the other well known matters are combined. It separates spontaneously by the action of the air, as well as by that of acids. These last separate it in a state of greater purity, the less disposed the acid may be to operate in the way of combustion. It is requisite, therefore, for this purpose, that the fatty matter should be previously diffused in 12 times its weight of hot water; and the muriatic or acetous acid is preferable to the sulphuric or the nitrous. The colour of the waxy matter is greyish; and though exposure to the air, and also the action of the oxygenated muriatic acid, did produce an apparent whiteness, it nevertheless disappeared by subsequent fusion. No method was discovered by which it could be permanently bleached.

The nature of this wax or fat is different from that of any other known substance of the like kind. When slowly cooled after fusion, its texture appears crystalline or shivery, like spermaceti; but a speedy cooling gives it a semitransparency resembling wax. Upon the whole, nevertheless, it seems to approach more nearly to the former than to the latter of these bodies. It has less smell than spermaceti, and melts at 127° F.; Dr. Bostock says 92°. Spermaceti requires 6° more of heat to fuse it, (according to Dr. Bostock, 20°). The spermaceti did not so speedily become brittle by cooling as the adipocire. One ounce of alkohol, of the strength between 39 and 40 degrees of Baumé's aërometer, dissolved when boiling hot 12 gros of this substance, but the same quantity in like circumstances dissolved only 30 or 36 grains of spermaceti. The separation of these matters was also remark-

ably different, the spermaceti being more speedily deposited, and in a much more regular and crystalline form. Ammonia dissolves with singular facility, and even in the cold, this concrete oil separated from the fatty matter; and by heat it forms a transparent solution, which is a true soap. But no excess of ammonia can produce such an effect with spermaceti.

Fourcroy concludes his memoir with some speculations on the change to which animal substances in peculiar circumstances are subject. In the modern chemistry, soft animal matters are considered as a composition of the oxides of hydrogene and carbonated azote, more complicated than those of vegetable matters, and therefore more incessantly tending to alteration. If then the carbon be conceived to unite with the oxygene, either of the water which is present, or of the other animal matters, and thus escape in large quantities in the form of carbonic acid gas, we shall perceive the reason why this conversion is attended with so great a loss of weight, namely, about nine-tenths of the whole. The azote, a principle so abundant in animal matters, will form ammonia by combining with the hydrogene; part of this will escape in the vaporous form, and the rest will remain fixed in the fatty matter. The residue of the animal matters deprived of a great part of their carbon, of their oxygene, and the whole of their azote, will consist of a much greater proportion of hydrogene, together with carbon and a minute quantity of oxygene. This, according to the theory of Fourcroy, constitutes the waxy matter, or adipocire, which, in combination with ammonia, forms the animal soap, into which the dead bodies are thus converted.

Muscular fibre, macerated in dilute nitric acid, and afterwards well washed in warm water, affords pure adipocire, of a light yellow colour, nearly of the consistence of tallow, of a homogeneous texture, and of course free from ammonia. This is the mode in which it is now commonly procured for chemical experiment.

Ambergris appears to contain adipocire in large quantity, rather more than half of it being of this substance.

Adipocire has been more recently examined by Chevreuil. He found it composed of a small quantity of ammonia, potash, and lime, united to much margarine, and to a very little of another fatty matter different from that. Weak muriatic acid seizes the three alkaline bases. On treating the residue with a solution of potash, the margarine is precipitated in the form of a pearly substance, while the other fat remains dissolved. Fourcroy being of opinion that the fatty matter of animal carcasses, the substance of biliary calculi, and spermaceti, were nearly identical, gave them the same name of adipocire; but it appears from the researches of Chevreuil that these substances are very different from each other.

In the Philosophical Transactions for 1813, there is a very interesting paper on the above subject by Sir E. Home and Mr. Brande. He adduces many curious facts to prove that adipocire is formed by an incipient and incomplete putrefaction. Mary Howard, aged 44, died on the 12th May 1790, and was buried in a grave ten feet deep at the east end of Shoreditch church-yard, ten feet to the east of the great common sewer, which runs from north to south, and has always a current of water in it, the usual level of which is eight feet below the level of the ground, and two feet above the level of the coffins in the graves. In August 1811 the body was taken up, with some others buried near it, for the purpose of building a vault, and the flesh in all of them was converted into adipocire or spermaceti. At the full and new moon the tide raises water into the graves, which at other times are dry. To explain the extraordinary quantities of fat or adipocire formed by animals of a certain intestinal construction, Sir E. observes, that the current of water which passes through their colon, while the loculated lateral parts are full of solid matter, places the solid contents in somewhat similar circumstances to dead bodies in the banks of a common sewer.

The circumstance of ambergris, which contains 60 per cent. of fat, being found in immense quantities in the lower intestines of the spermaceti whales, and never higher up than seven feet from the anus, is an undeniable proof of fat being formed in the intestines; and as ambergris is only met with in whales out of health, it is most probably collected there from the absorbents, under the influence of disease, not acting so as to take it into the constitution. In the human colon, solid masses of fat are sometimes met with in a diseased state of that canal. A description and analysis by Dr. Ure of a mass of ambergris, extracted in Perthshire from the rectum of a living woman, were published in a London Medical Journal in September 1817. There is a case communicated by Dr. Babington, of fat formed in the intestines of a girl four and a half years old, and passing off by stool. Mr. Brande found, on the suggestion of Sir E. Home, that muscle, digested in bile, is convertible into fat, at the temperature of about 100°. If the substance, however, pass rapidly into putrefaction, no fat is formed. Fæces voided by a gouty gentleman after six days' constipation, yielded, on infusion in water, a fatty film. This process of forming fat in the lower intestines by means of bile, throws considerable light upon the nourishment derived from clysters, a fact well ascertained, but which could not be explained. It also accounts for the wasting of the body which so invariably attends all complaints of the lower

bowels. It accounts too for all the varieties in the turns of the colon, which we meet with in so great a degree in different animals. This property of the bile explains likewise the formation of fatty concretions in the gall-bladder so commonly met with, and which from these experiments, appear to be produced by the action of the bile on the mucus secreted in the gall-bladder; and it enables us to understand how want of the gall-bladder in children, from mal-formation, is attended with excessive leanness, notwithstanding a great appetite, and leads to an early death. Fat thus appears to be formed in the intestines, and from thence received into the circulation, and deposited in almost every part of the body. And as there appears to be no direct channels by which any superabundance of it can be thrown out of the body, whenever its supply exceeds the consumption, its accumulation becomes a disease, and often a very distressing one.

ADI'POSE. (*Adiposus*; from *adeps*, fat.) Fatty; as adipose membrane, &c.

Adipose arteries. Those which supply the fat about the kidneys.

ADIPOSE MEMBRANE. *Membrana adiposa.* The fat collected in the cells of the cellular membrane.

ADI'PSA. (*a*, *æ*. f.; from *α*, neg. and *διψα*, thirst. 1. Without thirst.

2. That which abates thirst.

3. Hippocrates applied it to oxymel.

ADI'PSIA. (*a*, *æ*. f.; from *α*, neg. and *διψα*, thirst.) A want of thirst. It is mostly symptomatic of some disease of the brain.

ADIPSON. (From *α*, priv. and *διψα*, thirst.) 1. Oxymel is so termed by Hippocrates, because it prevents and allays thirst.

2. A name of liquorice root for the same reason.

ADI'PSOS. (From *α*, neg. and *διψα*, thirst: so called because it allays thirst.) Without thirst. 1. The Egyptian palm-tree, the fruit of which is said to be the *Myrobalans*, which quench thirst.

2. A name for liquorice.

ADI'RIGE. Ammoniacal salt.

ADJUTO'RIUM. (*um*, *i*. n.; from *ad* and *juvo*, to help.) A name of the *humerus*, from its usefulness in lifting up the fore-arm.

ADJU'VANS. Assisting in prevention or cure of disease. See *Juvans*.

ADNATA TUNICA. A membrane of the eye, called also *tunica* or *membrana albuginea oculi*, mostly confounded with the *conjunctiva*. It is thus formed: five of the muscles which move the eye, take their origin from the bottom of the orbit, and the sixth arises from the edge of it. They are all inserted, by a tendinous expansion, into the anterior part of the *tunica sclerotica*, which expansion forms the *adnata*, and gives the whiteness peculiar to the fore-part of the eye. It lies betwixt the *sclerotica* and *conjunctiva*.

ADNA'TUS. (From *adnescor*, to grow to.) Adnate; connected: applied to some parts which appear to grow to others; as *tunica adnata*, *stipulæ adnatæ*, *folium adnatum*.

A'DOC. Milk.

ADOLESCE'NTIA. (*a*, *æ*. f.; from *adolescere*, to grow.) Adolescence; the state of growing youth, or that period of a person's age commencing from his infancy, or, according to some, commencing from the fifth year, and terminating at his full stature or manhood. See *Age*.

ADO'NION. (From *Αδωνις*, the youth from whose blood it was feigned to have sprung.) See *Artemisia abrotanum*.

ADONIS. (*is*, *idis*. f.; from *Adonis*, a proper name.) The roots of the *Adonis verna* and *apennina* were formerly supposed to possess emmenagogue properties.

ADONIUM. See *Artemisia abrotanum*.

ADO'PTER. *Tubus intermedius.* A chemical vessel with two necks used to combine retorts to the cucurbits or matrasses in distillation, with retorts instead of receivers.

A'DOR. (From *α*, neg. and *δορ*, a spear: so named from its being without a beard or spear.) A species of corn mentioned by Dioscorides.

A'DOS. Forge water, or water in which red-hot iron is extinguished.

ADOSCULATION. (*Adosculatio*, *onis*. f.; from *ad*, and *osculor*, to kiss.) This term is used by some naturalists to express a species of copulation or impregnation by mere external contact between the genital parts of the two sexes, without intromission. This takes place in several birds and plants.

AD PONDUS OMNIUM. The weight of the whole. These words are inserted in pharmaceutical preparations, or prescriptions, when the last ingredient ought to weigh as much as all the others put together.

ADPRESSUS. Approximate, contiguous, pressed to, or laid to: applied to branches of leaves when they rise in a direction nearly parallel to the stem, and are close to them; as in the branches of the *Genista tinctoria*, and leaves of the *Thlaspi campestris*.

ADRA RHI'ZA. Blanchard says the root of the *Aristolochia* is thus named.

ADRA'CHNE. The strawberry bay-tree. A species of *Arbutus*.

A'DRAM. Fossil salt.

ADRARA'GI. An Indian name for our garden-saffron.

ADROBO'LON. (From *αδρος*, large, and *βωλος*, a globe, bole, or mass.) Indian bdellium, which is coarser than the Arabian. See *Bdellium*.

ADSCENDENS. See *Ascendens*.

ADSTRICTION. *Adstrictio.* Sometimes used to express a costive state of the body, and often synonymously with astringent.

ADSTRINGENS. See *Astringent*.

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ADULT. (*Adultus.* Formed from the verb *adolescere*, to grow up.) An appellation distinguishing any thing that is arrived at maturity, and applied to plants as well as to persons.

ADULTERA'TION. *Adulteratio.* The act of corrupting or debasing a thing that was pure by some improper admixture.

In *Pharmacy*, a fraudulent corruption of drugs or medicines, by substituting ingredients of less value for the sake of greater gain. Dealers in medicine are well acquainted with this practice.

Adusta. (From *aduro*, to burn.) Adust: burnt, parched. This term was formerly applied to the fluid of the body when acrid, and particularly when the acrimony was supposed to have arisen from great heat.

ADUSTIO. (*tio, onis.* f.; from *adurio*, to burn.) Adustion. 1. Applied formerly, in *Pathology*, to an inflammation about the brain and its membranes, with a hollowness of the eyes, a pale colour, and a dry body. Obsolete.

2. In *Surgery*, adustion formerly was used the same as cauterisation, and means the application of any substance to the animal body which acts like fire. See *Moxa*. The ancient surgeons, especially the Arabians, were remarkably fond of having recourse to adustion in local diseases: but the use of actual heat is very rarely admitted by the moderns.

ADVENTITIUS. (From *advenio*, to come to.) Adventitious, accidental. Any thing that accidentally, and not in the common course of natural causes, happens to make a part of another. Something accruing or befalling a person or thing from without. It is used in medicine in opposition to hereditary; as when diseases may be transmitted from the parent, and also acquired, as is the case with gout and scrofula. They are sometimes hereditary, and very often adventitious.

ADVERSIFO'LIA. (From *adversus*, opposite, and *folium*, a leaf.) A plant with opposite leaves.

Adversifoliæ plantæ. 1. Plants the leaves of which stand opposite to each other on the same stem or branch.

2. The name of a class in Sauvages' *Methodus Foliorum*. Valerian, teasel, honeysuckle, &c. are examples.

ADVERSUS. Adverse; opposite. Applied in natural history to parts which stand opposite to each other; as *Plantæ adversifoliæ*, the leaves standing opposite to each other on the same stem, as in valerian, teasel, honey-suckle, &c.

A'dy. (From ἁδυ, or ἡδυ, sweet.) A tree which grows in the island of St. Thomas, called also *Palma ady*, which affords a considerable quantity of juice that ferments into wine. The entire fruit is called by the Portuguese *caryoces* and *cariosse*, by the natives *abarya*. The fruit externally resembles a lemon, and contains a stone, the kernel of which, if heated in hot water, gives out an oil of a saffron colour, which becomes hard in the cold, and is used as butter. Of these kernels the inhabitants give three or four as a restorative three or four times a-day.

ADYNA'MIA. (*a, æ.* f. Αδυναμια; from α, priv. and δυναμις, power.) A defect of vital power.

ADYNAMICUS. Adynamic, or deficient of power: applied to fevers which were formerly called putrid.

Ady'namon. (From α, neg. and δυναμις, strength.) Among ancient physicians, it signified a kind of weak factitious wine, prepared from must, boiled down with water; to be given to patients to whom pure or genuine wine might be hurtful.

Adynamum. See *Adynamon*.

ÆDOI'A. (The plural of Αιδοῖον; from αιδως, modesty; or from α, neg. and ειδω, to see; as not being decent to the sight.) The pudenda, or parts of generation.

ÆDOPSO'PHIA. (*a, æ.* f.; from αιδοια, *pudenda*; and ψοφεω, to break wind.) Wind from the bladder, or from the womb, making its escape through the vagina.

ÆDOPTO'SIS. (*is, is.* f.; from αιδοῖον, the groin, *pudendum*; and πτωσις, a falling down.) Genital prolapse.

ÆGAGRO'PILUS. (From αιγαγρος, a wild-goat, and *pila*, a ball.) *Ægagropila*.

1. A ball found in the stomach of deer, goats, hogs, horned cattle, as cows, &c. It consists of hairs which they have swallowed from licking themselves. These balls are of different degrees of hardness, but have no medicinal virtues. Some rank them among the *Bezoars*. Hieron. Velschius wrote a treatise on the virtues of this substance.

2. A species of conferva found in Wallenfenmoor is also so named, from its resembling these concretions.

Ægelethron. Supposed to be the *Mercurialis annua* of Linnæus.

Æ'GIAS. A white speck on the pupil of the eye, which occasions a dimness of sight.

ÆGI'DES. A disorder of the eyes mentioned by Hippocrates. Foësius thinks the disease consists of small cicatrices in the eye, caused by an afflux of corrosive humours upon the part. But in one passage of Hippocrates, Foësius says it signifies small white concretions of humours which stick upon the pupil, and obscure the sight.

ÆGI'DION. A collyrium or ointment for inflammations and defluxions of the eyes.

Æ'GILOPS. See *Ægylops*.

ÆGINE'TA, Paulus. A celebrated surgeon of the island of Ægina, from which he derived his name. He is placed by Le Clerc in the fourth century; by others, in the seventh. He was eminently skilled in his profession, and his works are frequently cited by Fabricius ab Aquapendente. He is the first author that notices the cathartic quality

of rhubarb. He begins his book with the description of the diseases of women; and is said to be the first that deserves the appellation of a man-midwife.

ÆGINE'TIA. Malabrian broom rape. A species of *Orobanche.*

Æ'GIS. A film or white speck on the eye.

ÆGLEUS. Αιγληεις. Applied to the white chameleon thistle, which was used medicinally, and to distinguish it from the ἐρεβεννοες, *erebennus*, that which we call the black chameleon, and which is poisonous. — *Galen.*

ÆGLIA. A white speck on the eye.

ÆGO'CERAS. (*as, atis.* n.; from αιξ, a goat, and κερας, a horn: so called, because the pods were supposed to resemble the horns of a goat.) See *Trigonella fœnugræcum.*

ÆGO'LETHRON. (*ron, i.* n.; from αιξ, a goat, and ολεθρος, destruction: so named from the opinion of its being poisonous to goats.) Tournefort says it is *Chamærododendron*, now the *Azelæa pontica* of Linnæus.

ÆGO'NYCHON. (*Ægonychus, i.* m.; from αιξ, a goat, and ονυξ, a hoof; because of the hardness of the seed. See *Lithospermum officinale.*

ÆGOPO'DIUM. (*um, i.* m.; from αιξ, a goat, and πους, a foot: from its supposed resemblance to a goat's foot.) A genus of plants in the Linnæan system. Class, *Pentandria:* Order, *Digynia.* Goatweed. The following species was formerly much esteemed:

ÆGOPODIUM PODAGRARIA. Goatweed, goutweed. This plant is sedative, and was formerly applied to mitigate pains of gout, and to relieve piles, but not now employed. In its earlier state it is tender and esculent.

ÆGOPROSO'PON. (From αιξ, a goat, and προσωπον, a face: so called, because goats are subject to defects in the eyes, or from having in it some ingredients named after the goat.) A name of a lotion for the eyes, when inflamed.

Æ'GYLOPS. (*ops, opis.* m.; from αιξ, a goat, and ωψ, an eye: so named from the supposition that goats were very subject to it.) 1. The ancients applied this term, spelt indifferently with a *y* or an *i*, to a sore just under the inner angle of the eye. The best modern surgeons seem to consider the ægylops only as a stage of the fistula lachrymalis. Paulus Ægineta calls it anchilops, before it bursts, and ægylops after. When the skin covering the lachrymal sac has been for some time inflamed, or subject to frequent returning inflammations, it most commonly happens that the puncta lachrymalia are affected by it; and the fluid, not having an opportunity of passing off by them, distends the inflamed skin, so that at last it becomes sloughy, and bursts externally. This is that state of the disease which is called perfect *aigylops*, or *ægylops.*

2. A name of the *Bromus sterilis* of Linnæus, which is said to have been given to it from its supposed virtues in curing the disorder so called.

ÆGY'PTIA MUSCATA. See *Hibiscus abelmoschus.*

ÆGYPTI'ACUM UNGUENTUM. A name given to different unguents of the detergent or corrosive kind. We meet with a black, a red, a white, a simple, a compound, and a magistral ægyptiacum. The simple ægyptiacum, which is that usually found in our shops, is a composition of verdigris, vinegar, and honey, boiled to a consistence. It is usually supposed to take its name from its dark colour, wherein it resembles that of the natives of Egypt. It is improperly called an unguent, as there is no oil, or rather fat, in it.

ÆGYPTIA'CUS. (From *Ægyptus*, the country of Ægypt.) Ægyptian. Applied as a trivial name to the products of that country, &c.

ÆGY'PTIUM PHARMACUM AD AURES. Aëtius speaks of this as excellent for deterging fœtid ulcers of the ears, which he says it cures, though the patient were born with them.

AEI'GLUCES. (From αει, always, and γλυκυς, sweet.) A sweetish wine, or must.

AEIPATHEI'A. (From αει, always, and παθος, a disease.) Diseases of long duration.

ÆIZOON. (Αειζωον; from αει, always, and ζωη, life: so called because it is very tenacious of life.) An obsolete name of the *Sempervivum.* See *Sedum.*

ÆNEA. (*a, æ.* f.; from *æs*, brass: so called, because it was formerly made of brass.) A catheter.

Æ'ON. (Αιων. *Æon, onis.* m.) The spinal marrow.

ÆONE'SIS. A washing, or sprinkling of the whole body. — *Hippocrates.*

ÆO'NION. The common house-leek. See *Sempervivum tectorum.*

ÆO'RA. (*a, æ.* f.; from αιωρεω, to lift up, to suspend on high.) Swinging. A species of exercise frequently used by the ancients. See *Gestation.*

Æ'POS. An excrescence, or protuberance.

ÆQUA'LIS. Equal. Applied, 1. In *Botany*, to distinguish length; as, *filamenta æqualia; pedunculi æquales*, &c.

2. In *Pharmacy*, applied to the quantity of ingredients in a compound; thus, in extemporaneous prescription, ℞. *Pilulæ saponis cum opio*, ʒj. *Pulveris scillæ*, ʒss. *Asafœtidæ*, ʒj. *Fiant pilulæ* xxiv. *æquales*, — means, make twenty pills, each containing twenty-fourth parts of the several ingredients.

Æ'QUE. Equally.

ÆQUIVALVIS. Æquivalve. Composed of equal valves.

A'ER. (*er, eris.* m.; from αηρ.) Air. This term was, till lately, used as the generic name for such invisible and exceedingly rare fluids as possess a very high degree of elas-

ticity, and are not condensible into the liquid state by any degree of cold hitherto produced; but as air is also commonly employed to signify that compound of aëriform fluids which constitutes our atmosphere, it has been deemed advisable to restrict it to this signification, and to employ as the generic term the word GAS for the different kinds of air, except what relates to our atmospheric compound. See *Atmosphere.*

Ærated alkaline water. Water impregnated with carbonic acid. See *Carbonic acid.*

Ærated magnesian water. A solution of magnesia in carbonated water.

AEREUS. (From αηρ, air.) Ærial. Appertaining to air.

ÆRIAL. *Aereus.* Belonging to air.

Ærial acid. See *Carbonic acid.*

Ærial plants. Those which, after a certain time, do not require that their roots should be fixed to any spot in order to maintain their life, which they do by absorption from the atmosphere. Such are a curious tropical tribe of plants called *Cacti,* the *Epidendrum, Flos æris,* and the *Ficus australis.*

ÆRI'TIS. *Ærites.* Said to be the *Anagallis arvensis.*

ÆROLITE. A meteoric stone.

AEROLO'GIA. (*a, æ.* f.; from αηρ, the air, and λογος, a discourse.) That part of medicine which treats of the nature and properties of air.

AEROLO'GICE. (*ce, es.* f.) See *Aerologia.*

AERO'MELI. Honey-dew; also a name for manna.

ÆROMETER. An instrument for making the necessary corrections in pneumatic experiments to ascertain the mean bulk of the gases.

AEROPHO'BIA. (*a, æ.* f.; from αηρ, air, and φοβος, fear.) Fear of air or wind.

1. Said to be a symptom of phrenitis.
2. A name of *Hydrophobia.*

AERO'PHOBUS. (*us, i.* m.; from αηρ, air, and φοβος, fear.) According to Cœlius Aurelianus, some phrenetic patients are afraid of a lucid, and others of an obscure air: and this he calls *aerophobus.*

AERO'SIS. The ancient physicians expressed by this term the act whereby the blood is attenuated and converted into an *aura,* for the support of the vital spirits, and the maintenance of the flame of life.

AEROSTATIO. *Ærostation.* A name commonly, but not very correctly, given to the art of raising heavy bodies into the atmosphere, by buoyancy of heated air, or gases of small specific gravity, inclosed in a bag, which, from being usually of a spherical form, is called a balloon.

ÆRO'SUS. (*Ærosus;* from *æs,* copper and brass.) Coppery.

ÆROSUS LAPIS. So Pliny calls the *Lapis calimanaris,* upon the supposition that it was a copper ore.

ÆRU'CA. Verdigris.

ÆRUGINOSUS. (From *ærugo,* verdigris.) Æruginous; partaking of, or like to the rust of copper. Often applied to a verdigris-like colour, and sometimes to a brownish colour.

ÆRU'GO. (*go, ginis.* f.; from *æs,* copper.) 1. The rust of any metal, particularly of copper.

2. Verdigris. See *Ærugo æris.*

ÆRUGO ÆRIS. An impure subacetate of copper. It is prepared by stratifying copper plates with the husks of grapes, after the expression of their juice, and when they have been kept for some time imperfectly exposed to the air, in an apartment warm but not too dry, so as to pass to a state of fermentation, whence a quantity of vinegar is formed. The copper plates are placed in jars in strata, with the husks thus prepared, which are covered. At the end of twelve, fifteen, or twenty days, these are opened: the plates have an efflorescence on their surfaces of a green colour and silky lustre: they are repeatedly moistened with water; and at length a crust of verdigris is formed, which is scraped off with a knife, is put into bags, and dried by exposure of these to the air and sun. It is of a green colour, with a slight tint of blue.

In this preparation the copper is oxidised, probably by the atmospheric air, aided by the affinity of the acetic acid; and a portion of this acid remains in combination with the oxide, not sufficient, however, to produce its saturation. When acted on by water, the acid, with such a portion of oxide as it can retain in solution, are dissolved, and the remaining oxide is left undissolved. From this analysis of it by the action of water, Proust inferred that it consists of 43 of acetate of copper, 27 of black oxide of copper, and 30 of water, this water not being accidental, but existing in it in intimate combination.

Verdigris is used as a pigment in some of the processes of dyeing, and in surgery it is externally applied as a mild detergent in cleansing foul ulcers, or other open wounds. On account of its virulent properties, it ought not to be used as a medicine without professional advice; and in case any portion of this poison be accidentally swallowed, emetics should be first given, and afterwards cold water, gently alkalised, ought to be drunk in abundance.

For medicinal and surgical use, the crystallised verdigris, a pure acetate of copper, should be used. The London pharmacopœia directs the old *mel Ægyptiacum,* or *oxymel æruginis,* under the title of *Linimentum æruginis,* and this is certainly a useful detergent application to some ulcerating sores; but a solution of sulphate of copper in common oxymel is a preferable substitute. Independent of the adulterations to which common verdigris is subject, there is a substance occasionally found in trade, under

the name of English verdigris, which is made by triturating acetate of lead and sulphate of copper with a certain quantity of chalk and water: the mixture is dried in cakes, and grape stalks added *ad libitum*.

ÆRUGO PRÆPARATA. See *Ærugo æris*.

ÆS. (*Æs, eris*. n.; etymology uncertain.) Brass. A combination of copper and zinc.

ÆSCHROMYTHE'SIS. The obscene language of the delirious.

ÆSCHYNOMENOUS. (*Æschynomenosus;* from αισχυνομαι, to be ashamed, and applied to sensitive plants, because they retreat from the touch as if ashamed.) Sensitive: applied to the tribe of sensitive plants by some writers.

ÆSCOS. A deformity of the body or of a limb.

ÆSCULA'PIUS, the son of Apollo, by the nymph Coronis, born at Epidaurus, and educated by Chiron, who taught him to cure the most dangerous diseases, and even raise the dead; worshipped by the ancients as the god of medicine. His history is so involved in fable, that it is useless to trace it minutely. His two sons, Machaon and Podalirius, who ruled over a small city in Thessaly, after his death accompanied the Greeks to the siege of Troy: but Homer speaks merely of their skill in the treatment of wounds; and divine honours were not paid to their father till a later period. In the temples raised to him, votive tablets were hung up, on which were recorded the diseases cured, as they imagined, by his assistance.

Æ'SCULUS. (*us, i.* m.; from *esca*, food.) The name of a genus of plants in the Linnæan system. Class, *Heptandria;* Order, *Monogynia*. Horse-chesnut.

ÆSCULUS HIPPOCASTANUM. The systematic name for the common horse-chestnut tree; called also *Castanea equina* and *pavina*. *Æsculus — foliolis septenis* of Linnæus. The fruit of this tree, when dried and powdered, is recommended as an errhine. The bark is highly esteemed on the Continent as a febrifuge; and is, by some, considered as being superior in quality to the Peruvian bark. The bark intended for medical use is to be taken from those branches which are neither very young nor very old, and to be exhibited under similar forms and doses, as directed with respect to the Peruvian bark. It rarely disagrees with the stomach; but its astringent effects generally require the occasional administration of a laxative. During the late scarcity of grain, some attempts were made to obtain starch from the horse-chestnut, and not without success.

ÆSECA'VUM. Brass.

ÆSTAS. (*as, atis*. f.; from *æstu*, hot weather.) 1. The summer.

2. *Æstates*, plural; sun-spots or freckles. See *Ephelis*.

ÆSTA'TES. See *Æstas*.

ÆSTHE'TICUS. (From αισθάνομαι, to feel or perceive.) Affecting the sensation.

ÆSTI'VAL. (*Æstivalis;* from *æstas*, summer.) Æstival; belonging to summer. Diseases of animals and plants which appear in the summer.

ÆSTIVALES PLANTÆ. Plants which flower in summer. A division according to the seasons of the year.

ÆSTIVA'TIO. Æstivation.

1. The action of the summer, or its influence on things.

2. The particular state of the bud in summer, and used by Linnæus to denote one of those circumstances which constitute the habit of plants.

ÆSTI'VUS. Appertaining to summer.

ÆSTPHARA. Incineration, or burning of the flesh, or any other part of the body.

ÆSTUA'RIUM. (*um, i.* n.) An æstuary, or stove, for conveying heat to all parts of the body at once. A kind of vapour-bath. Ambrose Parey calls an instrument thus, which he describes for conveying heat to any particular part. Palmarius, *De Morbis Contagiosis*, gives a contrivance under this name for sweating the whole body.

ÆSTUA'TIO. The boiling up, or rather the fermenting of liquors when mixed.

Æ'STUS. (*us, ûs*. m.; from the Hebrew *esh*, heat.) Heat: applied to the feeling merely of heat, and sometimes to that of inflammation, in which there is heat and redness.

ÆSTUS VOLATICUS. 1. The disease so termed by the early writers was a sudden and fugitive sensation of heat, which left a little redness of the skin. In the present day, we apply it to a species of strophulus which attacks children mostly, and is called the wild-fire rash. See *Strophulus*.

2. Made synonymous with phlogosis by Vogel.

3. The *Erythema volaticum* of Sauvage.

ÆTAS. (*as, tis*. f.; *quasi ævitas*, from *ævum*, age.) The ancients reckoned six stages of life.

1. *Pueritia*, childhood, which is to the fifth year of our *age*.

2. *Adolescentia*, youth, reckoned to the eighteenth, and youth properly so called, to the twenty-fifth year.

3. *Juventus*, reckoned from the twenty-fifth to the thirty-fifth year.

4. *Virilis ætas*, manhood, from the thirty-fifth to the fiftieth year.

5. *Senectus*, old *age*, from fifty to sixty.

6. *Crepita ætas*, decrepid age, which ends in death.

Æ'THER. (*er, eris*. m.; from αιθηρ: a supposed fine subtile fluid.) Æther. A volatile liquor, obtained by distillation, from a mixture of alkohol and a concentrated acid.

The medical properties of æther, when taken internally, are antispasmodic, cordial, and stimulant. Against nervous and typhoid fevers, all nervous diseases, but especially tetanic affections, soporose diseases from debility, asthma, palsy, spasmodic colic, hys-

teria, &c. it always enjoys some share of reputation. Regular practitioners seldom give so much as empirics, who sometimes venture upon large quantities, with incredible benefit. Applied externally, it is of service in the headach, toothach, and other painful affections. Thus employed, it is capable of producing two very opposite effects, according to its management; for, if it be prevented from evaporating, by covering the place to which it is applied closely with the hand, it proves a powerful stimulant and rubefacient, and excites a sensation of burning heat, as is the case with solutions of camphor in alkohol, or turpentine. In this way, it is frequently used for removing pains in the head or teeth. On the contrary, if it be dropped on any part of the body, exposed freely to the air, its rapid evaporation produces an intense degree of cold; and as this is attended with a proportional diminution of bulk in the part, applied in this way, it has frequently contributed to the reduction of the intestine, in cases of strangulated hernia.

ÆTHER RECTIFICATUS. *Æther vitriolicus.* Rectified æther. Take of sulphuric æther, fourteen fluid ounces. Fused potash, half an ounce. Distilled water, eleven fluid ounces.

First dissolve the potash in two ounces of the water, and add thereto the æther, shaking them well together, until they are mixed. Next, at a temperature of about 200 degrees, distil over twelve fluid ounces of rectified æther, from a large retort into a cooled receiver. Then shake the distilled æther well with nine fluid ounces of water, and set the liquor by, so that the water may subside. Lastly, pour off the supernatent rectified æther, and keep it in a well-stopped bottle.

Sulphuric æther is impregnated with some sulphureous acid, as is evident in the smell, and with some ætherial oil: and these require a second process to separate them. Potash unites to the acid, and requires to be added in a state of solution, and in sufficient quantities, for the purpose of neutralising it; and it also forms a soap with the oil. It is advantageous also to use a less quantity of water than exists in the ordinary solution of potash; and therefore the above directions are adopted in the last London Pharmacopœia. For its virtues, see *Æther.*

ÆTHER SULPHURICUS. *Æther vitriolicus; Naphtha vitrioli.* Sulphuric æther. Take of rectified spirit, sulphuric acid, of each by weight, a pound and a half. Pour the spirit into a glass retort, then gradually add to it the acid, shaking it after each addition, and taking care that their temperature, during the mixture, may not exceed 120 degrees. Place the retort very cautiously into a sand-bath, previously heated to 200 degrees, so that the liquor may boil as speedily as possible, and the æther may pass over into a tubulated receiver, to the tubulure of which another receiver is applied, and kept cold by immersion in ice, or water. Continue the distillation until a heavier part also begins to pass over, and appear under the æther in the bottom of the receiver. To the liquor which remains in the retort, pour twelve fluid ounces more of rectified spirit, and repeat the distillation in the same manner.

It is mostly employed as an excitant, nervine, antispasmodic, and diuretic, in cases of spasms, cardialgia, enteralgia, fevers, hysteria, cephalalgia, and spasmodic asthma. The dose is from min. xx. to ʒij. Externally, it cures toothach, and violent pains in the head. See *Æther.*

ÆTHER VITRIOLICUS. See *Æther sulphuricus*, and *Æther rectificatus.*

ÆTHE'REA HERBA. The plant formerly so called is supposed to be the *Eryngium*, and also the *Anagallis.*

ÆTHEREUS. See *Ætherial.*

ÆTHERIAL. (*Ætherialis;* from *æther.*) Ætherial; something that belongs to, or partakes of the nature of æther.

Ætherial oil. See *Oleum ætherium.*

Æ'THIOPS. (*ops, opis.* m.; so named because in colour like that of the Æthiopian.) A term applied formerly to several preparations.

ÆTHIOPS ANTIMONIA'LIS. A preparation of antimony and mercury, once in high repute, and still employed by some practitioners in cutaneous diseases. A few grains are to be given at first, and the quantity increased as the stomach can bear it.

ÆTHIOPS MARTIALIS. A preparation of iron, formerly in repute, but now neglected.

Æthiops mineral. See *Hydrargyri sulphuretum nigrum.*

ÆTHMOID. See *Ethmoid.*

Æ'THNA. A chemical furnace.

ÆTHOLICES. Superficial pustules in the skin, raised by heat; as boils, fiery pustules.

ÆTHU'SA. (*a, æ.* f.; from αιθουσα, beggarly.) The name of a genus of plants of the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

ÆTHUSA CYNAPIUM. Fool's parsley. A plant which very much resembles parsley. When eaten or prepared, as parsley often is, in soups or sauces, it produces cholic and deleterious effects. It is common in most gardens.

ÆTHUSA MEUM. The systematic name of the *meum* of the Pharmacopœias; called also *Meum athamanticum, Meu* and *Spignel.* Baldmoney. The root of this plant is recommended as a carminative, stomachic, and for attenuating viscid humours, and appears to be nearly of the same nature as lovage, differing in its smell, being rather more agreeable, somewhat like that of parsnips, but stronger, and being in its taste less sweet, and more warm, or acrid.

ÆTHYA. A mortar.

ÆTIA. (Αιτια. *a, æ.* f.) A cause.

Æ'TIOI PHLEBES. See *Phlebes atioi.*

ÆTIOLOGY. (Αιτολογια. *Ætiologia, æ.* f.; from αιτια, a cause, and λογος, a dis-

course.) The doctrine of the causes of diseases.

The healthy state of the body has been known to continue for near a century, and death to take place under a gradual sinking of the vital power; but this is very seldom the case, for disease kills most people; and as disease is an alteration in the functions or appearances of the body from health, it follows, as no effect can take place without a preceding cause, that diseases result from certain agents acting on the sentient fibres; for it is by their movements that the functions are performed. Every alteration, therefore, from health, implies a pre-existing cause, the operation of which is on the sentient fibres.

To produce most diseases, a certain state of the body is required, and also a more active agent to excite them. This certain state or condition of the body is a susceptibility or power to receive the impression of the more active cause; so that, in considering the causes of diseases, we have to look to,

1. Those circumstances which produce and establish the state of the solids to be acted on by that which excites disease.

2. Those circumstances which so impress the solids as to alter their actions. These considerations are embraced under the two following heads:

1. Predisposing causes.
2. The exciting causes.

Predisposition is the condition that must exist, in order that the other remote causes may act. The human body, by a law in its economy, is always susceptible of the impression of some morbific agents, and consequently it may at any time be influenced by them; but with the greater number of diseases it is otherwise — the body resisting the exciting causes until a certain change takes place in their innate principles of action, when, and not before, disease is produced. Thus, for example, the human body is at all times susceptible of the venereal poison, which is an exciting cause; but it is not always susceptible of the cause of fever or influenza.

The predisposing causes of diseases are,

1. The temperament and constitution.
2. Idiosyncrasy.
3. The age or period or life.
4. The sex.
5. The particular structure of parts.
6. The quantity of the circulating fluids.
7. The quality or composition of the circulating fluids.

But all the remote causes of disease may probably be embraced by the following states of the nervous system, viz.

1. A state of debility.
2. A state of increased vigour.

The *exciting* cause of a disease is an agent which influences the body, either by its immediate contact, or through the medium of the mind, and so impresses the sentient fibres as to alter and derange its healthy actions. These exciting causes are very many.

1. The varied states of the atmosphere, as regards its weight, density, temperature, moisture, and dryness.

2. The presence of heterogeneous particles in the air, as solids, particles of silk, cotton, and the like; of dust, and the like; of gaseous bodies from lead, copper, arsenical and other manufactories, &c. Likewise all the noxious exhalations from the animal and vegetable kingdoms: the exhalations from some living plants; those from dead vegetables; also the secretions and excretions from animals; the effluvia from putrefying substances; the miasm from marshes and pools; and likewise the poisons from typhus fever, hooping-cough, scarlet fever, small-pox, measles, dysentery, &c.

3. The passions of the mind, especially anger, joy, fear, and grief.

4. The ingesta, or things taken into the stomach in an improper quantity, or of an unhealthy quality.

5. Motion and rest, both in excess or not sufficient.

6. Sleep and watching, also, when in excess, or deficient.

7. The excretions and retensions, as the perspiration, the saliva, the bile, the pancreatic juice, the enteric juice, the urine, the semen, the fæces. All these, when not duly eliminated, as well as when of an acrimonious or unhealthy quality, excite disease.

8. Injuries; as concussion, compression, fractures, &c.

9. Some circumstances natural to the body; as worms, teething, descent of the testes, pregnancy.

10. Some poisons generated within the body; as that of syphilis, tinea capitis, impetigo, &c.

11. Sympathy, a wonderful property of the living, sensible, and irritable fibres, by which a certain band of connection exists, and is maintained between parts that are remote from each other.

12. Some diseases excite others.

All these several causes are embraced by the term remote causes. To be acquainted with them is always useful, and, in guarding against the approach of diseases, it is often of the utmost importance; but they do not afford us any information upon the real nature of diseases.

It is from the joint operation of these causes that the proximate cause results. "This," says Dr. Gaubius, "deserves the name of a physical cause, which so constitutes the disease, that, when present, the disease exists; while it continues, the disease continues; when changed or removed, the disease is altered or destroyed." It is this which constitutes the proximate cause, and is the essence of the disease, the actual source of all its effects.

ÆTITES. (From αετος, an eagle, and

called eagle-stone, because this bird was supposed to carry them to their nest.) Eagle-stone. A stone formed of oxide of iron, containing in its cavity some concretion which rattles on shaking the stone. Superstition formerly ascribed wonderful virtues to them.

AE'TIUS. A physician, called also *Amidenus*, from the place of his birth. He flourished at Alexandria, about the end of the fifth century, and left sixteen books, divided into four *tetrabiblia*, on the practice of physic and surgery, principally collected from Galen and other earlier writers, but with some original observations.

Æto'cion. See *Daphne mezereon.*

Ætolium. See *Daphne mezereon.*

Æto'nychum. See *Lithospermum.*

AFFECTION. (*Affectio, onis.* f. This is expressed in Greek by πaθος: hence *pathema, passio.*)

1. This term is applied indifferently with disease: hence, we say a nervous, rheumatic, gouty, inflammatory affection, &c.

2. It is applied to symptoms which result from the passions of the mind; as joy, grief, jealousy, &c.

AFFERENS. (From *affero*, to bring.) Applied to lymphatic vessels, which bring their contents to certain glands.

AFFINITY. (*Affinitas, atis.* f.; a proximity of relationship.) This term is used indifferently with attraction. See *Attraction.*

Affinity of aggregation. See *Attraction.*

Affinity, appropriate. See *Affinity, intermediate.*

Affinity of composition. See *Attraction.*

Affinity, compound. When three or more bodies, on account of their mutual affinity, unite and form one homegeneous body, then the affinity is termed compound affinity, or attraction: thus, if to a solution of sugar and water be added spirits of wine, these three bodies will form an homogeneous liquid by compound affinity.

Affinity, divellent. See *Affinity, quiescent.*

Affinity, double. Double elective attraction. When two bodies, each consisting of two elementary parts, come into contact, and are decomposed, so that their elements become reciprocally united, and produce two new compound bodies, the decomposition is then termed *decomposition by double affinity*: thus, if we add common salt, which consists of muriatic acid and soda, to nitrate of silver, which is composed of nitric acid and oxide of silver, these two bodies will be decompounded; for the nitric acid unites with the soda, and the oxide of silver with the muriatic acid, and thus may be obtained two new bodies. The common salt and nitrate of silver, therefore, mutually decompose each other by what is called *double affinity*.

Affinity, intermediate. Appropriate affinity. Affinity of an intermedium is, when two substances of different kinds, that show to one another no component affinity, do, by the assistance of a third, combine, and unite into an homogeneous whole: thus, oil and water are substances of different kinds, which, by means of alkali, combine and unite into an homogeneous substance. Hence the theory of lixiviums, of washing, &c. See *Attraction.*

Affinity, quiescent. Mr. Kirwan employs the term *quiescent affinity* to mark that by virtue of which the principles of each compound, decomposed by double affinity, adhere to each other; and *divellent affinity*, to distinguish that by which the principles of one body unite and change order with those of the other: thus, sulphate of potash is not completely decomposed by the nitric acid or by lime, when either of these principles is separately presented; but if the nitric acid be combined with lime, this nitrate of lime will decompose the sulphate of potash. In this last case, the affinity of the sulphuric acid with the alkali is weakened by its affinity to the lime. This acid, therefore, is subject to two affinities, the one which retains it to the alkali, called *quiescent*, and the other which attracts it towards the lime, called *divellent* affinity.

Affinity, reciprocal. When a compound of two bodies is decomposed by a third, the separated principle being in its turn capable of decomposing the new combination: thus ammonia and magnesia will separate each other from muriatic acid.

Affinity, simple. Single elective attraction. If a body, consisting of two component parts, be decomposed on the approach of a third, which has a greater affinity with one of those component parts than they have for each other, then the decomposition is termed, decomposition by *simple* affinity: for instance, if pure potash be added to a combination of nitric acid and lime, the union which existed between these two bodies will cease, because the potash combines with the nitric acid, and the lime, being disengaged, is precipitated. The reason is, that the nitric acid has a greater affinity for the pure potash than for the lime; therefore it deserts the lime, to combine with the potash. When two bodies only enter into chemical union, the affinity, which was the cause of it, is also termed *simple* or *single elective* attraction: thus the solution of sugar in water is produced by simple affinity, because there are but two bodies.

Affinity, vital. That which regulates the formation of the various solids and fluids from the common circulating fluids.

A'FFION. An Arabic name for opium.

A'ffium. An Arabic name of opium.

AFFLA'TUS. (*us, ûs.* m.; from *ad* and *flare*, to blow.) 1. A vapour or blast.

2. Applied by some to a species of erysipelas, which attacks suddenly, as if produced

by some unwholesome wind blowing on the part.

AFFUSION. (*Affusio;* from *ad,* and *fundo,* to pour upon.) 1. In *Pathology,* the pouring a liquor upon the body, or some part of it. The affusion of cold water, or pouring two or three quarts on the patient's head and body, is sometimes practised by physicians, but lately introduced by Dr. Currie, of Liverpool, in the treatment of typhus fever, and which appears to possess an uniformity of success, which we look for in vain in almost any other branch of medical practice. The remedy consists merely in placing the patient in a bathing-tub, or other convenient vessel, and pouring a pailful of cold water upon his body; after which he is wiped dry, and again put to bed. It should be noted,

First, That it is the *low contagious fever* in which the cold affusion is to be employed; the first symptoms of which are a dull headach, with restlessness and shivering; pains in the back, and all over the body, the tongue foul, with great prostration of strength; the headach becoming more acute, the heat of the body, by the thermometer, 102° to 105°, or more; general restlessness, increasing to delirium, particularly in the night.

Secondly, That it is *in the early stage of the disease* we must employ the remedy; and generally *in the state of the greatest heat and exacerbation.*

Thirdly, It is *affusion,* not *immersion,* that must be employed.

Since the first publication of Dr. Currie's work, the practice of affusion has been extended throughout England; and its efficacy has been established in some stages of the disease, from which the author had originally proscribed the practice of it. One of the cautionary injunctions which had been given for the affusion of cold water in fever, was, *never to employ it in cases where the patient had a sense of chilliness upon him,* even if the thermometer applied to the trunk of the body indicated a preternatural degree of heat. In his last edition of Reports, however, Dr. Currie has given the particulars of a case of this kind, in which the cold affusion was so managed as to produce a successful event.

In fevers *arising from,* or *accompanied by, topical inflammation,* his experience does not justify the use of cold affusion; though, in a great variety of these cases, the warm affusion may be used with advantage. "And," says he, "though I have used the cold affusion in some instances, so late as the twelfth or fourteenth day of contagious fever, with safety and success, yet it can only be employed, at this advanced period, in the instances in which the heat keeps up steadily above the natural standard, and the respiration continues free. In such cases, I have seen it appease agitation and restlessness, dissipate delirium, and, as it were, snatch the patient from impending dissolution. But it is in the *early stages* of fever (let me again repeat) that it ought always to be employed, if possible; and where, without any regard to the heat of the patient, it is had recourse to in the last stage of fever, after every other remedy has failed, and the case appears desperate (of which I have heard several instances), can it appear surprising that the issue should sometimes be unfavourable?"

Numerous communications from various practitioners in the West and East Indies, in Egypt and America, also show the efficacy of affusion in the raging fevers of hot countries.

2. In *Chemistry,* the same as ablution; the mere pouring of water or some liquor repeatedly on some substances to cleanse or purify them.

AFORA. (From α, priv. and *fores,* a door.) Without a door or valve: applied to plants, the seed-vessel of which is not furnished with a valvule.

AFTER. *Post.* That which generally follows; that to which it is an adjunct: as after-pains of labour; after-birth, the cake which follows the birth of the infant, &c. &c.

After-birth. See *Placenta.*

After-pains. See *Parturitio.*

AGALACTA'TIO. See *Agalactia.*

AGALAC'TIA. (*a, æ.* f. Αγαλακτια; from α, priv. and γαλα, milk.) *Agalixis; Agalactio; Agalactatio.* A defect of milk in childbirth.

AGALA'CTOS. (From α, priv. and γαλα, milk.) An epithet given to a woman who has no milk when she lies in.

AGALA'XIS. See *Agalactia.*

AGALLOCHUM. See *Lignum aloes.*

AGALLOCHUM VERUM. See *Lignum aloes.*

AGA'LLUGE. See *Lignum aloes.*

AGALLUGUM. See *Lignum aloes.*

AGALMATOLITE. See *Figurestone.*

AGARICOI'DES. (From αγαρικος, the agaric, and ειδος, resemblance.) A species of fungus like the agaric.

AGA'RICUS. (*us, i.* m. Αγαρικος: from *Agaria,* a town in Asia; or from *Agarus,* a river in Sarmatia, now Malowouda.) Agaric. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Fungi.*

The agarici are mushrooms with a cap, and gills underneath of a different substance from the cap. They are very varied in their qualities. The plants of this genus appear to approach nearer to the nature of animal matter than any other productions of the vegetable kingdom; as, beside hydrogene, oxygene, and carbon, they contain a considerable portion of nitrogene, and yield ammonia by distillation. Prof. Proust has likewise discovered in them the benzoic acid, and phosphate of lime.*

The mushrooms, remarkable for the quickness of their growth and decay, as well as for the fœtor attending their spontaneous decomposition, were unaccountably neglected

by analytical chemists, though capable of rewarding their trouble, as is evinced by the recent investigations and discoveries of Messrs. Vauquelin and Braconnot. The insoluble fungous portion of the mushroom, though it resembles woody fibre in some respects, yet being less soluble than it in alkalies, and yielding a nutritive food, is evidently a peculiar product, to which accordingly the name of *fungin* has been given. Two new vegetable acids, the boletic and fungic, were also fruits of these researches.

The six following species have been submitted to chemical analysis; the results are affixed to each.

1. *Agaricus campestris,* an ordinary article of food, analysed by Vauquelin, gave the following constituents: 1. Adipocire. On expressing the juice of the agaric, and subjecting the remainder to the action of boiling alkohol, a fatty matter is extracted, which falls down in white flakes as the alkohol cools. It has a dirty white colour; a fatty feel, like spermaceti; and, exposed to heat, soon melts, and then exhales the odour of grease. 2. An oily matter. 3. Vegetable albumen. 4. The sugar of mushrooms. 5. An animal matter, soluble in water and alkohol: on being heated, it evolves the odour of roasting meat, like osmazome. 6. An animal matter not soluble in alkohol. 7. Fungin. 8. Acetate of potash.

2. *Agaricus volvaceus* afforded Braconnot fungin, gelatin, vegetable albumen, much phosphate of potash, some acetate of potash, sugar of mushrooms, a brown oil, adipocire, wax, a very fugacious deleterious matter, uncombined acid, supposed to be the acetic, benzoic acid, muriate of potash, and a deal of water; in all 14 ingredients.

3. *Agaricus acris,* or *piperatus,* was found by Braconnot, after a minute analysis, to contain nearly the same ingredients as the preceding, without the wax and benzoic acid, but with more adipocire.

4. *Agaricus stypticus.* From twenty parts of this Braconnot obtained of resin and adipocire 1·8, fungin 16·7, of an unknown gelatinous substance, a potash salt, and a fugacious acrid principle 1·5.

5. *Agaricus bulbosus,* was examined by Vauquelin, who found the following constituents: an animal matter insoluble in alkohol; osmazome; a soft fatty matter of a yellow colour and acrid taste; an acid salt (not a phosphate). The insoluble substance of the agaric yielded an acid by distillation.

6. *Agaricus theiogalus.* In this, Vauquelin found sugar of mushrooms; osmazome; a bitter acrid fatty matter; an animal matter, not soluble in alkohol; a salt containing a vegetable acid.

Agaricus albus. See *Boletus laricis.*

Agaricus campestris. There are several species of the agaric which go by this term; as the *Agaricus edulis, chantarellus, deliciosus, violaceus,* &c.; but the eatable mushroom of this country is the *Agaricus campestris* of Linnæus. Similar to it in quality is the champignon. See *Agaricus pratensis.* Broiled with salt and pepper, or stewed with cream and some aromatic, they are extremely delicious, and, if not eaten to excess, salubrious. Great care should be taken to ascertain that they are the true fungus, and not those of a poisonous nature. Catchup is made by throwing salt on mushrooms, which causes them to part with their juice. For its chemical analysis, see *Agaricus.*

None of the following species are known to be dangerous, and are sold for food in the markets of Tuscany and other foreign places: viz. *Agaricus araneosus; cortinellus; albellus,* the musk champignon; *eburneus,* the mugnaio; *ericetorum,* the jozzolo; *virgineus,* the petite oreillette; *auricula,* the escoubarbe; *eryngii,* the ciccioli, which grows on the sea-holly; *tristis,* the fungo appassionato; *nivalis,* the fungo dormiente; *socialis,* pivoulade d'Ecosse; *ilicinus; tortilis,* the mousseron de Dieppe; *palomet,* the palombette; *virens,* the verdone; *translucens,* the pivoulade de saule; *deliciosus; subdulcis; piperatus; procerus; cylindraceus; attenuatus; asper; solitarius incarnatus; vaginatus,* and *aroideus.*

Agaricus chantarellus. A species of fungus, esteemed a delicacy by the French. Broiled with salt and pepper, it has much the flavour of a roasted cockle.

Agaricus chirurgorum. See *Boletus igniarius.*

Agaricus cinnamomeus. Brown mushroom. This species of agaric is of a pleasant smell. When broiled, it gives a good flavour.

Agaricus deliciosus. This fungus, well seasoned, and then broiled, has the exact flavour of a roasted muscle. It is in season in September. Care must be taken not to confound it with *Agaricus necator* or *theiologus galus,* which have yellow milk, and are deleterious.

Agaricus gynopus. An agaric, the cap of which is fleshy.

Agaricus lepiotus. The footstalk furnished with a moveable collar?

Agaricus mineralis. A mineral: the mountain milk, or mountain meal, of the Germans. It is one of the purest of the native carbonates of lime, found chiefly in the clefts of rocks, and at the bottom of some lakes, in a loose or semi-indurated form. It has been used internally in hæmorrhages, strangury, gravel, and dysenteries; and externally as an application to old ulcers, and weak and watery eyes.

Agaricus muscarius. Bug Agaric: so called from its known virtue in destroying bugs. This reddish fungus is the *Agaricus — stipitatus, lamellis dimidiatis solitariis, stipite volvato, apice dilatato, basi ovato,* of Linnæus. It is not much known in this country. Haller relates that six persons of Lithuania perished

at one time by eating this kind of mushroom, and that in others it has caused delirium. The following account, from Orfila, of the effects of this species in the animal economy, is interesting. Several French soldiers ate, at two leagues from Polosck, in Russia, mushrooms of the above kind. Four of them, of a robust constitution, who conceived themselves proof against the consequences under which their feebler companions were beginning to suffer, refused obstinately to take an emetic. In the evening, the following symptoms appeared: — anxiety, sense of suffocation, ardent thirst, intense griping pains, a small and irregular pulse, universal cold sweats, changed expression of countenance, violet tint of the nose and lips, general trembling, fœtid stools. These symptoms becoming worse, they were carried to the hospital. Coldness and livid colour of the limbs, a dreadful delirium, and acute pains, accompanied them to the last moment. One of them sunk a few hours after his admission into the hospital; the three others had the same fate in the course of the night. On opening their dead bodies, the stomach and intestines displayed large spots of inflammation and gangrene; and putrefaction seemed advancing very rapidly. It is employed externally to strumous, phagedenic, and fistulous ulcers, as an escharotic.

Agaricus piperatus. The plant thus named by Linnæus, is the pepper mushroom; also called pepper agaric. It is the *Fungus piperatus albus, lacteo-succo turgens*, of Ray. *Fungus albus acris.* When freely taken, fatal consequences are related by several writers to have been the result. When this vegetable has even lost its acrid juice by drying, its caustic quality still remains.

Agaricus pratensis. The champignon of Hudson's Flora Anglica. This plant has but little smell, and is rather dry; yet when broiled and stewed, communicates a good flavour.

Agaricus pleuropus. An agaric, the footstalk of which is on the side, or wanting.

Agaricus procerus. This is the best and the most usually eaten of those the gills of which do not melt into a black liquid.

Agaricus violaceus. Violet mushroom. This fungus requires much boiling, but when sufficiently done and seasoned, it is as delicious as an oyster. Hudson's *bulbosus* is only a variety of this.

AGATE. A mineral found chiefly in Siberia and Saxony, which consists of calcedony blended with variable proportions of jasper, amethyst, quartz, opal, heliotrope, and carnelion.

AGE. See *Ætas.*

AGENE'SIA. (*a, æ.* f. Αγενησια; from α, neg. γενναω, or γινομαι, to beget.) Male sterility, or impotency in man.

AGENT. (*Agens, entis.* m.; from *ago*, to act.) That whereby a thing is done or effected, or that which has a power whereby it acts on another, or by its action induces some change in it.

In *Chemistry*, any substance capable of producing chemical action, and where in explaining a process, the quality of agent is attributed to a body. It is only used as a designation of the substance, the presence of which determines the combination or decomposition; in which sense it is sometimes attributed to menstrua, or such bodies as in mixture have the greatest share of activity and motion. It is sometimes also used for what is more usually called instrument: thus, fire, water, air, earth, and menstrua, are chemical agents.

The internal agent in man, whereby all the vital motions are managed, is variously called. See *Nature.*

A'GER. (*Ager, gri.* m.; from αγρος.) The common earth or soil.

Ager naturæ. The womb.

AGE'RATUM. (*um, i.* n. Αγηρατον; from α, priv. and γηρας, *senectus:* never old, ever green; because its flowers preserve their beauty a long time.) See *Achillæa ageratum.*

Agera'tus lapis. (*Ageratus,* common.) A stone used by cobblers.

A'GES. (From αγης, wicked: so called because it is generally the instrument of wicked acts.) The palm of the hand.

AGEU'STIA. (*a, æ.* f.; from α, neg. and γευομαι, *gusto*, to taste.) A defect or loss of taste. Dr. Cullen makes two species: the one *organic*, arising from some affection in the membrane of the tongue, by which relishing things, or those which have some taste, are prevented from coming into contact with the nerves; the other *atonic*, arising without any affection of the tongue. Want of taste depends on a defective supply of nervous influence, and answers as a symptom in many diseases. It requires, for its removal, the remedies which destroy the primary affection. In many acute febrile diseases the taste is totally wanting, and the same is caused by the use of tobacco, both smoking and chewing; and other acrid narcotics have been known to cause it. In all these cases, after the removal of the causes as far as possible, masticatories are serviceable of mustard, horse-radish, and pyrethrum. I have known the latter, in particular, beneficial. A tincture of the root is to be mixed with water, and so diluted as to produce a salivatory effect by washing the mouth with it.

AGGLUTINANT. (*Agglutinans;* from *ad*, to, and *gluten*, glue: so called because they are of a gluey or gummy nature.) Adhesive: applied to external applications, which heal the parts by causing them to stick together.

AGGLUTINA'TION. (*Agglutinatio;* from *ad*, and *glutino*, to glue together.) The adhesive union or sticking together of substances.

AGGLUTI'TIO. Obstruction in the œsophagus, or a difficulty in swallowing.

AGGREGATE. (*Aggregatus*; from *aggrego*, to assemble together.) 1. Aggregate: added together.

2. In *Chemistry*, when bodies of the same kind are united, the only consequence is, that one larger body is produced. In this case, the united mass is called an aggregate, and does not differ in its chemical properties from the bodies from which it was originally made. Elementary writers call the smallest parts into which an aggregate can be divided, without destroying its chemical properties, integrant parts. Thus the integrant parts of common salt are the smallest parts which can be conceived to remain without change; and beyond these, any further subdivision cannot be made without developing the component parts, namely, the alkali and the acid; which are still further resolvable into their constituent principles.

3. In *Botany*, it is applied to glands, flowers, gems, &c. An aggregate flower is one which consists of a number of smaller flowers or fructifications, collected into a head by means of some part common to them all. In this view, aggregate flowers are opposed to simple flowers, which have a single fructification, complete in its parts; nine of which are common to many flowers. An aggregate gem is when two, three, or even more gems appear at the same time.

A peduncle is called, in *Anatomy*, an assemblage of glands, *Glandulæ aggregatæ*; as those on some parts of the internal surface of the intestines: and aggregate, or clustered flower-stalks, when several grow together; as in *Verbascum nigrum*.

AGGREGATION. (*Aggregatio, onis.* f.; from *aggrego*, to assemble together.) See *Attraction*.

Aggregation, affinity of. See *Attraction*.

Aggregation, attraction of. See *Attraction*.

AGHEU'STIA. See *Ageustia*.

A'GIS. The thigh or femur.

AGITA'TION. *Agitatio*. 1. A violent perturbation of spirits, occasioned by some predominant passion.

2. A species of exercise by which the body is shaken.

AGITATO'RIUS. Convulsive.

AGLACTA'TIO. (*tio, onis.* f.; from *α*, priv. and *γαλα*, milk.) Defect of milk.

AGLA'XIS. (*is, is.* f.) Defect of milk.

AGLIUM. 1. A shining tubercle or pustule on the face.

2. A white speck on the eye.

A'GMA. *Agme*. A fracture.

A'GNACAL. A tree, which, according to Ray, grows about the isthmus of Darien, and resembles a pear-tree, the fruit of which is a great provocative to venery.

AGNA'TA. The same as *Adnata*.

AGNI'NUS. (*Agninus*; from *agnus*, a lamb.) Aëtius calls one of the membranes which involve the fœtus by the name of *membrana agnina*, which he derives from its tenderness. See *Amnios*.

AGNOI'A. (From *α*, priv. and *γινωσκω*, to know.) Forgetfulness.

A'GNUS. The lamb. See *Ovis aries*.

AGNUS CASTUS. (*Agnus*: so called from the down upon its surface, which resembles that upon a lamb's skin; and *castus*, because the chaste matrons, at the feasts of Ceres, strewed them upon their beds, and lay upon them.) See *Vitex agnus castus*.

A'GNUS SYTHICUS. See *Polypodium barometz*.

AGO'CE. 1. The deduction or reasoning upon diseases from their symptoms and appearances.

2. The order, state, or tenour of a disease or body.

AGOMPHI'ASIS. *Gomphiasis*. A looseness of the teeth.

A'GONE. (Αγονη; from *α*, neg. and *γονος*, offspring: so called because it was supposed to cause barrenness.) Henbane. See *Hyosciamus niger*.

AGO'NIA. (*a, æ.* f.) Sterility, impotence, agony.

AGONI'STICUM. (Αγωνιςικον; from *αγωνιαω*, to struggle.) A term used by ancient physicians to signify water extremely cold, which was directed to be given in large quantities, in acute erysipelatous fevers, with a view of overpowering or struggling with the febrile heat of the blood.

A'GONOS. (From *α*, priv. and *γονος*, or *γονη*, an offspring.) Barren. Hippocrates calls those women so who have not children, though they might have if the impediment were removed.

AGO'STOS. (From *αγω*, to bring, or lead.) That part of the arm from the elbow to the fingers; also the palm or hollow of the hand.

AGRE'STA. (*a, æ.* f. Αγριος, wild.) 1. The immature fruit of the vine.

2. Verjuice, which is made from the wild-apple.

AGRE'STEN. Common tartar.

AGRE'STIS. (*is, is.*; from *αγρος*, a field.) 1. Pertaining to the field; the trivial name of many plants.

2. In the works of some old writers it expresses an ungovernable malignity in a disease.

A'GRIA. (*a, æ.* f. Αγρια.) 1. See *Ilex aquifolium*.

2. A malignant pustule, of which the ancient surgeons, and particularly Celsus, describe two sorts; one which has been so called, is small, and casts a roughness or redness over the skin, slightly corroding it; smooth about its centre; spreads slowly; and is of a round figure. The second ulcerates, with a violent redness and corrosion, so as to make the hair fall off; it is of an unequal form, and turns leprous. See *Lichen*.

AGRIA'MPELOS. (*los, li.* f.; from *αγριος*, wild, and *αμπελος*, a vine.) The wild vine, or white bryony; and, according to Gerard, the black bryony. See *Tamus communis*, and *Bryonia alba*.

AGRIELÆ'A. (*a, æ.* n.; from *αγριος*, wild, and *ελαια*, the olive-tree.) The oleaster, or wild-olive.

AGRIFO'LIUM. (*um, i.* n.; from *ακις*, a prickle, and *φυλλόν*, a leaf.) The holly-tree; which should rather be called *Acifolium*, from its prickly leaves. See *Ilex aquifolium*.

AGRIMO'NIA. (*a, æ.* f.; from *αγρος*, a field, and *μονος*, alone: so named from its being the chief of all wild herbs.) Agrimony.

1. The name of a genus of plants in the Linnæan system. Class, *Dodecandria*; Order, *Digynia*.

2. The pharmacopœial name of the common agrimony. See *Agrimonia eupatoria*.

Agrimonia eupatoria. The systematic name of the common agrimony. *Agrimonia* of the pharmacopœias. *Agrimonia—foliis caulinis pinnatis, foliolis undique serratis, omnibus minutis interstinctis, fructibus hispidis*, of Linnæus.

1. A common plant in fields about hedges and shady places, flowering in June and July. It has been principally regarded in the character of a mild astringent and corroborant, and many authors recommend it as a deobstruent, especially in hepatic and other visceral obstructions. Chomel relates two instances of its successful use in cases where the liver was much enlarged and indurated. It has been used with advantage in hæmorrhagic affections, and to give tone to a lax and weak state of the solids. In cutaneous disorders, particularly in scabies, we have been told that it manifests great efficacy. For this purpose it was given, infused with liquorice, in the form of tea; but, according to Alston, it should be always exhibited in the state of powder. It is best used while fresh, and the tops, before the flowers are formed, possess the most virtue. Cullen observes that the agrimony has some astringent powers, but they are feeble; and pays little attention to what has been said in its favour.

AGRIMONY. See *Agrimonia*.

Agrimony, hemp. See *Bidens tripartita*.

AGRIOCA'RDAMUM. (*um, i.* n.; from *αγριος*, wild, and *καρδαμον*, the nasturtium.) Wild garden-cress. See *Lepidium iberis*.

AGRIOCA'STANUM. (*um, i.* n.; from *αγριος*, wild, and *καςανον*, the chestnut.) See *Bunium bulbo-castanum*.

AGRIOCI'NARA. (*a, æ.* f.; from *αγριος*, wild, and *κιναρα*, artichoke.) Wild artichoke. See *Cinara scolymus*.

AGRIOCOCCIME'LA. (*a, æ.* f.; from *αγριος*, wild, *κοκκος*, a berry, and *μηλεα*, an apple-tree.) See *Prunus spinosa*.

AGRIOME'LA. The crab-apple. See *Pyrus malus*.

A'GRION. See *Peucedanum silaus*.

AGRIOPASTINA'CA. (*a, æ.* f.; from *αγριος*, wild, and *pastinaca*, a carrot.) Wild carrot, or parsnip.

AGRIOPHY'LLON. See *Peucedanum silaus*.

AGRIORI'GANUM. (From *αγριος*, wild, and *οριγανον*, marjoram.) Wild marjoram. See *Origanum vulgare*.

AGRIOSELI'NUM. (*um, i.* n.; from *αγριος*, wild, and *σελινον*, parsley.) Wild parsley. See *Smyrnium olusatrum*.

AGRIOSTA'RI. (From *αγριος*, wild, and *ςαις*, wheat.) Wild field-corn, a species of *Triticum*.

AGRIPA'LMA. (*a, æ.* f.; from *αγριος*, wild, and *παλμα*, a palm-tree.) The herb mother-wort, or wild-palm. See *Leonurus cardiaca*.

Agripalma gallis. See *Leonurus cardiaca*.

AGRI'PPÆ. Children born with their feet foremost were so called, because that was said to be the case with Agrippa, the Roman, who was named *ab ægro partu*, from his difficult birth.

A'GRIUM. (*um, i.* n.) An impure sort of natron. The purer sort was called *halmyrhaga*.

AGROSTEMMA. (*a, æ.* f. *Αγρου ςεμμα*, the garland of the field.) The name of a genus of plants. Class, *Decandria*; Order, *Pentagynia*. Cockle.

Agrostemma githago. This plant has been also called *Nigellastrum*, *Pseudo melanthium*, *Lychnis segetum major*, *Githago*, *Nigella officinarum*, and *Lychnoides segetum*. The corn-cockle. It has no particular virtues, and is fallen into disuse.

AGROSTIS. (*tis, tis.* f.; from *αγριος*, a field.) The name of a genus of plants. Class, *Triandria*; Order, *Digynia*. Bent-grass.

Agru'mina. Leeks; wild-onions.

AGRY'PNIA. (*a, æ.* f.; from *α*, priv. and *υπνος*, sleep.) Watchfulness; sleeplessness.

Natural sleep is a natural torpitude of the voluntary organs of the animal frame, produced by a general exhaustion of sensorial power, in consequence of an exposure to the common stimulants or exertions of the day. And hence, if such exhaustion do not take place, natural sleep cannot possibly ensue, though morbid sleep undoubtedly may, as produced by other causes.

Now it often happens, that, from an energetic bent of the mind to a particular subject, the sensorial power continues to be secreted, not only in a more than usual quantity, but for a more than usual term of time; and, in consequence of this additional supply, there is no exhaustion at the ordinary period, and therefore no sleep. Severe grief is often a stimulus of this kind; during which a morbid redundancy of sensorial power continues to be secreted, followed by

a morbid excitement of the system generally, from day to day, and from night to night, till the frame is worn out by the protracted watchfulness or sensorial erethism. And it is astonishing to witness in various instances how long the frame will support itself before it is worn out, or the irritation that prevents sleep sufficiently subsides for its return, and particularly where the mind is labouring under the influence of the depressing passions, or of depressing pain. A hemicrania has kept a person awake for three months; and a melancholy or gloom on the spirits for fourteen months. Overwhelming joy has often a similar effect, though seldom in an equal degree, or for so long a period of time. The mind may also be intensely directed to some peculiar object of study; and the energy of the will becomes in this case a like stimulus to the secretion of a fresh or protracted tide of sensorial power, so that the usual exhaustion of the nervous system does not take place at the accustomed period. This is peculiarly the case in a pursuit of the abstract sciences, or those of a more strictly intellectual nature, as the higher branches of the mathematics.

Where the determination of the mind to a particular subject is exquisitely intense, whether that subject be a passion or a problem, by far the greater part of the sensorial secretion is expended at this particular outlet; and, consequently, the frame at large, with the exception of those organs to which such outlet peculiarly appertains, is so far drawn upon, as a common bank, for a contribution of sensorial power, that it labours under a certain degree of deficiency, and hence a certain degree of torpitude, so far as to become insensible to the world around it: making, in this respect, an approach to the state of mind called mental abstraction.

The cure of this species of sleeplessness is to be accomplished by allaying the mental excitement by which it is produced. This is best done by recalling the mind from the pursuit that leads it astray, and a free surrender of the will to listlessness and quiet. The perturbation will then subside; the sensorial organs become tranquillised and inactive; the secreted tide of sensorial power will be at its ebb, and the habit of refreshing slumber resume its influence. But where this cannot be obtained by the mere exercise of the will, we must call opium or some other narcotic to our aid, which, by its revellent stimulus, may coincide with the consent of the will, and produce the exhaustion, and, consequently, the quiet that is requisite for sleep.

Sleep is often retarded also by bodily disquiet. Uneasiness of any kind will become an obstacle; and hence, an aching coldness of the extremities, or of any other part, will prevent it; an uneasy sensation at the stomach, or any other part, will prevent it; an absence of the common pleasurable feeling with which we ordinarily prepare ourselves for sleep will prevent it; "and on this account," as Darwin observes, "if those, who are accustomed to wine at night, take tea instead, they cannot sleep. And the same evil happens from a want of solid food for supper to those who are accustomed to use it; as, in these cases, there is an irksome or dissatisfied feeling in the stomach." And hence, also, too great an anxiety or desire to sleep, is another cause of its suspension; for this, as a mental disquiet, will only add to the corporeal disquiet which has produced it; and, as already observed, the emotions of the mind must be as quiescent as those of the body, and the will, instead of commanding or interfering, must tranquilly resign itself to the general intention.

Where uneasinesses of this kind have been permitted to continue for several nights in succession, the sleeplessness is apt to become chronic, and to be converted into a habit. We have hence had examples, in which vigilance or sleeplessness has continued for a month without intermission; for six months; and even for three years.

Mr. Gooch gives us a singular case of a man who never slept, and yet enjoyed a very good state of health till his death, which happened in the seventy-third year of his age. He had a kind of dozing for about a quarter of an hour once a day, but even that was not sound, though it was all the slumber he was ever known to take.

The cure of this disease demands a particular attention to its cause; for if we can get rid of the organic disquiet on which it depends, we shall be pretty sure to succeed in obtaining our object. All irksome chills, and especially those of the feet, should be taken off by a sufficient warmth of clothing; and the habitual supper, or other indulgence, which has hitherto preceded and introduced sleep, should be freely allowed.

The lulling sounds of soft and agreeable music, or agreeable reading, have been tried as concomitants, and not unfrequently with success; and narcotic aromas, especially the hop, has at times been had recourse to, heaped into pillows; but, so far as I have seen (and I have once or twice witnessed the experiment), with as little efficacy as the pillows of the male fern in cases of rickets, which were once, according to Van Swieten, in equal estimation for this last complaint. A pediluvium, as recommended by Lang, will often be found a much better prescription, or any means which will excite that breathing moisture, which is indicative of general ease. Soft, gentle, and general friction, and especially where there is any chill or rigidity upon the limbs, will frequently produce the same effect in a very agreeable way; and this, too, without combining it with the external use of opiates, as proposed by De la Prada, and various other writers.

Mosch was the favourite medicine of Thi-

lenius, and hyosciamus of Stoerck; but a free and exhilarating glass of wine, as proposed by Fordyce, will often answer much better than either of them. In many cases of disquiet, and particularly in the stomach and præcordia, it might be well to try the hypnotic powders of the nutmeg, as warmly recommended by Dr Cullen. We have already noticed this reputed effect in the East Indies, which Bontius confirmed by his own experience, and which has since been confirmed by practitioners in Europe; and when taken in a large dose, there can be little doubt of its somnolent virtue. In the case recited by Dr. Cullen in proof of this, the person had swallowed more than two drachms by mistake, and the effect was a drowsiness, commencing an hour afterwards, which gradually increased to a complete stupor and insensibility. After this he was delirious, and continued to be alternately stupid and delirious for several hours; but in six hours from the attack, he was pretty well recovered from every symptom.

Where, however, the morbid habit is too rigidly established to give way to any of these means, we must forcibly break through it by the use of opium, till the habit itself be overcome, when all narcotics should be gradually omitted.

The wakefulness so common to old people, is hardly a disease: they use but little exertion, and hence require but little sleep; and the internal inactivity is upon a par with the external. A third part of the vessels, perhaps, that took a share in the general energy of the middle of life, is obliterated, and the wear and tear of those that remain are much less. The pulse beats feebly; the muscles of respiration are less forcibly distended; the stomach digests a smaller portion of food — for only a smaller portion is required; the intellect is less active; the corporeal senses less lively, and a minuter quantity of nervous fluid secreted by the brain and its dependencies: and hence, though there is far more weakness than in earlier life, there is a less proportionate demand for exertion, and hence a far smaller necessity for sleep.

From such a line of reasoning, we may see why sleeplessness should be found as a symptom in excessive fatigue, violent pain of any kind, inflammation, fevers, and various affections of the brain.

AGRYPNOCO'MA. (*a, atis.* n.; from *αγρυπνος*, without sleep, and *κωμα*, a lethargy.) A lethargic kind of watchfulness, in which the patient is stupidly drowsy, and yet cannot sleep.

AGUE. An ague or intermittent fever is one that consists of a paroxysm of fever, which leaves the person free from any fever for a time, and then returns, and this state of fever and no fever continues a certain time, when the paroxysm returns. The intermissions are generally perfect and regular. The febrile paroxysm of an ague consists of three periods or stages, the *cold*, the *hot*, and the *sweating* stage, and these in regular succession.

The *cold* stage commences with languor, a sense of debility and sluggishness in motion, frequent yawning and stretching, and an aversion to food. The face and extremities become pale, the features shrink, the bulk of every external part is diminished, and the skin over the whole body appears constricted, as if cold had been applied to it. At length, the patient feels very cold, and universal rigors come on with pains in the head, back, loins, and joints, nausea and vomiting of bilious matter; the respiration is small, frequent and anxious; the urine is almost colourless; sensibility is greatly impaired; the thoughts are somewhat confused; and the pulse is small, frequent, and often irregular. In a few instances, drowsiness and stupor have prevailed in so high a degree as to resemble coma or apoplexy; but this is by no means usual.

These symptoms abating after a short time, the second stage commences with an increase of *heat* over the whole body, redness of the face, dryness of the skin, thirst, pain in the head, throbbing in the temples, anxiety and restlessness; the respiration is fuller and more free, but still frequent; the tongue is furred, and the pulse has become regular, hard, and full. If the attack has been very severe, then perhaps delirium will arise.

When these symptoms have continued for some time, a moisture breaks out on the forehead, and by degrees becomes a *sweat*, and this, at length, extends over the whole body. As this sweat continues to flow, the heat of the body abates, the thirst ceases, and most of the functions are restored to their ordinary state. This constitutes the third stage.

It must, however, be observed, that in different cases these phenomena may prevail in different degrees, and their mode of succession vary; that the series of them may be more or less complete; and that the several stages, in the time they occupy, may be in different proportions to one another.

When an ague has taken place, and discovered its type, or given an interval of a particular measure between the close of the first and the commencement of the second paroxysm, which period is called the *revolution* of the intermittent, it continues true, as a general rule, not merely to the same measure or extent of interval, but to the length and severity of paroxysm, through the whole course of the disease; the character of the cold stage determining that of the hot, and both together that of the sweating stage. But the first interval, like the first paroxysm, which regulates the rest, is of

different duration in different cases. Of the reason of this difference we know nothing; sometimes it seems to depend upon the season or the temperament of the atmosphere, operating upon the febrile miasm that is diffused through it, and all who have agues in the same place, or at the same time, have them of the same kind. Sometimes, on the contrary, it seems chiefly to depend on the time of life, the idiosyncrasy, or the particular condition of the constitution, for different individuals, even at the same place, and under the same roof, exhibit different forms; but upon this subject we have no clear information.

It is this difference in the interval between the close of the first and the commencement of the second febrile paroxysm that lays the foundation for dividing agues into distinct species. The following comprise all its principal diversities:

1. The *quotidian*.
2. The *tertian*.
3. The *quartan*.
4. The *irregular ague*.
5. The *complicated ague*.

1. Of the *quotidian*. The intermission of this species of ague is about every twenty-four hours, the paroxysm commencing in the morning. The genuine quotidian is of less frequent occurrence than the other species, but it has a considerable resemblance to that variety of the complicated ague which has generally been denominated a double tertian, and with which it is often confounded. It is distinguishable, however, to an attentive eye by the regularity of its paroxysms, which is true to itself on every return; while, in the double tertian, the alternate paroxysms only are true to each other.

2. Of the *tertian ague*. The intermission of this species is forty-eight hours: and it is called the tertian, because it appears every third day, reckoning the days inclusively. The fit commences generally about noon, and seldom lasts more than six hours, and at most under twelve. This is the *tritæus* of the Greek writers. It occurs most frequently in the spring and summer months. The chill during the cold fit is intense, with shivering, rigidity, and gnashing of the teeth. It is, however, of shorter duration than that of the quartan, and sometimes passes off in less than half an hour; and is succeeded, first, by nausea or vomiting, and afterwards by a pungent penetrating heat, frequent respiration, urgent desire for cold drink, wakefulness, and headach, sometimes delirium. At length a moisture on the skin, gradually advancing to a copious sweat, breaks forth; the urine commonly deposits a lateritious sediment, and there is often some looseness of the bowels. The entire paroxysm sometimes ceases in six hours, but more commonly extends to eight or ten: if it exceed twelve, as it does occasionally in the autumn, the disease forms generally a spurious tertian.

3. Of the *quartan ague*. The intermission in this is about seventy-two hours, and the usual duration of the fit which, generally, begins about noon, is under nine hours. This is the *tetratæus* of the Greek writers. It is rarely found in the spring season, but is common in the autumnal; it commences usually about four or five of the afternoon. The cold fit is less vehement than in the *tertian*, but of longer duration, and will sometimes continue for two hours, but usually without sickness or diarrhœa. It yields to a heat that is rather troublesome from its dryness than from its intensity, and which is rarely succeeded by a sensible perspiration. There is a heaviness or dulness of the head, rather than an acute pain. During the intermission, there are mostly pains in the limbs. It is in this species of ague that the liver, and more frequently the spleen, become tumid, and in some cases of great size: forming what is vulgarly called the *ague cake*.

4. Of the *erratic* or *irregular ague*. The peculiar character of this species is, that the duration of the intermission exceeds that of all of them: on which account it can never be confounded with any of the rest. The chief varieties are,

1. *Quintanus*, or five-day ague.
2. *Sextanus*, or six-day ague.
3. *Septanus*, or seven-day ague.
4. *Octanus*, or eight-day ague.
5. *Nonanus*, or nine-day ague.
6. *Decimanus*, or ten-day ague.
7. *Vagus*. Vague and irreducible.

Many others may be added, but it is quite unnecessary. Several of these have occasionally persevered with great obstinacy.

5. Of the *complicated ague*. The paroxysms are intricate or multiplicate, or both. There are numerous examples of these complicated forms of ague, and although difficult to ascertain their real types, may by some attention be referred to either the quotidian, tertian, or quartan type, of which, of course, they are then known to be varieties; the principal of these are, the double tertian, having a paroxysm every day, with the alternate paroxysms, similar to one another. The double tertian, with two paroxysms every other day. The triple tertian, with two paroxysms on one day, and another on the next. The double quartan, with two paroxysms on the first day, none on the second and third, and two again on the fourth day. The double quartan, with a paroxysm on the first day, another on the second, but none on the third. The triple quartan, with three paroxysms every fourth day. The triple quartan, with a paroxysm every day, every fourth paroxysm being similar.

When these fevers arise in the spring of the year, they are called vernal; and when

in the autumn, they are known by the name of autumnal. Intermittents often prove obstinate, and are of long duration in warm climates; and they not unfrequently resist every mode of cure, so as to become very distressing to the patient; and by the extreme debility which they thereby induce, often give rise to other chronic complaints.

It seems to be pretty generally acknowledged, that marsh miasmata, or the effluvia arising from stagnant water, or marshy ground, when acted upon by heat, are the most frequent exciting cause of this fever. In marshes, the putrefaction of both vegetable and animal matter is always going forward, it is to be presumed; and hence it has been generally conjectured, that vegetable and animal putrefaction imparted a peculiar quality to the effluvia arising from thence. We are not yet acquainted with all the circumstances which are requisite to render marsh miasma productive of the intermittents; but it may be presumed that a moist atmosphere has a considerable influence in promoting its action. See *Contagion*. A watery poor diet, great fatigue, long watching, grief, much anxiety, exposure to cold, lying in damp rooms or beds, wearing damp linen, the suppression of some long-accustomed evacuation, or the recession of eruptions, have been ranked among the exciting causes of intermittents; but it is more reasonable to suppose that these circumstances act only by inducing that state of the body which predisposes to these complaints. By some, it has been imagined that an intermittent fever may be communicated by contagion; but this supposition is by no means consistent with general observation.

One peculiarity of an ague is, its great susceptibility of a renewal from very slight causes, as from the prevalence of an easterly wind, even without the repetition of the original exciting cause. It would appear that a predisposition is left in the habit, which favours the recurrence of the complaint. In this circumstance, intermittents differ from most other fevers, as it is well known that after a continued fever has once occurred, and been removed, the person so affected is by no means so liable to a fresh attack of the disorder, as one in whom it had never taken place.

Such a depression of strength has been known to take place on the attack of an intermittent, as to cut off the patient at once; but an occurrence of this kind is very uncommon.

Patients are seldom destroyed in intermittents from general inflammation, or from a fulness of the vessels either of the brain or of the thoracic viscera, as happens sometimes in a continued fever; but when they continue for any length of time, they are apt to induce other complaints, such as a loss of appetite, flatulency, scirrhus of the liver, dropsical swellings, and general debility, which in the end now and then prove fatal. In warm climates, particularly, intermittents are very apt to terminate in this manner, if not speedily removed; and, in some cases, they degenerate into continued fevers. When the paroxysms are of short duration, and leave the intervals quite free, we may expect a speedy recovery; but when they are long, violent, and attended with much anxiety and delirium, the event may be doubtful. Relapses are very common to this fever at the distance of five or six months, or even a year; autumnal intermittents are more difficult to remove than vernal ones, and quartans more so than the other types.

Dissections of those who have died of an intermittent, show a morbid state of many of the viscera of the thorax and abdomen; but the liver, and organs concerned in the formation of bile, as likewise the mesentery, are those which are usually most affected.

The treatment of an intermittent fever resolves itself into,

1. Those means, which may be employed during a paroxysm, to arrest its progress, or to mitigate its violence.

2. Those which may prevent any return, and effect a permanent cure: this forms of course the more important part of the plan; but it is sometimes necessary to palliate urgent symptoms.

There is another way of curing an ague, which is by administering a remedy just as a paroxysm is about to begin. When therefore a fit is commencing, or shortly expected, we may try to obviate it by some of those means which excite movements of an opposite description in the system. An emetic will generally answer the purpose, determining the blood powerfully to the surface of the body; or a full dose of opium, assisted by the pediluvium, &c.: æther also, and various stimulant remedies, will often succeed, but these may perhaps aggravate, should they not prevent the fit; strong impressions on the mind, &c. have likewise been occasionally employed with effect. Should the paroxysm have already come on, and the cold stage be very severe, cordial diaphoretics, in repeated moderate doses, may assist in bringing warmth to the surface: when, on the contrary, great heat prevails, the antiphlogistic plan is to be pursued; and it may be sometimes advisable, when an organ of importance is much pressed upon, to take some blood locally, or even from the general system, if the patient is plethoric and robust: and where profuse perspirations occur, acidulated drink may be exhibited, with a little wine to support the strength, keeping the surface cool at the same time. In the intermissions, in conjunction with a generous diet, moderate exercise, and other means

calculated to improve the vigour of the system, are to be enforced with such medicines as have been known to prevent the return of the disease. These are very many. Before, however, any of these are resorted to, it is of the utmost importance to prepare the patient for their exhibition; for it seldom happens that the intermittent can be cured by any of them until the stomach and bowels are well cleared from any bilious, indigested, or other matters; and what is of equal importance, until every other disease is removed which may be increased by tonics; obstructions of bile, inflammatory conditions, and other states of the viscera, of the lungs more especially, should be attended to, and when removed, the proper remedy against the ague is to be administered. The best of these is cinchona or the Peruvian bark. I never knew this fail in a simple ague, unattended by any other disease. The best preparation of it is the powder. One ounce of good bark, finely powdered and mixed up with brandy, will generally prevent the recurrence of the fit, if the whole of that quantity be taken in the six hours before the fit is expected. If from the stomach not bearing this form of bark, or from any dislike to it, another is required, the next is the sulphate of quinine, a preparation of a species of cinchona which is now in general use, from the general success that results from it. From two to four grains are administered every two hours during the twelve hours prior to the fit, or a less dose every three hours during the whole of the period that the person is free from ague. The following are the best formulæ of cinchona: —

℞. Pulveris cinchonæ, ℥j.
Spiritus gallici, f. ℥ij. Fiat electuarium.

℞. Pulveris cinchonæ, ʒj.
Pulveris piperis nigri, ʒj.
Spiritus gallici, f. ℥ij. Fiat electuarium.

℞. Pulveris cinchonæ, ℥j.
Pulveris cinnamomi compositi, ʒij.
Misce et divide in partes xij. æquales.

℞. Extracti cinchonæ, ʒiss.
Extracti glycyrrhizæ, ʒvj.
Decocti cinchonæ, f. ℥vij.
Spiritus cinnamomi, f. ʒvj. Fiat mistura.

℞. Extracti cinchonæ, ʒj.
Tincturæ cinchonæ compositæ, f. ʒvj.
Decocti cinchonæ, f. ℥viss.
Syrupi aurantii, f. ℥ss. Fiat mistura.

℞. Quinæ sulphatis, ℈j.
Infusi rosæ compositi, f. ℥vij.
Spiritus cinnamomi, f. ʒvj. Fiat mistura.

℞. Quinæ sulphatis, ℈j.
Acidi sulphurici diluti, f. ʒss.
Infusi cascarillæ, f. ℥vij.
Syrupi aurantii, f. ℥ss. Fiat mistura.

℞. Quinæ sulphatis, ℈j.
Extracti cinchonæ, ʒj.
Fiant pilulæ xviij. æquales.

℞. Extracti cinchonæ cum resina, ʒj.
Quinæ sulphatis, ℈j.
Fiant pilulæ xviij. æquales.

Each of these prescriptions contains the dose which will cure the ague, when given properly during the six or twelve hours immediately before the paroxysm is expected. If, however, one formula prove insufficient, the dose may be increased, or the pills may be given, and each dose followed by one of the mixtures. Great care must be taken not to disorder the stomach, which is apt to reject such powerful medicines in such active doses so frequently and closely administered.

The next remedy to bark is arsenic, which is in very general use. Its exhibition should be watched attentively, as it proves a dangerous remedy in an over-dose, not merely by disagreeing, but by producing inflammation of the bowels. The tasteless ague drop has cured many thousands. The active base of this preparation is the arseniate of potash; and analogous to it is the liquor arsenicalis of the London Pharmacopœia. From five to ten minims is the dose, in a wine-glassful of brandy and water, or any warm aromatic, every six or eight hours, between the paroxysms.

All the tonic bitters have been successfully administered against intermittents, and some metallic salts which have a tonic operation in the system. Cascarilla, gentiana, colomba, quassia, aurantium, nux vomica, anthemis, &c., the sulphas cupri, sulphas zinci, oxydum zinci, alumen, muriate of ammonia, &c. &c. Of these powders, infusions, decoctions, tinctures, pills, &c. may be formed, and given in a full dose every four, six, or eight hours in the intermission.

Ague cake. The popular name for a tumour, generally an enlarged spleen, on the left side of the belly, lower than the false ribs in the region of the spleen, which forms in some and mostly in quartan agues. See Ague.

Ague complicated. See *Ague*.

Ague drop. A medicine sold for the cure of agues, composed of arsenite of potash in solution in water. The regular substitute for the quack medicine called the tasteless ague drop, which has cured thousands of that complaint, is the liquor arsenicalis.

Ague-free. A name given by some to sassafras, on account of its supposed febrifuge virtue.

Ague quartan. See *Ague*.

Ague quotidian. See *Ague*.

Ague tertian. See *Ague*.

AGUI'A. (*a*, *æ*. f.; from *α*, priv. and *γυιον*, a member.) Without the use of a

member. Applied in old writings to paralytic weakness of a limb, and where the use of the members is defective or lost.

A'GUL. *Alhagi.* An Arabian name for the Syrian thorn: the leaves are purgative.

AGUSTINE. (*Augustina, æ.* f.; from α, priv. and γευσια, taste, that is, tasteless.) A new earth discovered in the Saxon beryl, or beryl of Georgien Stadt, (a stone greatly resembling the beryl of Siberia,) by Professor Tromsdorff, of Erfurth, in Germany, to which he has given the name of *agustine,* on account of the property of forming salts which are nearly destitute of taste. This earth is white and insipid: when moistened with water, it is somewhat ductile, but is not soluble in that fluid. Exposed to a violent heat, it becomes extremely hard, but acquires no taste. It combines with acids forming salts which have little or no taste.

AGUTIGUEPA. The Brazilian name for the arrow-root. See *Maranta.*

AGUTIGUEPOO'BI BRAZILIENSIS. An Indian name of the arrow-root. See *Maranta.*

AGYION. See *Aguia.*

AGY'RTÆ. (From αγυρις, a crowd of people, or a mob; or from αγειρω, to gather together.) It formerly expressed certain strollers, who pretended to strange things from supernatural assistances; it was afterwards applied to all illiterate dabblers in medicine.

AHALOTH. The Hebrew name of lignum aloes. See *Lignum aloes.*

AHME'LLA. See *Achmella.*

AHO'VAI THEVETICLUSH. A chestnut-like fruit of Brazil of a poisonous nature.

AHU'SAL. Orpiment.

AI'LMAD. Antimony.

AIMATEI'A. A black bilious and blood-like discharge from the bowels.

AIMORRHŒ'A. See *Hæmorrhagia.*

AIMO'RRHOIS. See *Hæmorrhois.*

AIPATHEI'A. (From αει, always, and παθος, a disease.) A term sometimes applied to diseases of long continuance.

AI'PI. See *Jatropha manihot.*

AIR. See *Aer* and *Atmosphere.*

Air, alkaline. See *Ammonia.*

Air, atmospheric. See *Atmosphere.*

Air, azotic. See *Nitrogene.*

Air-bag. See *Folliculus.*

Air, fixed. See *Carbonic acid.*

Air, fluoric. See *Fluoric acid.*

Air, heavy inflammable. See *Carburetted hydrogene.*

Air, hepatic. See *Hydrogene sulphuretted.*

Air, inflammable. See *Hydrogene.*

Air, marine. See *Muriatic acid.*

Air, nitrous. See *Nitrous.*

Air, phlogisticated. See *Nitrogene.*

Air, phosphoric. See *Hydrogene phosphuretted.*

Air, sulphureous. See *Sulphureous acid.*

Air, vital. See *Oxygene.*

AI'RA. (*a, æ.* f.) A weed mentioned by Pliny, found amongst corn, as the tares, darnel-grass, &c. Darnel, or lolium.

AISTHETE'RIUM. (*um, i.* n.; from αισθανομαι, to perceive.) The common sensory, or seat, or origin of sensation.

AI'TMAD. Antimony.

AIX LA CHAPE'LLE. Called Aken by the Germans. A town in the south of France, where there is a sulphureous water, *Thermæ aquis-granensis,* the most striking feature of which, and what is almost peculiar to it, is the unusual quantity of sulphur it contains. The whole, however, is so far united to a gaseous basis, as to be entirely volatilised by heat; so that none is left in the residuum after evaporation. In colour it is pellucid, in smell sulphureous, and in taste saline, bitterish, and rather alkaline. The temperature of these waters varies considerably, according to the distance from the source, and the spring itself. In the well of the hottest bath, it is, according to Lucas, 136°, Monet, 146°; at the fountain where it is drunk, it is 112°. This thermal water is much resorted to on the Continent, for a variety of complaints. It is found essentially serviceable in the numerous symptoms of disorders in the stomach and biliary organs, that follow a life of high indulgence in the luxuries of the table; in nephritic cases, which produce pain in the loins, and thick mucous urine, with difficult micturition. As the heating qualities of this water are as decided as in any of the mineral springs, it should be avoided in cases of a general inflammatory tendency; in hectic fever and ulceration of the lungs; and in a disposition to active hæmorrhagy. As a hot bath, this water is even more valuable and more extensively employed than as an internal remedy. The baths of Aix la Chapelle may be said to be more particularly medicated than any other that we are acquainted with. They possess both temperature of any degree that can be borne, and a strong impregnation with sulphur in its most active forms; and a quantity of alkali, which is sufficient to give it a very soft soapy feel, and to render it more detergent than common water. From these circumstances, these baths will be found of particular service in stiffness and rigidity of the joints and ligaments, which is left by the inflammation of gout and rheumatism, and in the debility of palsy, where the highest degree of heat which the skin can bear is required. The sulphureous ingredient renders it highly active in almost every cutaneous eruption, and in general in every foulness of the skin; and here the internal use of the water should attend that of the bath. These waters are also much employed in the distressing debility which follows a long course of mercury and excessive salivation. Aken water is one of the few natural springs that are hot enough

to be employed as a vapour bath, without the addition of artificial heat. It is employed in cases in which the hot bath is used; and is found to be a remarkably powerful auxiliary in curing some of the worst species of cutaneous disorders. With regard to the dose of this water to be begun with, or the degree of heat to bathe in, it is in all cases best to begin with small quantities and low degrees of heat, and gradually increase them, agreeably to the effects and constitution of the patient. The usual time of the year for drinking these waters, is from the beginning of May to the middle of June, or from the middle of August to the latter end of September.

Aizo'on. (From ἀει, always, and ζω, to live.) *Aizoum.* 1. An evergreen aquatic plant, like the aloe, said to possess antiscorbutic virtues.

2. The house-leek. See *Sempervivum.*

Aizoum. See *Aizoon.*

Aja'va. An Indian name of a seed used in the East as a remedy for the colic.

AJUGA. (*a, æ.* f.; from α, priv. and ζυγον, a yoke.) 1. The name of a genus of plants in the Linnæan system.

2. The pharmacopœial name of the creeping bugloss. See *Ajuga pyramidalis.*

Ajuga pyramidalis. Upright bugloss, or middle consound; called also *Consolida media*, and *Bugula*. This plant, *Ajuga—caule tetragono foliis radicalibus maximis* of Linnæus, possesses subastringent and bitter qualities: and has been recommended in *phthisis, aphthæ*, and *cynanche.*

Ajura'rat. Lead.

A'KENSIDE, Mark. An English physician, born at Newcastle-upon-Tyne, in 1721; but more distinguished as a poet, especially for his "Pleasures of the Imagination." After studying at Edinburgh, and graduating at Leyden, he settled in practice; but though appointed physician to the Queen, as well as to St. Thomas's Hospital, he is said not to have been successful. He died of a fever in his 49th year. He has left a Dissertation on Dysentery in Latin, admired for its elegance; and several small Tracts in the Philosophical and London Medical Transactions.

AKOLOGY. See *Acology.*

AL. The Arabian article, which signifies *the*; it is applied to a word by way of eminence, as the Greek ὁ is. The Easterns express the superlative by adding *God* thereto, as *the mountain of God*, for the highest mountain; and it is probable that *Al* relates to the word *Alla*, God: so *Alchemy* may be, *the chemistry of God*, or the most exalted perfection of chemical science.

A'LA. (*a, æ.* f.; a wing.) 1. In *Ornithology*, the wing of a bird.

2. In *Anatomy*, applied to many parts, especially the arm-pit, because it answers to the pit under the wing of a bird.

3. In *Botany*. *a.* The angle which the leaves or the stalks or pedicles of the leaves form with the stem or branches of the plant from which they arise.

b. The two lateral or side petals or leaves of the papilionaceous flowers placed between those others which are called the *vexillum*, and the *carina*, which make the top and bottom of the flower.

c. An accidental part of the seed of a plant, consisting of a membranous prolongation from the side of the seed, and distinguished by the number into,

Monoterygia: one-winged, as in *Bignonia.*
Dipterygia: two-winged, as in *Betula.*
Tripterygia: three-winged.
Tetrapterygia: four-winged.
Polypterygia; or *Molendinacea*: many-winged, windmill-winged.

Ala auris. The upper and outer part of the external ear.

Ala interna minor. See *Nymphæ.*

Ala nasi. The cartilage of the nose which forms the outer part of the nostrils.

Ala vespertilionis. That part of the ligament of the womb, which lies between the tubes and the ovarium; so called from its resemblance to the wing of a bat.

Ala'bari. Lead.

ALABASTER. (*um, i.* n.) Among the stones which are known by the name of marble, alabasters are those which have a greater or less degree of imperfect transparency, a granular texture, are softer, take a duller polish than marble, and are usually of a whiter colour.

ALABASTRA. A term formerly applied to the calyx of some plants.

A'lacar. Sal ammoniac.

ALÆFO'RMIS. (From *ala*, a wing, and *forma*, resemblance.) Alæform: winglike. See *Pterygoid.*

A'lafi. *Alafor.* *Alafort.* Alkaline.

Alai'a phthisis. (From αλαιος, blind, and φθισις, a wasting.) A consumption from a flux of humours from the head.

A'lamad. *Alamed.* Antimony.

Alamaton. The fruit of a plum-like tree which grows in Madagascar.

Ala'mbic. Mercury.

Alandahla. (The Arabian for bitter.) The bitter-apple. See *Cucumis colocynthis.*

Alanfu'ta. An Arabian name of a vein between the chin and lower lip, which was formerly opened to prevent fœtid breath.

Alapou'li. See *Malus indica.*

Alaria ossa. The wing-like processes of the sphenoid bone.

ALA'RIS. (From *ala*, a wing.) Formed like, or belonging to a wing.

Alaris externus. A name of the external pterygoid muscle; so called because it takes its rise from the wing-like process of the sphenoid bone.

Alaris vena. The innermost of the three veins in the bend of the arm.

Alasalet. *Alaset.* Ammoniacum.

Alasi. *Alafor.* An alkaline salt.

ALA'STROB. Lead.

A'LATAN. Litharge.

ALATE'RNUS. A species of rhamnus.

ALA'TUS. (From *ala*, a wing.) Winged. 1. In *Botany*, applied to stems and leaf-stalks, when the edges or angles are longitudinally expanded into leaf-like borders; as in *Ænopordium acanthium; Lathyrus latifolius*, &c. and the leaf-stalk of the orange tribe, citrus, &c.

2. In *Pathology*, one who has prominent scapulæ like the wings of birds.

ALAUDA. (*a, æ.* f.; a name of Gaulish extraction.) The name of a genus of birds of the order *Passeres*. The lark genus.

ALAUDA ARVENSIS. The field-lark. The flesh of this, and several species caught in this country, is good when the bird is fat, and is by some considered as a delicacy when broiled or fried.

ALAU'RAT. Nitre.

ALBADAL. An Arabic name for the sesamoid bone of the great toe.

ALBAGE'NZI. *Albagiazi*. Arabic names for the os sacrum.

ALBAGRAS NIGRA. So Avicenna names the *Lepra ichthyosis*, or *Lepra græcorum*.

ALBAME'NTUM. (*um, i.* n.; from *albus*, white.) The white of an egg.

ALBA'NUM. Urinous salt.

ALBA'RA. (Chaldean.) The white leprosy.

ALBARAS. 1. Arsenic.

2. A white pustule.

ALBA'TIO. (From *albus*, white.) *Albificatio*. The whitening of any thing.

A'LBERAS. (Arabian.) White pustules on the face: also the *staphisagria*, because its juice was said to remove these pustules.

ALBE'STON. Quick-lime.

A'LBETAD. Galbanum.

A'LBICANS. (From *albico*, to grow white.) Inclining to white. Whitish.

ALBICA'NTIA CORPORA. *Corpora albicantia Willisii*. Two small round bodies or projections from the base of the brain, of a white colour. See *Cerebrum*.

ALBIDUS. Albide: applied to stone colour. See *Colour*.

A'LBIMEC. Orpiment. See *Arsenic*.

ALBIN. A mineral found in Bohemia; so called from its white colour.

ALBINO. The name of albino was first employed by the Portuguese, and applied to such Moors as were born white, or rather who continued so from the time of birth, for the children of negroes have little discolouration on birth, nor for several weeks afterwards, and who, on account of this morbid hue, were regarded as monsters; and the term has since passed into our own and most other languages of the world. In these persons, however, there were other peculiarities observed besides the hue of the skin, for their hair, in all its natural quarters, was equally white, the iris of the eyes white, and the pupil rose-coloured. This whiteness of the surface, however, is not the clear and glossy tint of the uncoloured parts of the European frame in a healthy state, but of a dead or pallid cast, something like that of leprous scales. The eyes, in consequence of the deficiency of their natural pigment, are so weak, that the individuals can hardly see any object in the day, or bear the rays of the sun; though, under the milder light of the moon, they see with great accuracy, and run through the deepest shades of their forests with as much ease and activity as other persons do in the brightest day-light. They are also said to be less robust than other men, and to sleep through the day and go abroad at night: both which last facts are easily accounted for, from the weakness of their sight, and the discomfort of the sun-beams to their eyes.

It was at one time a subject of inquiry whether these persons were a distinct variety of the human race, or merely instances of an occasional aberration from the ordinary laws that govern the human fabric; and the former opinion derived some support from its being found that male and female albinoes, who not unfrequently intermarried, being rejected by the rest of the world, produced an offspring with the same imperfections as their own. The question, however, has long been sufficiently set at rest, since albino children have been found produced in most parts of the world, and from parents of all tribes and colours, black and olive hued, and red and tawny; and, since the subject has been more closely attended to, from white parents or inhabitants of Europe, as well as black or copper-coloured Africans.

ALBINO-SKIN. A disease characterised by the albino signs in European children. These signs are a dull or unglossy white diffused over the body, with white or flaxen hair, white irids, and red pupils. The disease is rare, but we have had at least eleven examples described by different authorities to the present time. Two by De Saussure, four by Buzzi, one by Helvetius, one by Maupertius, and three by Dr. Traill. It is singular that all these are males; and still more so, that the female offspring of the same families were, without an exception, destitute of the albino degeneracy. The three described by Dr. Traill were part of a family of six, the daughters of which were in every respect unaffected. How far this disorder is in Europe capable of being produced hereditarily as abroad, is not known; nor, indeed, does there yet appear to have been an opportunity of forming an intermarriage between a male and a female of this kind, as not a single female has yet been discovered possessing the imperfective formation.

The same delicacy of constitution that distinguishes the foreign or negro albino, distinguishes the European, of which we may form an estimate from Dr. Traill's account of one of the three we have already alluded to.

"The oldest of these albinoes," says he, "is nine years of age, of a delicate constitution, slender, but well formed both in person and in features: his appetite has always been bad; he frequently complains of a dull pain in his forehead; his skin is exceedingly fair; his hair flaxen and soft; his cheeks have very little of the rose in them. The iris and *pupil* of his eyes are of a bright-red colour, reflecting in some situations an opaline tinge. He cannot endure the strong light of the sun. When desired to look up, his eye-lids are in constant motion, and he is incapable of fixing his eye steadily on any object, as is observed in those labouring under some kinds of slight ophthalmia, but in him is unaccompanied by tears. His mother says, that his tears never flow in the coldest weather, but when vexed they are shed abundantly. He goes to school, but generally retires to the darkest part of it to read his lesson. His disposition is very gentle; he is not deficient in intellect. His whole appearance is so remarkable, that some years ago a person attempted to steal him, and would have succeeded in dragging him away, had not his cries brought him assistance."

The disease consists altogether in a defective secretion of the rete mucosum, which is not only without the colouring constituent principles that naturally belong to it, and particularly its power of affording a black pigment, but seems to be also untempered or imperfectly elaborated in other respects, judging from the dulness or deadness of the white hue it gives to the surface of the body, instead of the life and glossiness it diffuses in a state of perfect health. That this cutaneous layer is not altogether wanting is clear, since in such case the red vascularity of the cutis would be conspicuous through the delicate transparent cuticle, in albinoes peculiarly delicate, and tinge the surface with a red instead of a white colour.

ALBI'NUM. See *Gnaphalium dioicum.*

ALBI'NUS BERNARD SIEGFRED, son of a physician, and professor at Leyden of the same name, was born near the end of the 17th century, and prosecuted his studies with so much zeal and success, that he was appointed, on the recommendation of Boerhaave, professor of anatomy and surgery, when only 20 years old. This office he filled for half a century, and acquired a greater reputation than any of his predecessors. He has left several valuable anatomical works; and particularly very accurate descriptions, and plates of the muscles and bones, which are still highly esteemed.

A'LBOR. Urine.

A'LBORA. (*a, æ.* f.) A sort of itch, or leprosy. Paracelsus says, it is a complication of the morphew, serpigo, and leprosy. When cicatrices appear in the face like the serpigo, and then turn to small blisters of the nature of the morphew, it is the albora. It terminates without ulceration, but by fœtid evacuations in the mouth and nostrils; it is also seated in the root of the tongue.

ALBO'REA. Quicksilver.

A'LBOT. A crucible.

ALBO'TAI. A'LBOTAR. Turpentine.

A'LBOTAT. White lead.

A'LBOTIM. Turpentine.

A'LBOTIS. (*is, is.* m.) The Arabian name for the *terminthus* of the Greeks.

ALBUCA'SIS, an Arabian physician and surgeon, of considerable merit, who lived about the beginning of the twelfth century. He has copied much from preceding writers, but added also many original observations; and his works may be still perused with pleasure.

ALBUGINEA OCULI. See *Adnata tunica.*

ALBUGINEA TESTIS. *Tunica albuginea testis.* The innermost coat of the testicle. A strong, white, and dense membrane, immediately covering the body or substance of the testicle. On its outer surface it is smooth, but rough and uneven on the inner. See *Testicle.*

ALBUGI'NEUS. (From *albus*, white: so called on account of its white colour.) *Membrana albuginea: Tunica albuginea.* The name of a membrane of the eye, and of the testicle.

ALBUGINOSUS. Albuginous; whitish.

ALBU'GO. (*o, inis.* f.; from *albus*, white.) 1. The white of the eye.

2. A white opacity of the cornea of the eye.

ALBUGO OVI. The white of an egg.

ALBUHAR. White lead.

ALBUM BALSAMUM. The balsam of copaiba. See *Copaiba.*

ALBUM GRÆCUM. The dung of dogs, which, from exposure to the air, becomes white like chalk. It was formerly applied as a discutient, to the inside of the throat, in quinsies, being first mixed with honey; medicines of this kind have long since justly sunk into disuse.

ALBUM OLUS. See *Valeriana locusta.*

ALBU'MEN. (*en, inis.* n.; the white of an egg, which consists principally of it.) *Albumine.* This term is applied,

1. To a substance called also coagulable lymph. It is one of the chief constituent principles of all the animal solids. Beside the white of egg, it abounds in the serum of blood, the vitreous and crystalline humours of the eye, and the fluid of dropsy. Fourcroy has discovered it in the green fecula of plants in general, particularly in those of the cruciform order, in very young ones, and in the fresh shoots of trees. Vauquelin says it exists also in the mineral water of Plombières. Seguin has found it in remarkable quantity in such vegetables as ferment without yeast, and afford a vinous liquor; and from a series of experiments he infers, that albumen is the true principle of fermentation, and that its action is more powerful in proportion to its solubility, three

different degrees of which he found it to possess.

The chief characteristic of albumen is its coagulability by the action of heat. If the white of an egg be exposed to a heat of about 134° F. white fibres begin to appear in it, and at 160° it coagulates into a solid mass. In a heat not exceeding 212 it dries, shrinks, and assumes the appearance of horn. It is soluble in cold water before it has been coagulated, but not after; and when diluted with a very large portion, it does not coagulate easily. Pure alkalies dissolve it, even after coagulation. It is precipitated by muriate of mercury, nitro-muriate of tin, acetate of lead, nitrate of silver, muriate of gold, infusion of galls, and tannin. The acids and metallic oxides coagulate albumen. On the addition of concentrated sulphuric acid, it becomes black, and exhales a nauseous smell. Strong muriatic acid gives a violet tinge to the coagulum, and it at length becomes saturated with ammonia. Nitric acid, at 70° F. disengages from it abundance of azotic gas; and if the heat be increased, prussic acid is formed; after which carbonic acid and carburetted hydrogen are evolved, and the residue consists of water containing a little oxalic acid, and covered with a lemon-coloured fat oil. If dry potash or soda be triturated with albumen, either liquid or solid, ammoniacal gas is evolved, and the calcination of the residuum yields an alkaline prussiate.

On exposure to the atmosphere in a moist state, albumen passes at once to the state of putrefaction.

Solid albumen may be obtained by agitating white of egg with ten or twelve times its weight of alkohol. This seizes the water which held the albumen in solution; and this substance is precipitated under the form of white flocks or filaments, which cohesive attraction renders insoluble, and which consequently may be freely washed with water. Albumen thus obtained is like fibrine, solid, white, insipid, inodorous, denser than water, and without action or vegetable colours. It dissolves in potash and soda more easily than fibrine; but in acetic acid and ammonia, with more difficulty. When these two animal principles are separately dissolved in potash, muriatic acid added to the albuminous, does not disturb the solution, but it produces a cloud in the other.

Fourcroy and several other chemists have ascribed the characteristic coagulation of albumen by heat to its oxygenation. But cohesive attraction is the real cause of the phenomenon. In proportion as the temperature rises, the particles of water and albumen recede from each other, their affinity diminishes, and then the albumen precipitates. However, by uniting albumen with a large quantity of water, we diminish its coagulating property to such a degree, that heat renders the solution merely opalescent. A new-laid egg yields a soft coagulum by boiling; but when, by keeping, a portion of the water has transuded so as to leave a void space within the shell, the concentrated albumen affords a firm coagulum.

An *analogous phenomenon* is exhibited by acetate of alumina, a solution of which, being heated, gives a precipitate in flakes, which redissolve as the caloric which separated the particles of acid and base escapes, or as the temperature falls. A solution containing $\frac{1}{10}$ of dry albumen forms by heat a solid *coagulum;* but when it contains only $\frac{1}{15}$, it gives a glairy liquid. One thousandth part, however, on applying heat, occasions opalescence. Putrid white of egg, and the *pus* of ulcers, have a similar smell. According to Dr. Bostock, a drop of a saturated solution of corrossive sublimate let fall into water containing $\frac{1}{2000}$ of albumen, occasions a milkiness and curdy precipitate. On adding a slight excess of the mercurial solution to the albuminous liquid, and applying heat, the precipitate which falls, being dried, contains in every 7 parts 5 of albumen. Hence that salt is the most delicate test of this animal product. The yellow pitchy precipitate occasioned by tannin, is brittle when dried, and not liable to putrefaction. But tannin, or infusion of galls, is a much nicer test of gelatin than of albumen.

The cohesive attraction of coagulated albumen makes it resist putrefaction. In this state it may be kept for weeks under water without suffering change. By long digestion in weak nitric acid, albumen seems convertible into gelatin. By the analysis of Gay Lussac and Thénard, 100 parts of albumen are formed of 52·883 carbon, 23·872 oxygene, 7·540 hydrogene, 15·705 nitrogene; or, in other terms, of 52·883 carbon, 27·127 oxygene and hydrogene, in the proportions for constituting water, 15·705 nitrogene, and 4·285 hydrogene in excess. The negative pole of a voltaic pile in high activity coagulates albumen; but if the pile be feeble, coagulation goes on only at the positive surface. Albumen, in such a state of concentration as it exists in serum of blood, can dissolve some metallic oxides, particularly the protoxide of iron. Orfila has found white of egg to be the best antidote to the poisonous effects of corrosive sublimate on the human stomach. As albumen occasions precipitates with the solutions of almost every metallic salt, probably it may act beneficially against other species of mineral poison.

From its coagulability, albumen is of great use in clarifying liquids.

It is likewise remarkable for the property of rendering leather supple, for which purpose a solution of whites of eggs in water is used by leather-dressers.—*Ure's Chem. Dict.*

2. To a farinaceous, fleshy, or horny substance, which makes up the chief bulk of some seeds, as grapes, corn, palms, lilies,

never rising out of the ground, nor assuming the office of leaves, being destined solely to nourish the germinating embryo, till its roots perform their office. In the date palm, this part is nearly as hard as stone; in *Mirabilis* it is like wheat-flour. It is wanting in several tribes of plants, as those with compound or with cruciform flowers, and the cucumber or gourd kind, according to Gardner. Some few leguminous plants have it, and a great number of others, which, like them, have cotyledons besides. We are not, however, to suppose, that so important an organ is altogether wanting, even in the above-mentioned plants. The farinaceous matter destined to nourish their embryos, is unquestionably lodged in their cotyledons, the sweet taste of which, as they begin to germinate, often evinces its presence, and that it has undergone the same change as in barley. The albumen of the nutmeg is remarkable for its eroded variegated appearance, and aromatic quality: the cotyledons of this plant are very small. — *Smith.*

Albumen ovi. The white of an egg.

ALBURNUM. (*um, i.* n.; from *albus*, white.) The soft white substance, which, in trees, is found between the liber, or inner bark, and the wood. In process of time, it acquires solidity, becoming itself the wood. While soft, it performs a very important part of the functions of growth, which ceases when it becomes hard. A new circle of alburnum is annually formed over the old, so that a transverse section of the trunk presents a pretty correct register of the tree's age, each zone marking one year. From its colour and comparative softness, it has been called, by some writers, the *Adeps arborum.* The alburnum is found in largest quantities in trees that are vigorous. In an oak six inches in diameter, this substance is nearly equal in bulk to the wood.

A'LBUS. White. 1. Applied to many parts of the human body, and of animals, fishes, minerals, and plants, and to diseases, from their white colour; as *linea alba, lepra alba, macula alba,* &c.

2. Used to designate white colour in general. See *Colour.*

ALCA. (*a, æ.* f.) The name of a genus of birds in the order *Anseres.* The auk. The eggs of the *Alca torda,* or razor-bill auk, serve as food to the inhabitants of the western islands, the coasts of which the bird frequents.

A'LCAHEST. An Arabic word to express an universal dissolvent, which was pretended to by Paracelsus and Helmont. Some say that Paracelsus first used this word, and that it is derived from the German words *al* and *geest,* i. e. *all spirit;* and that Van Helmont borrowed the word, and applied it to his invention, which he called the universal dissolvent.

A'LCALI. (Arabian.) This word is spelt indifferently with a *c,* or a *k.* See *Alkali.*

ALCALISATION. See *Alkalisation.*

ALCANNA. See *Anchusa.*

A'lcaol. The solvent for the preparation of the philosopher's stone.

ALCARRAZES. A species of porous pottery made in Spain.

A'LCEA. (*a, æ.* f.; from αλκη, strength.) The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.* Hollyhock.

Alcea ægyptiaca villosa. See *Hibiscus abelmoschus.*

Alcea indica. See *Hibiscus abelmoschus.*

Alcea rosea. Common hollyhock. The flowers of this beautiful tree are said to possess astringent and mucilaginous virtues. They are seldom used medicinally.

A'lcebar. See *Lignum aloes.*

A'lcebris vivum. This signifies, according to Rulandus, Sulphur vivum.

A'lchabric. Sulphur vivum.

A'lchachil. Rosemary.

A'lcharith. Quicksilver.

Alchemia. See *Alchemy.*

ALCHEMI'LLA. (*a, æ.* f.; so called, because it was celebrated by the old alchemists.)

1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.* Ladies' mantle.

2. The pharmacopœial name of the ladies' mantle. See *Alchemilla vulgaris.*

Alchemilla vulgaris. Ladies' mantle. This plant, *Alchemilla — foliis lobatis,* of Linnæus, was formerly esteemed as an astringent in hæmorrhages, flour albus, &c. given internally. It is fallen into disuse.

ALCHEMIST. (*Alchemistus, i.* m.; from *alchemia.*) One who practises the mystical art of alchemy.

A'LCHEMY. *Alchemia; Alchimia; Alkima.* That branch of chemistry which relates to the transmutation of metals into gold, — the forming a panacea or universal remedy, — an alcahest, or universal menstruum, — an universal ferment, and many other absurdities. The fifteenth century was the era when these fancies began to influence medicine. To the alchemists we are indebted for our antimonial and mercurial preparations, and their pretensions and success produced a considerable revolution in medicine, by undermining the supreme authority of Galen.

A'lchibric. Sulphur.

A'lchien. This word occurs in the *Theatrum Chemicum,* and seems to signify that power in nature by which all corruption and generation are effected.

Alchimelec. (Hebrew.) The Egyptian melilot, a species of trefoil.

Alchimia. See *Alchemy.*

ALCHIMI'LLA. See *Alchemilla.*

A'lchitron. 1. Oil of juniper.

2. The name of a dentifrice of Messue.

A'LCHLYS. A speck on the pupil of the eye, somewhat obscuring vision.

A'lchute. The mulebrry.

A'lcimad. Antimony.

A'lcob. Sal-ammoniac.

Alco'calum. Most probably the Indian name of the artichoke.

A'lcofol. Antimony.

A'LCOHOL. See *Alkohol.*

A'lcola. (Hebrew.) 1. The thrush.

2. Paracelsus gives this name to tartar, or excrement of urine, whether it appears as sand, mucilage, &c.

Alcoli'ta. Urine.

Alco'ne. Brass.

A lcor. Æs ustum.

A'lcte. The name of a plant mentioned by Hippocrates, supposed to be the elder.

Alcu'brith. Sulphur.

ALCYO'NIUM. It is difficult to say what the Greeks called by this name. Dioscorides speaks of five sorts of it. It is a spongy plant-like substance, met with on the sea-shore, of different shapes and colours. This bastard sponge is calcined with a little salt, as a dentifrice, and is used to remove spots on the skin.

Aldebac. The Arabian name for bird-lime.

ALDER. See *Betula alnus.*

Alder, berry-bearing. See *Rhamnus.*

Alder wine. See *Betula alnus.*

Aldrum. See *Alzum.*

Aldum. See *Alzum.*

ALE. *Cerevisia;* called also *Liquor cereris,* and *Vinum hordeaceum.* A fermented liquor made from malt and hops, and chiefly distinguished from beer, made from the same ingredients, by the quantity of hops used therein, which is greater in beer, and therefore renders the liquor more bitter, and fitter for keeping. Ale, when well fermented, is a wholesome beverage, but seems to disagree with those subject to asthma, or any disorder of the respiration, or irregularity in the digestive organs. The old dispensatories enumerate several medicated ales, such as *Cerevisia oxydorica,* for the eyes; *Cerevisia antiarthritica,* against the gout; *Cephalica, Epileptica,* &c. See *Beer.*

Aleara. A cucurbit.

Ale'bria. (From *alo,* to nourish.) An obsolete term for that which is nourishing.

A'lec. *Alech.* Vitriol.

Ale'charith. Mercury.

Alei'mma. (From αλειφω, to anoint.) An ointment.

ALEI'ON. (Αλειον, copious.) Hippocrates uses this word for water.

ALEI'PHA. (From αλειφω, to anoint.) A medicated oil.

ALELAI'ON. (From αλς, salt, and ελαιον, oil.) Oil beat up with salt, to apply to tumours. Galen frequently used it.

ALE'MA. (From α, priv. and λιμος, hunger.) Meat, food, or any thing that satisfies the appetite.

ALE'MBIC. (*Alembicus.* Some derive it from the Arabian particle *al,* and αμβιξ; from αμβαινω, to ascend. Avicenna declares it to be Arabian.) It is a chemical utensil, called also a Moorshead, made of glass, metal, or earthenware, adapted to receive volatile products from retorts, and consists of a body, to which is fitted a conical head, and out of this head descends laterally a beak to be inserted into the receiver.

ALE'MBROTH. (A Chaldee word, importing the key of art.) 1. Some explain it as the name of a salt, *sal mercurii,* or *sal philosophorum et artis;* others say it is named *alembroth* and *sal fusionis* or *sal fixionis. Alembroth desiccatum* is said to be the *sal tartari;* hence this word seems to signify alkaline salt, which opens the bodies of metals by destroying their sulphurs, and promoting their separation from the ores. From analogy, it is supposed to have the same effect in conquering obstructions and attenuating viscid fluids in the human body.

2. A peculiar earth, probably containing a fixed alkali, found in the island of Cyprus, has also this appellation.

3. A solution of the corrosive sublimate, to which the muriate of ammonia has been added, is called sal alembroth.

Ale'mzadar. Sal ammoniac.

Ale'mzadat. Sal ammoniac.

Alepe'nsis. A species of ash-tree which produces manna.

A'les. (Fom αλς, salt.) A compound salt.

ALEURITES. Mealy: farinaceous.

ALEU'RON. (From αλεω, to grind.) Meal.

ALEXANDERS. See *Smyrnium.*

Alexanders, round-leaved. See *Smyrnium.*

ALEXA'NDRIA. (*a, æ. f.*; so called from the place of its growth.) *Alexandrina.* The bay-tree, or laurel of Alexandria. See *Prunus lauro-cerasus.*

Alexa'ndrium. See *Emplastrum alexandrium.*

ALEXICA'CUM. (*um, i. n.*; from αλεξω, to drive away, and κακον, evil.) An antidote, or amulet, to resist poison.

ALEXIPHA'RMIC. (*Alexipharmicum, i. n.*; from αλεξω, to expel, and φαρμακον, a poison.) 1. The property which a remedy has to resist or destroy every thing of a poisonous or malignant nature.

2. A medicine supposed to preserve the body against the power of poisons, or to correct or expel those taken. The ancients attributed this property to some vegetables, and even waters distilled from them. The term, however, is now very seldom used.

ALEXIPYRE'TICUM. (*um, i. n.*; from αλεξω, to drive away, and πυρετος, fever.) A febrifuge.

ALEXIPY'RETOS. (Αλεξιπυρετος. *Alexipyretum, i. n.*; from αλεξω, to expel,

and πυρετος, a fever.) A remedy for a fever.

Ale'xir. An elixir.

ALEXITE'RIUM. (*um, i.* n.; from αλεξω, to expel, and τηρεω, to preserve.) A preservative medicine against poison, or contagion.

Alfa'cta. Distillation.

A'lfadas. *Alfides.* Cerusse.

Alfa'sra. *Alphesara.* Obsolete. Arabic terms for the vine-tree.

Alfa'tide, A'lfol. Sal ammoniac.

A'lfusa. Tutty.

AL'GA. (*a, æ.* f.) A sea-weed.

ALGÆ. 1. The name of one of the seven *families* or natural tribes into which the whole vegetable kingdom is divided by Linnæus in his *Philosophia Botanica.* He defines them plants, the roots, leaves, and stems of which are all in one. Under this description are comprehended all the sea-weeds, and some other aquatic plants.

2. In the sexual system of plants, *Algæ* constitutes the third *order* of the class Cryptogamia. From their admitting of little distinction of root, leaf, or stem, and the parts of their flowers being equally incapable of description, the genera are distinguished by the situation of what is supposed to be the flowers or seeds, or by the resemblance which the whole plant bears to some other substance.

The parts of fructification of the *Algæ* are in *calycules,* of which there are three varieties: —

1. *Pelta,* the target; a flat, oblong fruit, seen in the *Lichen caninus.*

2. *Scutella,* the saucer; a round, hollow, or flat fruit, as in *Lichen stellaris.*

3. *Tuberculum,* the tubercle; an hemispherical fruit, observable in *Lichen geographicus.*

In the fuci, the parts of fructification are sometimes in hollow bladders; and in some of the ulvæ, it is dispersed through the whole substance of the plant.

A'lgali. A catheter. Also nitre.

A'lgarah. See *Anchilops.*

A'LGAROTH. (*Algarothus, i.* m.; so called from Victorius Algaroth, a physician of Verona, and its inventor.) The antimonial part of the butter of antimony, separated from some of its acid by washing it in water. It is also called *Algarot, Algeroth, Mercurius vitæ, Pulvis Algarothi, Pulvis angelicus, Mercurius mortis.* It is violently emetic in doses of two or three grains, and is preferred by many for making the emetic tartar.

ALGE'DO. (*o, inis.* f.; from αλγος, pain.) A violent pain about the anus, perinæum, testes, urethra, and bladder, arising from the sudden stoppage of a virulent gonorrhœa.

ALGEMA. (From αλγεω, to be in pain.) *Algemodes; Algematodes.* Uneasiness; pain of any kind.

Alge'riæ. *Algirie.* Lime.

A'lgeroth. See *Algaroth.*

A'lgibic. Sulphur vivum.

A'LGOR. (*or, oris.* m.; from *algeo,* to shake from cold.) A chillness, or coldness, or rigor. See *Cold.*

Algosarel. The Arabian term for the wild carrot. See *Daucus sylvestris.*

Alguada. A white leprous eruption.

A'LGUS. (*us, i.* m.; from *algeo, to* get cold.) Cold, chilliness.

Alha'gi. (Arabian.) A species of *Hedysarum.* The leaves are hot and pungent, the flowers purgative.

Alha'ndala. An Arabian name for the colocynth, or bitter apple.

Alha'sef. (Arabian.) *Alhasaf.* A sort of fœtid pustule.

A'lia squilla. (From αλιος, belonging to the sea, and σκιλλα, a shrimp.) The prawn. See *Cancer squilla.*

A'LIBILIS. (From *alo,* to nourish.) That which nourishes. An aliment is that substance which contains nourishment; and the alibile part of it is that portion of the chyme, which, when separated from the excrementitious part, goes into the blood for our nourishment.

A'LICA. (*a, æ.* f.; from *alendo,* because with it we are nourished.) In general signification, a grain; a sort of food admired by the ancients. It is not certain whether it is a grain, or a preparation of some kind thereof.

Alicastrum. (From *alica;* as *siliquastrum* from *siliqua.*) A kind of bread mentioned by Celsus.

A'lices. (From αλιζω, to sprinkle.) Little red spots in the skin, which precede the eruption of pustules in the small-pox.

Aliena'tio mentis. Estrangement of the mind.

ALIENA'TION. (*Alienatio;* from *alieno,* to estrange.) A term applied to any wandering of the mind.

ALIENA'TUS. Alienate. A leaf is so termed when the first leaves give way to others totally different from them, and the natural habit of the genus; as is the case in many of the *Mimosæ* from New Holland.

ALIFO'RM. (*Aliformis;* from *ala,* a wing, and *forma,* resemblance.) Wing-like. A name given by anatomists and naturalists to some parts from their supposed resemblance; as aliform muscles, &c. See *Ala.*

ALIMENT. (*Alimentum, i.* n.; from *alo,* to nourish.) That which, being subjected to the action of the organs of digestion, is capable of affording nourishment to the body. In this sense an aliment is extracted necessarily from vegetables or animals; for only those bodies that have possessed life are capable of serving usefully in the nutrition of animals during a certain time. Yet there are certain inorganic substances, such as water, common salt, lime, &c., which, though incapable by themselves

of nourishing, appear, when administered in conjunction with the former, to contribute essentially to nutrition. The consideration, therefore, of the materia alimentaria, or alimentary substances, necessarily embraces not only all the varieties of animal and vegetable food, but also those things which, in concert with them, promote their digestion, or correct some of their deleterious properties.

In respect to their nature, aliments are different from each other, by the proximate principles which predominate in their composition. They may be distinguished into nine classes: —

1st, *Farinaceous:* wheat, barley, oats, rice, rye, maize, potatoe, sago, salep, peas, haricots, lentils, &c.

2d, *Mucilaginous:* carrots, salsafy (goatsbeard), beet-root, turnip, asparagus, cabbage, lettuce, artichoke, cardoons, pumpions, melons, &c.

3d, *Sweet:* the different sorts of sugar, figs, dates, dried grapes, apricots, &c.

4th, *Acidulous:* oranges, gooseberries, cherries, peaches, strawberries, raspberries, mulberries, grapes, prunes, pears, apples, sorrel, &c.

5th, *Fatty* and *oily:* cocoa, olives, sweet almonds, nuts, walnuts, the animal fats, the oils, butter, &c.

6th, *Caseous:* the different sorts of milk, cheese, &c.

7th, *Gelatinous:* the tendons, the aponeurosis, the chorion, the cellular membrane, young animals, &c.

8th, *Albuminous:* the brain, the nerves, eggs, &c.

9th, *Fibrinous:* the flesh and the blood of different animals.

To these may be added,

10th, *Condiments:* as salt, pepper, mustard, horseradish, vinegar, &c.

We understand by *drink*, a liquid which, being introduced into the digestive organs, quenches thirst, and so by this repairs the habitual losses of our fluid humours; the drinks ought to be considered as real aliments.

The drinks are distinguished by their chemical composition: —

1st, Water of different sorts, spring water, river water, water of wells, &c.

2d, The juices and infusions of vegetables and animals; juices of lemon, of gooseberries, whey, tea, coffee, &c.

3d, Fermented liquors: the different sorts of wine, beer, cider, perry, &c.

4th, The alkoholic liquors: brandy, alkohol, æther, rum, sack, ratafia.

Amongst aliments there are few employed such as nature presents them: they are generally prepared, and disposed in such a manner as to be suitable for the action of the digestive organs. The preparations which they undergo are infinitely various, according to the sort of aliment, the people, the climates, customs, the degree of civilisation: even fashion is not without its influence on the art of preparing aliments.

In the hand of the skilful cook, alimentary substances almost entirely change their nature, form, consistence, odour, taste, colour, composition, &c., every thing is so modified that it is impossible for the most delicate tastes to recognise the original substance of certain dishes.

The useful object of cookery is to render aliments agreeable to the senses, and of easy digestion; but it rarely stops here: frequently, with people advanced in civilisation, its object is to excite delicate palates, or difficult tastes, or to please vanity. Then, far from being a useful art, it becomes a real scourge, which occasions a great number of diseases, and has frequently brought on premature death.

ALIMENTARIUS. Alimentary; nourishing; belonging to food.

ALIME'NTARY. See *Alimentarius.*

Alimentary canal. *Canalis alimentarius.* Alimentary duct: a name given to the whole of those passages which the food passes through, from the mouth to the anus. This duct may be said to be the true characteristic of an animal; there being no animal without it, and whatever has it, being properly ranged under the class of animals. Plants receive their nourishment by the numerous fibres of their roots, but have no common receptacle for digesting the food received, or for carrying off the excrements. But in all, even the lowest degree of animal life, we may observe a stomach, if not also intestines, even where we cannot perceive the least formation of any organs of the senses, unless that common one of feeling, as in oysters.

Alimentary duct. 1. The alimentary canal. See *Alimentary canal.*

2. The thoracic duct is sometimes so called. See *Thoracic duct.*

ALIMOS. Common liquorice.

Alimum. (*um, i.* n.; from α, priv. and λιμος, hunger.) A species of arum.

ALIMUS. (*us, i.* m.; from α, priv. and λιμος, hunger.) That which takes away hunger.

ALINDE'SIS. (Αλινδησις; from αλινδουμαι, to be turned about.) A bodily exercise, which seems to be rolling on the ground, or rather in the dust, after being anointed with oil. Hippocrates says, it hath nearly the same effect as wrestling.

ALIPÆ'NOS. (From α, priv. and λιπαινειν, to become fat.) The term used by Galen to such as were lean: and hence to external remedies which were of a dry nature. He also applied the word ἀλιπῆ to applications which coagulated and repressed inflammation.

Alipa'sma. (From αλειφω, to anoint.) An ointment rubbed upon the body, to prevent sweating.

Alipe. See *Alipænos.*

ALIPOW. A species of turbith, found near Mount Ceti, in Languedoc. It is a powerful purgative, used instead of senna, but is much more active.

ALI'PTÆ. (From αλειφω, to anoint.) Those who anointed persons after bathing.

ALIPTICUS. (From αλειφω, to anoint.) Appertaining to the anointing of the body.

Alisanders. The same as alexanders.

ALI'SMA. (*a, atis.* n.; from αλς, the sea.) The name of a genus of plants in the Linnean system. Class, *Hexandria;* Order, *Polygynia.* Water plantain.

Alisma plantago aquatica. The systematic name of the water plantain, now fallen into disuse.

Ali'stelis. (From αλς, the sea.) Sal ammoniac.

A'lit. *Alith.* Asafœtida.

Alkafi'al. Antimony.

A'lkahat glauberi. An alkaline salt.

A'lkahest. See *Alcahest.*

Alkahest glauberi. An alkaline salt.

ALKALESCENT. *Alkalescens.* Alkalescency. A slightly alkaline substance, or one in which alkaline properties are beginning to be developed, or to predominate, is so termed.

A'LKALI. (*Alkali.* This word is spelt indifferently with a *c*, or a *k*. It is an Arabian word; is indeclinable, and signifies burnt; or it is derived from *al* and *kali*, i. e. the essence, or the whole of kali, the plant from which it was originally prepared, though now derived from plants of every kind.) *Alcali.* A body which combines with an acid, so as to neutralise or impair its activity, and produce a salt. Acidity and alkalinity are, therefore, two correlative terms of one species of combination.

When Lavoisier introduced oxygene as the acidifying principle, Morveau proposed hydrogene as the alkalifying principle, from its being a constituent of volatile alkali or ammonia. But the splendid discovery by Sir H. Davy, of the metallic basis of potash and soda, and of their conversion into alkalies, by combination with oxygene, has banished that hypothesis. It is the mode in which the constituents are combined, rather than the nature of the constituents themselves, which gives rise to the acid or alkaline condition. Some metals, combined with oxygene in one proportion, produce a body possessed of alkaline properties; in another proportion, of acid properties. And, on the other hand, ammonia and prussic acid prove that both the alkaline and acid conditions can exist independent of oxygene. These observations, by generalising our notions of acids and alkalies, have rendered the definitions of them very imperfect. The difficulty of tracing a limit between the acids and alkalies is still increased, when we find a body sometimes performing the functions of an acid, sometimes of an alkali. Nor can we diminish this difficulty by having recourse to the beautiful law discovered by Sir H. Davy, that oxygene and acids go to the positive pole, and hydrogene, alkalies, and inflammable bases to the negative pole. We cannot, in fact, give the name of acid to all the bodies which go to the first of these poles, and that of alkali to those that go to the second; and if we wished to define the alkalies by bringing into view their electric energy, it would be necessary to compare them with the electric energy which is opposite to them. Thus we are always reduced to define alkalinity by the property which it has of saturating acidity, because alkalinity and acidity are two correlative and inseparable terms. Gay Lussac conceives the alkalinity which the metallic oxides enjoy, to be the result of two opposite properties, the alkalifying property of the metal, and the acidifying of oxygene, modified both by the combination and by the proportions.

The alkalies may be arranged into three classes: —

1st, Those which consist of a metallic basis combined with oxygene. These are three in number, potash, soda, and lithia.

2d, That which contains no oxygene, viz. ammonia.

3d, Those containing oxygene, hydrogene, and carbon. In this class we have aconita, atropia, brucia, cicuta, datura, delphia, hyosciama, morphia, strychnia, and, perhaps, some other *truly vegetable* alkalies. The order of vegetable alkalies may be as numerous as that of vegetable acids.

The earths, lime, barytes, and strontites, were enrolled among the alkalies by Fourcroy, but they have been kept apart by other systematic writers, and are called alkaline earths.

Besides neutralising acidity, and thereby giving birth to salts, the first four alkalies have the following properties: —

1st, They change the purple colour of many vegetables to a green, the reds to a purple, and the yellows to a brown. If the purple have been reddened by acid, alkalies restore the purple.

2d, They possess this power on vegetable colours *after* being saturated with carbonic acid, by which criterion they are distinguishable from the alkaline earths.

3d, They have an acrid and urinous taste.

4th, They are powerful solvents or corrosives of animal matter; with which, as well as with oils in general, they combine, so as to produce neutrality.

5th, They are decomposed, or volatilised, at a strong red heat.

6th, They combine with water in every proportion, and also largely with alkohol.

7th, They continue to be soluble in water when neutralised with carbonic acid; while the alkaline earths thus become insoluble.

According to Dr. Murray, either oxygene or hydrogene may generate alkalinity; but

the combination of both principles is necessary to give this condition its utmost energy. "Thus the class of alkalies will exhibit the same relations as the class of acids. Some are compounds of a base with oxygene; such are the greater number of the metallic oxides, and probably of the earths. Ammonia is a compound of a base with hydrogene. Potash, soda, barytes, strontites, and probably lime, are compounds of bases with oxygene and hydrogene; and these last, like the analogous order among the acids, possess the highest power." Now, perfectly dry and caustic barytes, lime, and strontites, as well as the dry potash and soda obtained by Gay Lussac and Thénard, are not inferior in alkaline power to the same bodies after they are slacked or combined with water. 100 parts of lime destitute of hydrogene, that is, pure oxide of calcium, neutralise 78 parts of carbonic acid. But 132 parts of Dr. Murray's *strongest* lime, that is the hydrate, are required to produce the same alkaline effect. If we ignite nitrate of barytes, we obtain, as is well known, a perfectly dry barytes, or protoxide of barium; but if we ignite crystallised barytes, we obtain the same alkaline earth combined with a prime equivalent of water. These two different states of barytes were demonstrated by M. Berthollet, in an excellent paper published in the 2d volume of the Memoirs D'Arcueil, so far back as 1809. "The first barytes," (that from crystallised barytes,) says he, "presents all the characters of a combination; it is engaged with a substance which *diminishes* its action on other bodies, which renders it more fusible, and which gives it by fusion the appearance of glass. This substance is nothing else but water; but, in fact, by adding a little water to the second barytes (that from ignited nitrate), and by urging it at the fire, we give it the properties of the first."—Page 47. 100 parts of barytes void of hydrogene, or dry barytes, neutralise 28½ of dry carbonic acid. Whereas 111⅞ parts of the hydrate, or what Dr. Murray has styled the most energetic, are required to produce the the same effect. In fact, it is not hydrogene which combines with the pure barytic earth, but hydrogene and oxygene in the state of water. The proof of this is, that when carbonic acid and that of hydrate unite, the exact quantity of water is disengaged. The protoxide of barium, or pure barytes, has never been combined with hydrogene by any chemist. — *Ure's Chem. Dict.*

Alkali, caustic volatile. See *Ammonia.*

ALKALI CAUSTICUM. Caustic alkali. An alkali is so called when deprived of the carbonic acid it usually contains, for it then becomes more caustic, and more violent in its action.

ALKALI FIXUM. See *Potash* and *Soda.*

Alkali, fossile. See *Soda.*

Alkali, mineral. See *Soda.*

Alkali, phlogisticated. Prussian alkali. When a fixed alkali is ignited with bullock's blood, or other animal substances, and lixiviated, it is found to be in a great measure saturated with prussic acid: from the theories formerly adopted respecting this combination, it was called phlogisticated alkali.

Alkali, Prussian. See *Alkali, phlogisticated.*

Alkali, vegetable. See *Potash.*

ALKALI VEGETABILE SALITUM. The muriate of potash.

Alkali, volatile. See *Ammonia.*

ALKALINITY. (*Alkalinitas;* from *alkali.*) The property which bodies have that contain more or less of free alkali; as bile, serum of blood, &c.

ALKALI'NUS. *Alkalinus.* Partaking of the property of, or having in its composition, an alkali. A class of substances were formerly so termed which consisted of the alkaline salts and carbonates of some earths. The alkalines now so called are those neutralised salts which have an alkaline base. The principal alkalines in use are the subcarbonates, carbonates, and bicarbonates of soda, potash, and of ammonia.

ALKALI'SATION. *Alkalisatio.* The impregnating any spirituous liquid with an alkali.

ALKALOMETER. The name of an instrument for determining the quantity of alkali in commercial potash and soda.

A'LKANET. (*Alkanah,* a reed, Arabian.) See *Anchusa tinctoria.*

ALKA'NNA. See *Anchusa.*

ALKANNA VERA. See *Lawsonia inermis.*

A'LKANT. Quicksilver.

ALKA'NTHUM. Arsenic.

ALKA'SA. A crucible.

ALKEKE'NGI. (An Arabian word.) The winter-cherry. See *Physalis alkekengi.*

ALKE'RMES. A term borrowed from the Arabs, denoting a celebrated remedy, of the form and consistence of a confection, whereof the kermes is the basis. See *Kermes.*

ALKE'RVA. (Arabian.) Castor oil.

A'LKI PLUMBI. Supposed to be the sugar or acetate of lead.

ALKIMA. See *Alchemy.*

A'LKOHOL. (An Arabian word, spelt indifferently with a *c* or a *k*, neuter and indeclinable, which signifies antimony, and so called from the usage of the Eastern ladies to paint their eyebrows with antimony, reduced to a most subtle powder; whence it at last came to signify any thing exalted to its highest perfection.) It is also termed *Alkol; Spiritus vinosus rectificatus; Spiritus vini rectificatus; Spiritus vini concentratus; Spiritus vini rectificatissimus.*

1. This term is applied in strictness only to the pure spirit obtainable by distillation and subsequent rectification from all liquids that have undergone vinous fermentation, and from none but such as are susceptible of it. But it is commonly used to signify this spirit more or less imperfectly

freed from water, in the state in which it is usually met with in the shops, and in which, as it was first obtained from the juice of the grape, it was long distinguished by the name of spirit of wine. At present, it is extracted chiefly from grain or melasses in Europe, and from the juice of the sugar-cane in the West Indies; and in the diluted state in which it commonly occurs in trade, constitutes the basis of the several spirituous liquors called brandy, rum, gin, whiskey, and cordials, however variously denominated or disguised.

As we are not able to compound alkohol immediately from its ultimate constituents, we have recourse to the process of fermentation, by which its principles are first extricated from the substances in which they were combined, and then united into a new compound; to distillation, by which this new compound, the alkohol, is separated in a state of dilution with water, and contaminated with essential oil; and to rectification, by which it is ultimately freed from these.

It appears to be essential to the fermentation of alkohol, that the fermenting fluid should contain saccharine matter, which is indispensable to that species of fermentation called vinous. In France, where a great deal of wine is made, particularly at the commencement of the vintage, that is too weak to be a saleable commodity, it is a common practice to subject this wine to distillation, in order to draw off the spirit; and as the essential oil that rises in this process is of a more pleasant flavour than that of malt or melasses, the French brandies are preferred to any other; though even in the flavour of these there is a difference, according to the wine from which they are produced. In the West Indies a spirit is obtained from the juice of the sugar-cane, which is highly impregnated with its essential oil, and well known by the name of *rum*. The distillers in this country use grain, or melasses, whence they distinguish the products by the name of *malt spirits*, and *melasses spirits*. It is said that a very good spirit may be extracted from the husks of gooseberries or currants, after wine has been made from them.

As the process of malting developes the saccharine principle of grain, it would appear to render it fitter for the purpose; though it is the common practice to use about three parts of raw grain with one of malt. For this two reasons may be assigned: by using raw grain, the expense of malting is saved, as well as the duty on malt; and the process of malting requires some nicety of attention, since, if it be carried too far, part of the saccharine matter is lost, and if it be stopped too soon, this matter will not be wholly developed. Besides, if the malt be dried too quickly, or by an unequal heat, the spirit it yields will be less in quantity, and more unpleasant in flavour. Another object of economical consideration is, what grain will afford the most spirit in proportion to its price, as well as the best in quality. Barley appears to produce less spirit than wheat; and if three parts of raw wheat be mixed with one of malted barley, the produce is said to be particularly fine. This is the practice of the distillers in Holland for producing a spirit of the finest quality; but in England they are expressly prohibited from using more than one part of wheat to two of other grain. Rye, however, affords still more spirit than wheat.

Other articles have been employed, though not generally, for the fabrication of spirit, as carrots and potatoes; and we are lately informed by Professor Proust, that from the fruit of the carob tree he has obtained good brandy in the proportion of a pint from five pounds of the dried fruit.

To obtain pure alkohol, different processes have been recommended; but the purest rectified spirit obtained as above described, being that which is least contaminated with foreign matter, should be employed. Rouelle recommends to draw off half the spirit in a water bath; to rectify this twice more, drawing off two-thirds each time; to add water to this alkohol, which will turn it milky by separating the essential oil remaining in it; to distil the spirit from this water; and finally rectify it by one more distillation.

Baumé sets apart the first running, when about a fourth is come over, and continues the distillation till he has drawn off about as much more, or till the liquor runs off milky. The last running he puts into the still again, and mixes the first half of what comes over with the preceding first product. This process is again repeated, and all the first products being mixed together, are distilled afresh. When about half the liquor is come over, this is to be set apart as pure alkohol.

Alkohol in this state, however, is not so pure as when, to use the language of the old chemists, it has been *dephlegmated*, or still further freed from water, by means of some alkaline salt. Boerhaave recommended, for this purpose, the muriate of soda, deprived of its water of crystallisation by heat, and added hot to the spirit. But the subcarbonate of potash is preferable. About a third of the weight of the alkohol should be added to it in a glass vessel, well shaken, and then suffered to subside. The salt will be moistened by the water absorbed from the alkohol; which being decanted, more of the salt is to be added, and this is to be continued till the salt falls dry to the bottom of the vessel. The alkohol in this state will be reddened by a portion of the pure potash, which it will hold in solution, from which it must be freed by distillation in a water bath. Dry muriate of lime may be substituted advantageously for the alkali.

As alkohol is much lighter than water, its specific gravity is adopted as the test of its

purity. Fourcroy considers it as rectified to the highest point when its specific gravity is 829, that of water being 1000; and, perhaps, this is nearly as far as it can be carried by the process of Rouelle or Baumé simply. Bories found the first measure that came over from twenty of spirit as 836 to be 820, at the temperature of 71° F. Sir Charles Blagden, by the addition of alkali, brought it to 813, at 60° F. Chaussier professes to have reduced it to 798; but he gives 998·35 as the specific gravity of water. Lowitz asserts, that he has obtained it at 791, by adding as much alkali as nearly to absorb the spirit; but the temperature is not indicated. In the shops it is about 835 or 840; according to the London College it should be 815.

It is by no means an easy undertaking to determine the strength or relative value of spirits, even with sufficient accuracy for commercial purposes. The following requisites must be obtained before this can be well done: the specific gravity of a certain number of mixtures of alkohol and water must be taken so near each other, as that the intermediate specific gravities may not perceptibly differ from those deduced from the supposition of a mere mixture of the fluids; the expansions or variations of specific gravity in these mixtures must be determined at different temperatures; some easy method must be contrived of determining the presence and quantity of saccharine or oleaginous matter which the spirit may hold in solution, and the effect of such solution on the specific gravity; and, lastly, the specific gravity of the fluid must be ascertained by a proper floating instrument with a graduated stem, or set of weights; or, which may be more convenient, with both.

The most remarkable characteristic property of alkohol, is its solubility or combination in all proportions with water; a property possessed by no other combustible substance, except the acetic spirit obtained by distilling the dry acetates. When it is burned in a chimney which communicates with the worm-pipe of a distilling apparatus, the product, which is condensed, is found to consist of water, which exceeds the spirit in weight about one-eighth part; or more accurately, 100 parts of alkohol, by combustion, yield 136 of water. If alkohol be burned in closed vessels with vital air, the product is found to be water and carbonic acid. Whence it is inferred, that alkohol consists of hydrogene, united either to carbonic acid, or its acidifiable base; and that the oxygene uniting on the one part with the hydrogene, forms water; and on the other with the base of the carbonic acid, forms that acid.

The most exact experiments on this subject are those recently made by De Saussure. The alkohol he used had, at 62·8°, a specific gravity of 0·8302; and by Richter's proportions, it consists of 13·8 water, and 86·2 of absolute alkohol. The vapour of alkohol was made to traverse a narrow porcelain tube, ignited; from which the products passed along a glass tube about six feet in length, refrigerated by ice. A little charcoal was deposited in the porcelain, and a trace of oil in the glass tube. The resulting gas being analysed in an exploding eudiometer, with oxygene, was found to resolve itself into carbonic acid and water. Three volumes of oxygene disappeared for every two volumes of carbonic acid produced; a proportion which obtains in the analysis by oxygenation of olefiant gas. Now, as nothing resulted but a combustible gas of this peculiar constitution, and condensed water equal to $\frac{1000}{4464}$ of the original weight of the alkohol, we may conclude, that vapour of water and olefiant gas are the sole constituents of alkohol. Subtracting the 13·8 per cent. of water in the alkohol at the beginning of the experiment, the absolute alkohol of Richter will consist of 13·7 hydrogene, 51·98 carbon, and 34·32 oxygene. Hence Gay Lussac infers, that alkohol, in vapour, is composed of one volume olefiant gas, and one volume of the vapour of water, condensed by chemical affinity into one volume.

The sp. gr. of olefiant gas is	0·97804
Of aqueous vapour is	0·62500
Sum =	1·60304
And alkoholic vapour is =	1·6133

These numbers approach nearly to those which would result from two prime equivalents of olefiant gas, combined with one of water; or ultimately, three of hydrogene, two of carbon, and one of oxygene.

The mutual action between alkohol and acids produces a light, volatile, and inflammable substance, called æther. Pure alkalies unite with spirit of wine, and form alkaline tinctures. Few of the neutral salts unite with this fluid, except such as contain ammonia. The carbonated fixed alkalies are not soluble in it. From the strong attraction which exists between alkohol and water, it unites with this last in saline solutions, and, in most cases, precipitates the salt. This is a pleasing experiment, which never fails to surprise those who are unacquainted with chemical effects. If, for example, a saturated solution of nitre in water be taken, and an equal quantity of strong spirit of wine be poured upon it, the mixture will constitute a weaker spirit, which is incapable of holding the nitre in solution; it therefore falls to the bottom instantly, in the form of minute crystals.

The degree of solubility of many neutral salts in alkohol have been ascertained by experiments made by Macquer, of which an account is published in the Memoirs of the Turin Academy.

All deliquescent salts are soluble in alkohol. Alkohol holding the strontitic salts in solution, gives a flame of a rich purple.

The cupreous salts and boracic acid give a green; the soluble calcareous, a reddish; the barytic, a yellowish.

The alkohol of 0·825 has been subjected to a cold of — 91° without congealing.

When potash and soda are put in contact with the strongest alkohol, hydrogene is evolved. When chlorine is made to pass through alkohol in a Woolfe's apparatus, there is a mutual action. Water, an oily-looking substance, muriatic acid, a little carbonic acid, and carbonaceous matter, are the products. This oily substance does not redden turnsole, though its analysis by heat shows it to contain muriatic acid. It is white, denser than water, has a cooling taste, analogous to mint, and a peculiar, but not ethereous odour. It is very soluble in alkohol, but scarcely in water. The strongest alkalies hardly operate on it.

It was at one time maintained, that alkohol did not exist in wines, but was generated and evolved by the heat of distillation. On this subject Gay Lussac made some decisive experiments. He agitated wine with litharge in fine powder, till the liquid became as limpid as water, and then saturated it with subcarbonate of potash. The alkohol immediately separated and floated on the top. He distilled another portion of wine *in vacuo*, at 59° Fahr., a temperature considerably below that of fermentation. Alkohol came over. Mr. Brande proved the same position by saturating wine with subacetate of lead, and adding potash.

Adem and Duportal have substituted for the re-distillations used in converting wine or beer into alkohol, a single process of great elegance. From the capital of the still a tube is led into a large copper recipient. This is joined by a second tube to a second recipient, and so on through a series of four vessels, arranged like a Woolfe's apparatus. The last vessel communicates with the worm of the first refrigeratory. This, the body of the still, and the two recipients nearest it, are charged with the wine or fermented liquor. When ebullition takes place in the still, the vapour issuing from it communicates soon the boiling temperature to the liquor in the two recipients. From these the volatilised alkohol will rise and pass into the third vessel, which is empty. After communicating a certain heat to it, a portion of the finer or less condensable spirit will pass into the fourth, and thence, in a little, into the worm of the first refrigeratory. The wine round the worm will likewise acquire heat, but more slowly. The vapour that, in that event, may pass uncondensed through the first worm, is conducted into a second, surrounded with cold water. Whenever the still is worked off, it is replenished by a stop-cock from the nearest recipient, which, in its turn, is filled from the second, and the second from the first worm tub. It is evident, from this arrangement, that by keeping the third and fourth recipients at a certain temperature, we may cause alkohol, of any degree of lightness, to form directly at the remote extremity of the apparatus. The utmost economy of fuel and time is also secured, and a better-flavoured spirit is obtained. The *arrière goût* of bad spirit can scarcely be destroyed by infusion with charcoal and redistillation. In this mode of operating, the taste and smell are excellent, from the first. Several stills on the above principle have been constructed at Glasgow for the West India distillers, and have been found extremely advantageous. The excise laws do not permit their employment in the home trade.

If sulphur in sublimation meet with the vapour of alkohol, a very small portion combines with it, which communicates a hydrosulphureous smell to the fluid. The increased surface of the two substances appears to favour the combination. It had been supposed that this was the only way in which they could be united; but Favre has lately asserted, that having digested two drachms of flowers of sulphur in an ounce of alkohol, over a gentle fire not sufficient to make it boil, for twelve hours, he obtained a solution that gave twenty-three grains of precipitate. A similar mixture, left to stand for a month in a place exposed to the solar rays, afforded sixteen grains of precipitate; and another from which the light was excluded, gave thirteen grains. If alkohol be boiled with one-fourth of its weight of sulphur for an hour, and filtered hot, a small quantity of minute crystals will be deposited on cooling; and the clear fluid will assume an opaline hue on being diluted with an equal quantity of water, in which state it will pass the filter, nor will any sediment be deposited for several hours. The alkohol used in the last-mentioned experiment did not exceed 840.

Phosphorus is sparingly soluble in alkohol, but in greater quantity by heat than in cold. The addition of water to this solution affords an opake milky fluid, which becomes clear by the subsidence of the phosphorus.

Earths seem to have scarcely any action upon alkohol. Quicklime, however, produces some alteration in this fluid, by changing its flavour, and rendering it of a yellow colour. A portion is probably taken up.

Soaps are dissolved with great facility in alkohol, with which they combine more readily than with water. None of the metals, or their oxides, are acted upon by this fluid. Resins, essential oils, camphire, bitumen, and various other substances, are dissolved with great facility in alkohol, from which they may be precipitated by the addition of water. From its property of dissolving resins, it becomes the menstruum of some varnishes.

Camphire is not only extremely soluble in alkohol, but assists the solution of resins in it. Fixed oils, when rendered dry by me-

tallic oxides, are soluble in it, as well as when combined with alkalies.

Wax, spermaceti, biliary calculi, urea, and all the animal substances of a resinous nature, are soluble in alkohol; but it curdles milk, coagulates albumen, and hardens the muscular fibre and coagulum of the blood.

The uses of alkohol are various. As a solvent of resinous substances and essential oils, it is employed both in pharmacy and by the perfumer. When diluted with an equal quantity of water, constituting what is called proof spirit, it is used for extracting tinctures from vegetable and other substances, the alkohol dissolving the resinous parts, and the water the gummy. From giving a steady heat without smoke when burnt in a lamp, it was formerly much employed to keep water boiling on the tea-table. In thermometers, for measuring great degrees of cold, it is preferable to mercury, as we cannot bring it to freeze. It is in common use for preserving many anatomical preparations, and certain subjects of natural history; but to some it is injurious, the molluscæ for instance, the calcareous covering of which it in time corrodes. It is of considerable use, too, in chemical analysis, as appears under the different articles to which it is applicable.

From the great expansive power of alkohol, it has been made a question, whether it might not be applied with advantage in the working of steam-engines. From a series of experiments made by Betancourt, it appears, that the steam of alkohol has, in all cases of equal temperature, more than double the force of that of water; and that the steam of alkohol at 174° F. is equal to that of water 212°; thus there is a considerable diminution of the consumption of fuel, and where this is so expensive as to be an object of great importance, by contriving the machinery so as to prevent the alkohol from being lost, it may possibly at some future time be used with advantage, if some other fluid of great expansive power, and inferior price, be not found more economical.

Alkohol may be decomposed by transmission through a red-hot tube: it is also decomposable by the strong acids, and thus affords that remarkable product, æther and oleum vini. — *Ure's Chem. Dict.*

II. The alkohol of the London Pharmacopœia is directed to be made thus: — Take of rectified spirit, a gallon; subcarbonate of potash, three pounds. Add a pound of the subcarbonate of potash, previously heated to 300°, to the spirit, and macerate for twenty-four hours, frequently stirring them; then pour off the spirit, and add to it the rest of the subcarbonate of potash heated to the same degree; lastly, with the aid of a warm bath, let the alkohol distil over; keep it in a well-stopped bottle. The specific gravity of alkohol is to the specific gravity of distilled water, as 815 to 1000.

A'LKOSOR. Camphire.

ALKSOAL. A crucible.

ALKYMIA. Powder of basilisk.

A'LLABOR. Lead.

ALLAGITE. A carbosilicate of manganese.

ALLANITE. A mineral, first recognised as a distinct species by Mr. Allan of Edinburgh. It is massive, and of a brownish black colour.

ALLANTOID. (*Allantoides;* from αλλας, a hog's pudding, and ειδος, likeness: because in some brutal animals, it is long and thick.) *Membrana allantoides, Membrana sarciminalis.* A membrane of the fœtus, peculiar to brutes, which contains the urine discharged from the bladder.

ALLELUI'A. (Hebrew. *Praise the Lord.* So named for its many virtues.) See *Oxalis acetosella.*

ALL-GOOD. See *Chenopodium bonus-henricus.*

ALL-HEAL. See *Heraclium, Stachys,* and *Hypericum.*

ALLIA'CEOUS. (*Alliaceus;* from *allium,* garlic.) Pertaining to garlic.

ALLIA'RIA. (*a, æ.* f.; from *allium,* garlic: from its smell resembling garlic.) See *Erysimum alliaria.*

A'LLICAR. Vinegar.

ALLI'COA. Petroleum.

ALLIGATU'RA. A ligature or bandage.

ALLIO'TICUM. (*um, i.* n.; from αλλιοω, to alter, or vary.) An alterative medicine, consisting of various antiscorbutics. — *Galen.*

A'LLIUM. (*um, i.* n.; from *oleo,* to smell, because it stinks: or from αλεω, to avoid, as being unpleasant to most people.) Garlic.

1. The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia.*

2. The pharmacopœial name of garlic. See *Allium sativum.*

ALLIUM CEPA. The onion: called also *Cepa. Allium: — scapo nudo infernè ventricoso longiore, foliis teretibus,* of Linnæus. Dr. Cullen says, onions are acrid and stimulating, and possess very little nutriment. With bilious constitutions they generally produce flatulency, thirst, headach and febrile symptoms: but where the temperament is phlegmatic, they are of infinite service, by stimulating the habit and promoting the natural secretions, particularly expectoration and urine. They are recommended in scorbutic cases, as possessing antiscorbutic properties. Externally, onions are employed in suppurating poultices, and suppression of urine in children is said to be relieved by applying them roasted to the pubes.

ALLIUM PORRUM. The leek or porret. *Porrum.* Every part of this plant, but more particularly the root, abounds with a peculiar odour. The expressed juice possesses diuretic qualities, and is given in the cure of dropsical diseases, and calculous com-

plaints, asthma and scurvy. The fresh root is much employed for culinary purposes.

ALLIUM SATIVUM. Garlic. Called also *Allium*, and *Theriaca rusticorum. Allium: — caule planifolio bulbifero, bulbo composito, staminibus tricuspidatis*, of Linnæus. This species of garlic, according to Linnæus, grows spontaneously in Sicily; but, as it is much employed for culinary and medicinal purposes, it has been long very generally cultivated in gardens. Every part of the plant, but more especially the root, has a pungent acrimonious taste, and a peculiarly offensive strong smell. This odour is extremely penetrating and diffusive; for, on the root being taken into the stomach, the alliaceous scent impregnates the whole system, and is discoverable in the various excretions, as in the urine, perspiration, milk, &c. Garlic is generally allied to the onion, from which it seems only to differ in being more powerful in its effects, and in its active matter, being in a more fixed state. By stimulating the stomach, they both favour digestion, and, as a stimulus, are readily diffused over the system. They may, therefore, be considered as useful condiments with the food of phlegmatic people, or those whose circulation is languid, and secretions interrupted; but with those subject to inflammatory complaints, or where great irritability prevails, these roots, in their acrid state, may prove very hurtful. The medicinal uses of garlic are various; it has been long in estimation as an expectorant in pituitous asthmas, and other pulmonary affections, *unattended* with inflammation. In hot bilious constitutions, therefore, garlic is improper: for it frequently produces flatulence, headach, thirst, heat, and other inflammatory symptoms. A free use of it is said to promote the piles, in habits disposed to this complaint. Its utility as a diuretic in dropsies is attested by unquestionable authorities; and its febrifuge power has not only been experienced in preventing the paroxysms of intermittents, but even in subduing the plague. Bergius says quartans have been cured by it; and he begins by giving one bulb, or clove, morning and evening, adding every day one more, till four or five cloves be taken at a dose: if the fever then vanishes, the dose is to be diminished, and it will be sufficient to take one, or two cloves, twice a-day, for some weeks. Another virtue of garlic is that of an anthelmintic. It has likewise been found of great advantage in scorbutic cases, and in calculous disorders, acting in these, not only as a diuretic, but, in several instances, manifesting a lithontriptic power. That the juice of alliaceous plants, in general, has considerable effects upon human calculi, is to be inferred from the experiments of Lobb: and we are abundantly warranted in asserting that a decoction of the beards of leeks, taken liberally, and its use persevered in for a length of time, has been found remarkably successful in calculous and gravelly complaints. The penetrating and diffusive acrimony of garlic, renders its external application useful in many disorders, as a rubefacient, and more especially as applied to the soles of the feet, to cause a revulsion from the head or breast, as was successfully practised and recommended by Sydenham. As soon as an inflammation appears, the garlic cataplasm should be removed, and one of bread and milk be applied, to obviate excessive pain. Garlic has also been variously employed externally, to tumours and cutaneous diseases; and, in certain cases of deafness, a clove, or small bulb of this root, wrapt in gauze or muslin, and introduced into the meatus auditorius, has been found an efficacious remedy. Garlic may be administered in different forms; swallowing the clove entire, after being dipped in oil, is recommended as the most effectual; where this cannot be done, cutting it into pieces, without bruising it, and swallowing these, may be found to answer equally well, producing thereby no uneasiness in the fauces. On being beaten up, and formed into pills, the active parts of this medicine soon evaporate: this Dr. Woodville, in his Medical Botany, notices, on the authority of Cullen, who thinks that Lewis has fallen into a gross error, in supposing dried garlic more active than fresh. The syrup and oxymel of garlic, which formerly had a place in the British Pharmacopœias, are now expunged. The cloves of garlic are by some bruised, and applied to the wrists, to cure agues, and to the bend of the arm, to cure the toothach. When held in the hand, they are said to relieve hiccough; when beat with common oil into a poultice, they resolve sluggish humours; and, if laid on the navels of children, they are supposed to destroy worms in the intestines.

ALLIUM VICTORIALE. *Victorialis longa.* The root, which, when dried, loses its alliaceous smell and taste, is said to be efficacious in allaying the abdominal spasms of gravid females.

ALLO'CHOOS. (From αλλος, another, and χεω, to pour.) Hippocrates uses this word to mean delirious.

ALLOCHROITE. A massive opake mineral, of a greyish, yellowish, or reddish colour.

ALLOEO'SIS. (From αλλος, another.) Alteration in the state of a disease.

ALLOEO'TICUS. (From αλλος, another.) Alterative: a medicine which changes the appearance of the disease.

ALLOGNO'SIS. (From αλλος, another, and γινωσκω, to know.) Delirium; perversion of the judgment; incapability of distinguishing persons.

ALLOPHANE. A mineral of a blue, and sometimes a green or brown colour.

ALLO'PHASIS. (From αλλος, another,

and φαω, to speak.) According to Hippocrates, a delirium where the patient is not able to distinguish one thing from another.

ALLOTRIOPHA'GIA. (*a, æ.* f.; from αλλοτριος, foreign, and φαγω, to eat.) A desire to eat unusual things for food. See *Pica.*

ALLOY. 1. Where any precious metal is mixed with another of less value, the assayers call the latter the alloy, and do not in general consider it in any other point of view than as debasing or diminishing the value of the precious metal.

2. Philosophical chemists have availed themselves of this term to distinguish all metallic compounds in general. Thus brass is called an alloy of copper and zinc; bell metal an alloy of copper and tin.

Every alloy is distinguished by the metal which predominates in its composition, or which gives it its value. Thus English jewellery trinkets are ranked under alloys of gold, though most of them deserve to be placed under the head of copper. When mercury is one of the component metals, the alloy is called *amalgam.* Thus we have an amalgam of gold, silver, tin, &c. Since there are about thirty different permanent metals, independent of those evanescent ones, that constitute the bases of the alkalies and earths, there ought to be about 870 different species of binary alloy. But only 132 species have been hitherto made and examined.

ALLSPICE. See *Myrtus pimenta.*

ALLUVIAL. (*Alluvialis;* from *alluo,* to wash.) That which is deposited in valleys or in plains from neighbouring mountains. Gravel, loam, clay, sand, brown coal, wood coal, bog iron ore, and calc tuff, compose the alluvial deposits.

ALMA. 1. The first motion of a fœtus to free itself from its confinement.

2. Water. — *Rulandus.*

ALMABRI. A stone like amber.

A'LMAGRA. *Bolum cuprum.* 1. Red earth, or ochre, used by the ancients as an astringent.

2. Rulandus says it is the same as *Lotio.*

3. In the *Theatrum Chymicum,* it is a name for the white sulphur of the alchemists.

ALMA'NDA CATHARTICA. A plant growing on the shores of Cayenne and Surinam, used by the inhabitants as a remedy for the colic; supposed to be cathartic.

ALMARA'NDA. *Almakis.* Litharge.

ALMA'RCAB. Litharge of silver.

ALMARCA'RIDA. Litharge of silver.

ALMA'RGEN. *Almarago.* Coral.

ALMARKASI'TA. Mercury.

ALMA'RTAK. Powder of litharge.

ALMATA'TICA. Copper.

ALMEAILE'TU. A word used by Avicenna, to express a preternatural heat less than that of fever, and which may continue after a fever.

ALMECA'SITE. *Almechasite.* Copper.

ALME'NE. Rock salt.

ALMI'SA. Musk.

ALMIZA'DAR. Sal ammoniac.

ALMIZA'DIR. Verdigris.

ALMOND. See *Amygdalus.*

Almond, bitter. See *Amygdalus.*

Almond, sweet. See *Amygdalus.*

Almond paste. This is made of four ounces of blanched bitter almonds, the white of an egg, rose water, and rectified spirits, equal parts, as much as is sufficient. It is a cosmetic for softening the skin and preventing chops.

Almonds of the Ears. (So called from their resemblance to an almond in shape.) See *Tonsils.*

Almonds of the Throat. See *Tonsils.*

ALNABATI. See *Ceratonia siliqua.*

A'LNEC. Tin.

A'LNERIC. Sulphur vivum.

A'LNUS. (*us, i.* f.; *alno,* Italian.) The alder. The pharmacopœial name of two plants: —

1. *Alnus rotundifolia.* The common alder-tree. See *Betula alnus.*

2. *Alnus nigra.* The black or berry-bearing alder. See *Rhamnus frangula.*

A'LOE. (*ë, ës.* f.; from *ahlah,* a Hebrew word, signifying growing near the sea.) The name of a genus of plants of the Linnæan system. Class, *Hexandria;* Order, *Monogynia.* The aloe.

ALOË CABALLINA. See *Aloë perfoliata.*

ALOË GUINEENSIS. See *Aloë perfoliata.*

ALOË PERFOLIATA. The systematic name of the plant from which the socotorine or zocotorine aloe of the shops is obtained. Linnæus defines the plant thus: *Aloë — foliis caulinis dentatis, amplexicaulibus vaginantibus, floribus corymbosis cernuis, pedunculatis subcylindricis.* The aloes is the inspissated juice of this plant. It is brought over, wrapt in skins, from the Island of Socotora, in the Indian Ocean. It is of a bright surface, and in some degree pellucid; in the lump, of a yellowish red colour, with a purplish cast; when reduced into powder, it is of a golden colour. It is hard and friable in very cold weather; but in summer it softens very easily betwixt the fingers. It is extremely bitter, and also accompanied with an aromatic flavour, but not so much as to cover its disagreeable taste. Its scent is rather agreeable, being somewhat similar to that of myrrh. Of late this sort has been very scarce, and its place in a great measure supplied by another variety, brought from the Cape of Good Hope, which is said to be obtained from the *Aloë spicata* of Linnæus, by inspissating the expressed juice of the leaves; whence it is termed, in the London Pharmacopœia, *Extractum aloës spicatæ.*

The *Aloë hepatica, vel Barbadensis,* the common or Barbadoes or hepatic aloes, was thought to come from a variety of the *Aloë perfoliata* described: — *floribus pedunculatis, cernuis corymbosis, subcylindricis, foliis spinosis, confertis, dentatis, vaginantibus, planis,*

maculatis: but Dr. Smith has announced, that it will be shown, in Sibthorp's *Flora Græca*, to be from a distinct species, the *Aloë vulgaris*, or true *αλοη* of Dioscorides; and it is therefore termed, in the London Pharmacopœia, *Aloës vulgaris extractum.* The best is brought from Barbadoes in large gourd-shells, an inferior sort in pots, and the worst in casks. It is darker coloured than the socotorine, and not so bright; it is also drier and more compact, though sometimes the sort in casks is soft and clammy. To the taste it is intensely bitter and nauseous, being almost wholly without that aroma which is observed in the socotorine. To the smell it is strong and disagreeable.

The *Aloë caballina, vel guineensis,* or horse-aloes, is easily distinguished from both the foregoing by its strong rank smell; in other respects it agrees pretty much with the hepatic, and is now not unfrequently sold in its place. Sometimes it is prepared so pure and bright as scarcely to be distinguishable by the eye, even from the socotorine, but its offensive smell betrays it; and if this also should be dissipated by art, its wanting the aromatic flavour of the finer aloes will be a sufficient criterion. This aloe is not admitted into the materia medica, and is employed chiefly by farriers.

The general nature of these three kinds is nearly the same. Their particular differences only consist in the different proportions of gum to their resin, and in their flavour. The smell and taste reside principally in the gum, as do the principal virtues of the aloes. Twelve ounces of Barbadoes aloes yield nearly 4 ounces of resin, and 8 of gummy extract. The same quantity of socotorine aloes yields 3 ounces of resin, and 9 of gummy extract.

Aloes is a well-known stimulating purgative, a property which it possesses not only when taken internally, but also by external application. The cathartic quality of aloes does not reside in the resinous part of the drug, but in the gum, for the pure resin has little or no purgative power. Its medium dose is from 5 to 15 grains, nor does a larger quantity operate more effectually. Its operation is exerted on the large intestines; principally on the rectum. In small doses, long continued, it often produces much heat and irritation, particularly about the anus, from which it sometimes occasions a bloody discharge; therefore, to those who were subject to piles, or of an hæmorrhagic diathesis, or even in a state of pregnancy, its exhibition has been productive of considerable mischief; but, on the contrary, by those of a phlegmatic constitution, or those suffering from uterine obstructions, (for the stimulant action of aloes, it has been supposed, may be extended to the uterus,) and in some cases of dyspepsia, palsy, gout, and worms, aloes may be employed as a laxative with peculiar advantage. In all diseases of the bilious tribe, aloes is the strongest purge, and the best preparations for this purpose are the pilula ex aloë cum myrrhâ, the tinctura aloës, or the extractum colocynthidis compositum. Its efficacy in jaundice is very considerable, as it proves a succedaneum to the bile, of which in that disease there is a defective supply to the intestine either in quantity or quality. Aloes therefore may be considered as injurious where inflammation or irritation exist in the bowels or neighbouring parts, in pregnancy, or in habits disposed to piles; but highly serviceable in all hypochondriac affections, cachectic habits, and persons labouring under oppression of the stomach caused by irregularity. Aromatics correct the offensive qualities of aloes the most perfectly. The canella alba answers tolerably, and without any inconvenience; but some rather prefer the essential oils for this purpose. Dr. Cullen says, "If any medicine be entitled to the appellation of a *stomach purge*, it is certainly aloes. It is remarkable with regard to it that it operates almost to as good a purpose in a small as in a large dose; that one or two grains will produce one considerable dejection, and 20 grains will do no more, except it be that in the last dose the operation will be attended with gripes, &c. Its chief use is to render the peristaltic motion regular, and it is one of the best cures in habitual costiveness. There is a difficulty we meet with in the exhibition of purgatives, viz. that they will not act but in their full dose, and will not produce half their effect if given in half the dose. For this purpose we are chiefly confined to aloes. Neutral salts in half their dose will not have half their effect; although even from these, by large dilution, we may obtain this property; but besides them, and our present medicine, I know no other which has any title to it, except sulphur. Aloes sometimes cannot be employed. It has the effect of stimulating the rectum more than other purges, and with justice has been accused of exciting hæmorrhoidal swellings, so that we ought to abstain from it in such cases, except when we want to promote them. Aloes has the effect of rarifying the blood, and disposing to hæmorrhagy, and hence it is not recommended in uterine fluxes. Fœtid gums are of the same nature in producing hæmorrhagy, and perhaps this is the foundation of their emmenagogue power." Aloes is administered either simply in powders, which is too nauseous, or else in composition: — 1. With purgatives; as soap, scammony, colocynth, or rhubarb. 2. With aromatics; as canella, ginger, or essential oils. 3. With bitters; as gentian. 4. With emmenagogues; as iron, myrrh, wine, &c. It may be exhibited in pills as the most convenient form, or else dissolved in wine, or diluted alkohol. The officinal preparations of aloes are the following: —

1. Pilulæ Aloës.
2. Pilulæ Aloës Compositæ.
3. Pilulæ Aloës cum Asafœtida.
4. Pilulæ Aloës cum Colocynthide.
5. Pilulæ Aloës cum Myrrha.
6. Tinctura Aloës.
7. Tinctura Aloës Ætherialis.
8. Tinctura Aloës et Myrrha.
9. Vinum Aloës.
10. Extractum Aloës.
11. Decoctum Aloës Compositum.
12. Pulvis Aloës Compositus.
13. Pulvis Aloës cum Canella.
14. Pulvis Aloës cum Guaiaco.
15. Tinctura Aloës Composita.
16. Extractum Colocynthidis Compositum.
17. Tinctura Benzoini Composita.

Aloë socotorina. See *Aloë perfoliata.*

Aloë zocotorina. See *Aloë perfoliata.*

Aloeda'rius. (From αλοη, the aloe.) A compound medicine that has aloes as the chief ingredient.

Aloephanginus. A medicine formed by a combination of aloes and aromatics.

ALOES. The English name of the inspissated juice of the aloe plant. See *Aloë perfoliata.*

Aloes, Barbadoes. See *Aloë perfoliata.*

Aloes, common. See *Aloë perfoliata.*

Aloes, hepatic. See *Aloë perfoliata.*

Aloes, horse. See *Aloë perfoliata.*

Aloës, lignum. See *Lignum aloës.*

Aloes, socotorine. See *Aloë perfoliata.*

Aloes, spiked. See *Aloë perfoliata.*

ALOE'TIC. *Aloëticus.* A medicine wherein aloes is the chief or fundamental ingredient.

ALOGOTRO'PHIA. (From αλογος, disproportionate, and τρεφω, to nourish.) Unequal nourishment.

A'lohar. (Arabian.) *Alohoc.* Mercury.

Alo'mba. (Arabian.) *Alooc.* Lead.

ALO'PECES. (*Alopex, pecis.* f.; from αλωπηξ, the fox.) The psoæ muscles are so called by Fallopius and Vesalius, because in the fox they are particularly strong.

ALOPE'CIA. (*a, æ.* f.; from αλωπηξ, a fox: because the fox is subject to a distemper that resembles it; or, as some say, because the fox's urine will occasion baldness.) Baldness, or the falling off of the hair. See *Baldness.*

ALOPECUROIDEUS. (From *alopecurus,* the fox-tail grass, and ειδος, resemblance.) Resembling the alopecurus.

ALO'SA. (From αλισκω, to take: because it is ravenous.) See *Clupea alosa.*

Alosa'nthus. (From αλs, salt, and ανθος, a flower.) Flower of salt.

A'losat. Quicksilver.

Alosohoc. Quicksilver.

ALPHABE'TUM. (*um, i.* n.; formed from the names of the two first letters of the Greek alphabet: — *alpha, beta.*) Raymond Lully hath given the world this alphabet, but to what end is difficult to say: —

A *significat Deum.*
B ——— *Mercurium.*
C ——— *Salis Petram.*
D ——— *Vitriolum.*
E ——— *Menstruale.*
F ——— *Lunam claram.*
G ——— *Mercurium nostrum.*
H ——— *Salum purum.*
I ——— *Compositum Lunæ.*
K ——— *Compositum Solis.*
L ——— *Terram compositi Lunæ.*
M ——— *Aquam compositi Lunæ.*
N ——— *Ærem compositi Lunæ.*
O ——— *Terram compositi Solis.*
P ——— *Aquam compositi Solis.*
Q ——— *Ærem compositi Solis.*
R ——— *Ignem compositi Solis.*
S ——— *Lapidem album.*
T ——— *Medicinam corporis rubei.*
U ——— *Calorem fumi secreti.*
X ——— *Ignem siccum cineris.*
Y ——— *Calorem balnei.*
Z ——— *Separationem liquorem.*
Z ——— *Alembicum cum cucurbitâ.*

A'lphanic. (An Arabian word, signifying tender.) *Alphenic.* Barley-sugar, or sugar-candy.

A'LPHITA. (*Alphita.* The plural of αλφιτον, the meal of barley in general.) By Hippocrates this term is applied to barley-meal, either toasted or fried. Galen says, that κριμνα is coarse meal, αλευρον is fine meal, and αλφιτα is a middling sort.

Alphi'tidon. *Alphitedum.* A bone broken into small fragments like *alphiton* or bran.

ALPHO'NSIN. (So called from the name of its inventor, Alphonso Ferrier, a Neapolitan physician.) The name of an instrument for extracting balls. It consists of three branches, which separate from each other by their elasticity, but are capable of being closed by means of a tube in which they are included.

ALPHOSIS. The specific name of a disease, applied by Good to the albino-skin.

A'LPHUS. (*Alphus.* Αλφος; from αλφαινω, to change: because it changes the colour of the skin.) A species of leprosy. See *Lepra.*

A'lpini balsamum. Balm of Gilead.

ALPI'NUS, Prosper, a Venetian, born in 1553. After graduating at Padua, he went to Egypt, and during three years carefully studied the plants of that country, and the modes of treating diseases there; of which he afterwards published a very learned account. He has left also some other less important works.

A'lrachas. Lead.

Alra'tica. An Arabic word used by Albucasis, to signify a partial or a total imperforation of the vagina.

Alrukak. The name in Avicenna for the frangments of frankincense.

Alsadaf. The name given by Avicenna to the *unguis odoratus,* supposed to be a part of the shell of the *Murex,* or purple fish.

Alsa'mach. An Arabic name for the great hole in the os petrosum.

Alsimbel. The Indian spikenard. See *Andropogon nardus.*

A'LSINE. (*e, es.* f.; from αλσος, a grove: so called because it grows in great abundance in woods and shady places.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Trigynia.* Chickweed.

Alsine media. The chickweed. *Morsus gallinæ centunculus.* If boiled tender, this plant may be eaten like spinach, and it forms also an excellent emollient poultice.

ALSTON, Charles, born in Scotland in 1683, distinguished himself by opposing the sexual system of Linnæus. He was materially instrumental, in conjunction with the celebrated Alexander Monro, in establishing the medical school at Edinburgh, where he was appointed professor of botany and materia medica. He died in 1760. His "Lectures on the Materia Medica," a posthumous work, abound in curious and useful facts, which will long preserve their reputation.

A'ltafor. Camphire.

A'LTERATIVE. (*Alternans;* from *altero,* to change.) That which re-establishes the healthy functions of the animal economy, without producing any sensible evacuation by perspiration, purging, or vomiting.

Alternæ plantæ. Alternate-leaved plants. The name of a class of plants in Sauvages' *Methodus foliorum.*

ALTERNANS. Alternate. See *Alternate.*

ALTERNATE. *Alternatus.* In *botany,* applied to branches and leaves when they stand singly on each side, in such a manner that between every two on one side there is but one on the opposite side; as on the branches of the *Althæa officinalis, Rhamnus catharticus,* and leaves of the *Malva rotundifolia.*

ALTHÆ'A. (*a, æ.* f.; from αλθεω, to heal: so called from its supposed qualities in healing.) 1. The name of a genus of plants of the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.* Marshmallow.

2. The pharmacopœial name of the marshmallow. See *Althæa officinalis.*

Althæa officinalis. The systematic name of the marshmallow; called also *Malvaviscus* and *Aristalthæa.* *Althæa: — foliis simplicibus tomentosis,* of Linnæus.

The mucilaginous matter with which this plant abounds, is the medicinal part of the plant; it is commonly employed for its emollient and demulcent qualities in tickling coughs, hoarseness, and catarrhs, in dysentery, and difficulty and heat of urine. The leaves and root are generally selected for use. They relax the passages in nephritic complaints, in which last case a decoction is the best preparation. Two or three ounces of the fresh roots may be boiled in a sufficient quantity of water to a quart, to which one ounce of gum-arabic may be added. The following is given where it is required that large quantities should be used. An ounce of the dried roots is to be boiled in water, enough to leave two or three pints to be poured off for use: if more of the root be used, the liquor will be disagreeably slimy. If sweetened, by adding a little more of the root of liquorice, it will be very palatable. The root had formerly a place in many of the compounds in the pharmacopœias, but now it is only directed in the form of syrup.

Altha'naca. *Althanacha.* Orpiment.

Althebe'gium. An Arabian name for a sort of swelling, such as is observed in cachectic and leuco-phlegmatic habits.

ALTHE'XIS. (From αλθειν, to cure, or heal.) Hippocrates often uses this word to signify the cure of a distemper.

Altihit. So Avicenna calls the *Laserpitium* of the ancients.

A'lud. Arabian aloes.

ALUDEL. A hollow sphere of stone, glass, or earthenware, with a short neck projecting at each end, by means of which one globe might be set upon the other. The uppermost has no opening at the top. They were used in former times for the sublimation of several substances.

ALUM. (*Alumen, inis.* n. *Alum,* an Arabian word.) This important salt, called also *Assos, Azub, Aseb, Elanula, Sulphas aluminæ acidulus cum potassâ, Super-sulphas aluminæ et potassæ,* and *Argilla vitriolata,* has been the object of innumerable researches, both with regard to its fabrication and composition. It is produced, but in a very small quantity, in the native state; and this is mixed with heterogeneous matters. It effloresces in various forms upon ores during calcination, but it seldom occurs crystallised. The greater part of this salt is factitious, being extracted from minerals called alum ores; such as,

1. *Sulphurated clay.* This constitutes the purest of all aluminous ores, namely, that of La Tolfa, near Civita Vecchia, in Italy. It is white, compact, and as hard as indurated clay, whence it is called *petra aluminaris.* It is tasteless and mealy; one hundred parts of this ore contain above forty of sulphur and fifty of clay, a small quantity of potash, and a little iron. Bergman says it contains forty-three of sulphur in one hundred, thirty-five of clay, and twenty-two of siliceous earth. This ore is first torrefied to acidify the sulphur, which then acts on the clay, and forms the alum.

2. The *pyritaceous clay,* which is found at Schwemsal, in Saxony, at the depth of ten or twelve feet. It is a black and hard, but brittle substance, consisting of clay, pyrites, and bitumen. It is exposed to the air for two years; by which means the pyrites are decomposed, and the alum is formed. The alum ores of Hesse and Liege are of this

kind; but they are first torrefied, which is said to be a disadvantageous method.

3. The *schistus aluminaris* contains a variable proportion of petroleum and pyrites intimately mixed with it. When the last are in a very large quantity, this ore is rejected as containing too much iron. Professor Bergman very properly suggested, that by adding a proportion of clay, this ore may turn out advantageously for producing alum. But if the petrol be considerable, it must be torrefied. The mines of Becket in Normandy, and those of Whitby in Yorkshire, are of this species.

4. *Volcanic aluminous ore.* Such is that of Solfaterra, near Naples. It is in the form of a white saline earth, after it has effloresced in the air; or else it is in a stony form.

5. *Bituminous alum ore* is called shale, and is in the form of a schistus, impregnated with so much oily matter, or bitumen, as to be inflammable. It is found in Sweden, and also in the coal mines at Whitehaven, and elsewhere.

Chaptal has fabricated alum on a large scale from its component parts. For this purpose he constructed a chamber 91 feet long, 48 wide, and 31 high in the middle. The walls are of common masonry, lined with a pretty thick coating of plaster. The floor is paved with bricks, bedded in a mixture of raw and burnt clay; and this pavement is covered with another, the joints of which overlap those of the first, and instead of mortar the bricks are joined with a cement of equal parts of pitch, turpentine, and wax, which, after having been boiled till it ceases to swell, is used hot. The roof is of wood, but the beams are very close together, and grooved lengthwise, the intermediate space being filled up by planks fitted into the grooves, so that the whole is put together without a nail. Lastly, the whole of the inside is covered with three or four successive coatings of the cement above mentioned, the first being laid on as hot as possible; and the outside of the wooden roof was varnished in the same manner. The purest and whitest clay being made into a paste with water, and formed into balls half a foot in diameter, these are calcined in a furnace, broken to pieces, and a stratum of the fragments laid on the floor. A due proportion of sulphur is then ignited in the chamber, in the same manner as for the fabrication of sulphuric acid; and the fragments of burnt clay, imbibing this as it forms, begin after a few days to crack and open, and exhibit an efflorescence of sulphate of alumina. When the earth has completely effloresced, it is taken out of the chamber, exposed for some time in an open shed, that it may be the more intimately penetrated by the acid, and is then lixiviated and crystallised in the usual manner. The cement answers the purpose of lead on this occasion very effectually, and, according to Chaptal, costs no more than lead would at three farthings a pound.

Curaudau has lately recommended a process for making alum without evaporation. One hundred parts of clay and five of muriate of soda are kneaded into a paste with water, and formed into loaves. With these a reverberatory furnace is filled, and a brisk fire is kept up for two hours. Being powdered, and put into a sound cask, one-fourth of their weight of sulphuric acid is poured over them by degrees, stirring the mixture well at each addition. As soon as the muriatic gas is dissipated, a quantity of water equal to the acid is added, and the mixture stirred as before. When the heat is abated, a little more water is poured in; and this is repeated till eight or ten times as much water as there was acid is added. When the whole has settled, the clear liquor is drawn off into leaden vessels, and a quantity of water equal to this liquor is poured on the sediment. The two liquors being mixed, a solution of potash is added to them, the alkali in which is equal to one-fourth of the weight of the sulphuric acid. Sulphate of potash may be used, but twice as much of this as of the alkali is necessary. After a certain time the liquor, by cooling, affords crystals of alum equal to three times the weight of the acid used. It is refined by dissolving it in the smallest possible quantity of boiling water. The residue may be washed with more water, to be employed in lixiviating a fresh portion of the ingredients.

Its sp. grav. is about 1·71. It reddens the vegetable blues. It is soluble in 16 parts of water at 60°, and in three fourths of its weight at 212°. It effloresces superficially on exposure to air, but the interior remains long unchanged. Its water of crystallisation is sufficient at a gentle heat to fuse it. If the heat be increased, it froths up, and loses fully 45 per cent. of its weight in water. The spongy residue is called *burnt* or calcined *alum*, and is used by surgeons as a mild escharotic. A violent heat separates a great portion of its acid.

Alum, analysed by Berzelius, consists of

Sulphuric acid,	34·33
Alumina,	10·86
Potash,	9·81
Water,	45·00
	100·00

or, Sulphate of alumina,	36·85
Sulphate of potash,	18·15
Water,	45·00
	100·00

When alum in powder is mixed with flour or sugar, and calcined, it forms the *pyrophorus* of Homberg.

Mr. Winter first mentioned, that another

variety of alum can be made with *soda*, instead of potash. This salt, which crystallises in octahedrons, has been also made with pure muriate of soda, and bisulphate of alumina, at the laboratory of Hurlett, by Mr. W. Wilson. It is extremely difficult to form, and effloresces like the sulphate of soda.

On the subject of soda-alum, Dr. Ure published a short paper in the Journal of Science for July 1822. The form and taste of this salt are exactly the same as those of common alum; but it is less hard, being easily crushed between the fingers, to which it imparts an appearance of moisture.

In medicine, it is employed internally as a powerful astringent in cases of passive hæmorrhages from the womb, intestines, nose, and sometimes lungs. In bleedings of an active nature, *i. e.* attended with fever, and a plethoric state of the system, it is highly improper. Dr. Percival recommends it in the *colica pictonum* and other chronic disorders of the bowels, attended with obstinate constipation. (See Percival's Essays.) The dose advised in these cases, is from 5 to 20 grains, to be repeated every four, eight, or twelve hours. When duly persisted in, this remedy proves gently laxative, and mitigates the pain.

Alum is also powerfully tonic, and is given with this view in the dose of 10 grains made into a bolus three times a day, in such cases as require powerful tonic and astringent remedies. Another mode of administering it, is in the form of whey, made by boiling a drachm of powdered alum in a pint of milk, for a few minutes, and to be taken in the quantity of a tea-cupful three times a day. Dr. Cullen thinks it ought to be employed with other astringents in diarrhœas. In active hæmorrhages, as was observed, it is not useful, though a powerful medicine in those which are passive. It should be given in small doses, and gradually increased. It has been tried in the diabetes without success; though, joined with nutmeg, it has been more successful in intermittents, given in a large dose, an hour or a little longer, before the approach of the paroxysm. In gargles, in relaxation of the uvula, and other swellings of the mucous membrane of the fauces, divested of acute inflammation, it has been used with advantage.

Externally, alum is much employed by surgeons as a lotion for the eyes, and is said to be preferable to sulphate of zinc or acetate of lead in the ophthalmia membranarum. From 2 to 5 grains dissolved in an ounce of rose water, forms a proper collyrium. It is also applied as a styptic to bleeding vessels, and to ulcers, where there is too copious a secretion of pus. It has proved successful in inflammation of the eyes, in the form of cataplasm, which is made by stirring or shaking a lump of alum in the whites of two eggs, till they form a coagulum, which is applied to the eye, between two pieces of thin linen rag. Alum is also employed as an injection in cases of gleet or fluor albus.

When deprived of its humidity, by placing it in an earthen pan over a gentle fire, it is termed burnt alum, *alumen exsiccatum*, and is sometimes employed by surgeons to destroy fungous flesh, and is a principal ingredient in most styptic powders.

Alum is also applied to many purposes of life; in this country, bakers mix a quantity with the bread, to render it white; this mixture makes the bread better adapted for weak and relaxed bowels; but in opposite states of the alimentary canal, this practice is highly pernicious.

The officinal preparations of alum are:

1. *Alumen exsiccatum.*
2. *Solutio sulphatis cupri ammoniati.*
3. *Liquor aluminis compositus.*
4. *Pulvis sulphatis aluminis compositus.*

Alum, compound solution of. See *Liquor aluminis compositus.*

Alum earth. A massive mineral of a blackish brown colour, a dull lustre, an earthy and somewhat slaty fracture, sectile and rather soft, containing charcoal, silica, alumina, oxide of iron, sulphur, sulphates of lime, potash, and iron, magnesia, muriate of potash, and water.

Alum slate. A massive mineral, of a bluish black colour.

Alumen catinum. A name of potash.

Alumen commune. See *Alum.*

Alumen crystallinum. See *Alum.*

Alumen exsiccatum. Dried alum. Expose alum in an earthen vessel to the fire so that it may dissolve and boil, and let the heat be continued and increased until the boiling ceases. See *Alum.*

Alumen factitium. See *Alum.*

Alumen romanum. See *Alum.*

Alumen rubrum. See *Alum.*

Alumen rupeum. See *Alum.*

Alumen rutilum. See *Alum.*

Alumen ustum. See *Alum.*

ALU'MINA. (*a*, *æ*. f.; from *Alumen*, it being the earthy base of that compound.) Alumine: called also earth of alum, and pure clay. One of the primitive earths; which, as constituting the plastic principle of all clays, loams, and boles, was called *argil*, or the *argillaceous earth*; but now, as being obtained in greatest purity from alum, is styled alumina. It was deemed elementary matter till Sir H. Davy's celebrated electro-chemical researches led to the belief of its being, like barytes and lime, a metallic oxide.

The purest native alumina is found in the oriental gems, the sapphire and ruby. They consist of nothing but this earth, and a small portion of colouring matter. The native porcelain clays or kaolins, however white and soft, can never be regarded as pure alumina. They usually contain fully half their weight of silica, and frequently other earths. To obtain pure alumina, we dissolve alum in 20

times its weight of water, and add to it a little of the solution of carbonate of soda, to throw down any iron which may be present. We then drop the supernatant liquid into a quantity of the water of ammonia, taking care not to add so much of the aluminous solution as will saturate the ammonia. The volatile alkali unites with the sulphuric acid of the alum, and the earthy basis of the latter is separated in a white spongy precipitate. This must be thrown on a filter, washed, or edulcorated, as the old chemists expressed it, by repeated affusions of water, and then dried. Or if an alum, made with ammonia instead of potash, as is the case with some French alums, can be got, simple ignition dissipates its acid and alkaline constituents, leaving pure alumina.

Alumina, prepared by the first process, is white, pulverulent, soft to the touch, adheres to the tongue, forms a smooth paste without grittiness in the mouth, insipid, inodorous, produces no change in vegetable colours, insoluble in water, but mixes with it readily in every proportion, and retains a small quantity with considerable force; is infusible in the strongest heat of a furnace, experiencing merely a condensation of volume and consequent hardness, but is in small quantities melted by the oxyhydrogene blowpipe. Its specific gravity is 2·000 in the state of powder, but by ignition it is augmented.

Every analogy leads to the belief that alumina contains a peculiar metal, which may be called *aluminum*. The first evidences obtained of this position are presented in Sir H. Davy's researches.

Alumina is widely diffused in nature. It is a constituent of every soil, and of almost every rock. It is the basis of porcelain, pottery, bricks, and crucibles. Its affinity for vegetable colouring matter, is made use of in the preparation of lakes, and in the arts of dyeing and calico-printing. Native combinations of alumina constitute the fullers' earth, ochres, boles, pipe-clays, &c.

The salts of alumina have the following general characters:

1. Most of them are very soluble in water, and their solutions have a sweetish acerb taste.

2. Ammonia throws down their earthy base, even though they have been previously acidulated with muriatic acid.

3. At a strong red heat they give out a portion of their acid.

4. Phosphate of ammonia gives a white precipitate.

5. Hydriodate of potash produces a flocculent precipitate of a white colour, passing into a permanent yellow.

6. They are not affected by oxalate of ammonia, tartaric acid, ferroprussiate of potash, or tincture of galls: by the first two tests they are distinguishable from yttria; and by the last two, from that earth and glucina.

7. If bisulphate of potash be added to a solution of an aluminous salt moderately concentrated, octahedral crystals of alum will form.

ALUMINITE. A mineral of a snow-white colour, dull, opake, and having a fine earthy fracture. It consists of sulphuric acid, alumina, water, silica, lime, and oxide of iron.

ALUMINOUS. *Aluminosus*. Pertaining to alum.

Aluminous acid. So called because it exists in alum. See *Sulphuric acid*.

Aluminous water. Waters impregnated with particles of alum.

ALUMINUM. (*um, i.* n.) The metallic base of alumine. See *Alumina*.

Alusar. Manna.

ALUSIA. (*a, æ.* f.; from αλυσις, a wandering.) Illusion; hallucination.

Dr. Good has given an excellent account of some kinds of mental illusions under this term, which he used for a genus of disease, under the head *Sentimentalism*, or mental extravagance. He includes chivalry, or romantic gallantry, crack-brained wit, false inspiration, and fanaticism.

The age of the first of these varieties, that of *chivalry*, or *romantic gallantry*, has nearly, if not altogether, departed. It may be regarded a generous and high-spirited flight of the imagination, that gives a visionary colouring to the external world, and combines, without a due degree of discrimination, ideas of fact with those of fancy. Like many of the varieties of ungovernable passion, it may lead to or be combined with insanity.

"I have sometimes," he observes, "had to attend patients who, having spent the greater part of their days and nights over the most captivating novels of the present day, had acquired so much of this falsity of perception as to startle their friends around them, and to give evident proofs that they were of a mind occasionally deranged, though, when the attention could once be seriously engaged, capable of being brought down to the soberness of external objects and real life. These have commonly been ladies unmarried, or without a family, about the middle, or a little beyond the middle of life, of a nervous temperament, fine taste and fancy, but whose education had been directed to subjects of superficial or external ornament rather than of intrinsic excellence. Their manner has been peculiarly courteous, their conversation sprightly and figurative, and their hand ready to aid the distressed. But it has been obvious that in all they were saying or doing they had some ideal character in their minds, whose supposed air, and language, and manners, they were copying; and the distressed were always most sure of relief, and of a relief often beyond the necessity of the case, whose story was combined with some perilous adventure or sentimental catastrophe.

" In former times, however, when the wild and daring spirit of romance formed the subject of popular study, this bewildering triumph of the imagination over the judgment was far more common, and carried to a much higher pitch. The high-toned and marvellous stories of La Morte d'Arthur, Guy of Warwick, Amadis of Gaul, the Seven Champions of Christendom, and the Mirror of Knighthood; the splendid and agitating alternations of magicians, enchanted castles, dragons, and giants, redoubtable combatants, imprisoned damsels, melting minstrelsy, tilts and tournaments, and all the magnificent imagery of the same kind, that so peculiarly distinguished the reign of Elizabeth, became a very frequent source of permanent hallucination. The historian of Don Quixote adhered strictly to the tenour of his times in representing the library of this most renowned knight as filled with romances of this description, and himself as being permanently crazed by an uninterrupted perusal of them. And that the same morbid effect was not confined to Spain, and was, indeed, common to our own country, we know from the severe, but just, invectives of Ascham against this class of writings, and his complaints of the disordered turn they had given to the public mind: and still more from the necessity Shakspeare felt himself under in making all his maniacal characters, whether really or but pretendedly so, deeply versed in the prose or poetical romances of the day, and throwing forth fragments of exquisite force or beauty in the midst of their wildest and most discordant ravings; Lear, Edgar, and the heart-broken Ophelia, are in this respect alike gifted, and show to what sources their reading had been directed. Without an attention to these casual glances, it is impossible to understand the meaning of the sentiment, and its force or feeling is lost upon us; as in the following burst of Ophelia, which consists of a string of quotations or allusions to picturesque customs: —

" ' You must sing *Down a-down an you call him adown-a*. O, how the wheel becomes it! It is the false steward that stole his master's daughter.'

" The explanation of this may be found in the commentators, or in the interesting and elaborate history of ' Shakspeare's Times,' by Dr. Drake.

" The *second variety* of the present species, that of *crack-brained wit*, is derived rather from the peculiar temperament of the individual, than from any particular habit or train of reading: for, in general, few persons have given themselves less time to read, study, or even think, than those who are possessed by it. It is characterised by high spirits, a sportive and rampant imagination, and a flow of facetious ebullient wit, incapable of restraining itself. It is hence often poured forth on most improper occasions, and hesitates not to sacrifice a friend at the shrine of a jest.

" There are some persons who possess by nature so perpetual a tide of excitement, that their high spirits seem seldom or never to ebb, and so irresistible a propensity to this kind of verbal merriment, that no change of circumstances can deprive them of it. Sir Thomas More, who perhaps overflowed with this disposition in a very high degree, is well known to have been facetious on his own scaffold.

" It is not always, however, nor, as we have just observed, even for the most part, that the man of ready wit is, like Sir Thomas More, a man of ready judgment, or sound learning. The apprehension necessary to constitute the one is widely different from that necessary to constitute the other, and hence vivacious sallies, taunts, and repartees, not only may co-exist with a deranged condition of mind, but are frequently a result of it; and on this account the court jester of former times, whose office succeeded to that of minstrel, was commonly denominated the king's fool, as uttering from the unbridled liberty of speech that was allowed him, humorous flashes of rebuke, which no man in his sober senses would have ventured upon.

" The *third variety* is also a pleasurable hallucination, and consists in a sense of false inspiration, or a visionary boast of some preternatural endowment; in the course of which the judgment is so far perverted as to mistake the energetic notions of the imagination for realities, so that the victim of the delusion believes in apparitions, affects an intercourse with the world of spirits, or lays claim to a power of working miracles.

" This morbid afflatus has often been aped by cunning impostors to serve their own interests with the multitude: and there is no great difficulty in conceiving that it is in many cases a real and serious hallucination, when we reflect on the ease with which such impostors themselves are capable of deluding the populace, and working them up into false ecstasies, and especially of inveigling them into a hearty belief of their own miraculous powers. When the passions of men are once set afloat, and the subject presented to them is full of the marvellous and the terrible, they are too apt to confound the false with the real, and are prepared to proceed to whatever extremities the magician may choose to lead them. We are told by Lucian, that when Archelaus, a celebrated Greek actor, performed the part of Andromeda, in the tragedy of Euripides, several of the spectators were seized with delirium; some at the time of performance, others a day or two afterwards; during which they did nothing but declaim in a theatrical manner, and piteously lament the fate of the

persecuted princess. Burton, therefore, has some reason for remarking that what the impostors before us, or the brain-sick enthusiasts whom they imitate, once broach and set on foot, 'be it never so absurd, false, and prodigious, the common people will follow and believe. It will run like murrain in cattle, scab in sheep. *Nulla scabies superstitione scabior;* as he that is bitten by a mad dog bites others, and all in the end become mad. Either out of affection of novelty, simplicity, blind zeal, hope or fear, the giddy-headed multitude will embrace it, and without farther examination approve it.'

"The genuine enthusiast is always possessed of a warm imagination, and generally of a nervous temperament and delicate frame; and a long series of elevated abstraction on religious subjects, combined with protracted fasting, has ordinarily been the harbinger of the fancied afflatus. Such was the discipline by which the lovely and blooming and sincerely devout Saint Teresa was prepared for ecstasies and visions, and led to impose upon herself and all that beheld her, and seriously to believe, in the fervour of her mind, that her body was lifted from the earth, and that she heard the voice of God, saw our Lord, with Saint Peter and Saint Paul, standing on her left hand; by the first of whom the cross, which was at the end of her beads, was miraculously transformed into four large gems, incomparably more precious than diamonds; with many other marvellous revelations, which we cannot find room to detail. Though it should be noticed that devils appeared to her as well as blessed spirits, whom she always kept at a distance by sprinkling holy water; and that she was an eye-witness to the joyful escape from the flame of purgatory of the purified souls of father Peter of Alcantara, father Ivagnez, and a Carmelite friar.

"It is not necessary to produce other examples, though many might be brought from our own times. A cure is extremely difficult to be obtained.

"From the influence which we have seen such enthusiasts, or even pretended enthusiasts, capable of producing upon the mind of the multitude, when roused by the solemnity and awfulness of the revelations that are supposed to be disclosed to them, we can easily see how *fanaticism*, constituting the *fourth variety* of alusia, may obtain an ascendency, and even rage with all the ramifying power of an epidemic: consisting of religious flights of the imagination predominant over the natural feelings as well as the judgment, excited by the calls or doctrines of those who affect to be preternaturally gifted, or who possess an equal influence over the mind by the high sanction of priesthood, profound learning, or any other respected authority; and often urging to a voluntary and inappropriate submission to severe privations, mortifications, and tortures, or to the torture and massacre of those who profess different creeds.

"Examples, as in the last variety, may be found in every age and religion, but chiefly in times of gross ignorance and barbarism, where the general mind has been too little informed to distinguish between truth and sophistry, and the passions have been undisciplined to restraint. It is hence of no importance what religion or superstition is to be inculcated: for those that are true, and those that are false, have been equally laid hold of by enthusiasts and impostors to produce the same end, and effect the same triumph, by means and machinery that could only be furnished from the infernal regions. Hence the blood and raving of the prophets of Baal; the Curetes, or Phrygian priests; and the delirious votaries of the Indian Juggernaut; the cruel and senseless penances and punishments sustained in many of the convents and nunneries of Lamism, and still more so in those of many Catholic countries. Hence the terrible sufferings of the Waldenses, the furies of Saint Bartholomew's day, the fires of Smithfield, and the dark and doleful cells, the whips, and wires, and pincers, and pullies, and all the infernal paraphernalia of the Inquisition. Hence, in ancient times, the matrons of Canaan and of Carthage were instigated to throw their own children into the flames, and sacrifice them to the gloomy deity whose anger it was held necessary to appease; and hence, in more modern days, Philip II. of Spain was goaded to impeach a son, of whom he was little worthy, before the Chamber of Inquisitors, to bespeak their condemnation of him, and to take effectual care that he should be poisoned as soon as his sentence had been pronounced.

"The cure of these diseases belongs rather to colleges of general instruction than of medicine. Individual cases of enthusiasm and fanaticism have existed, and will probably continue to exist in all ages; but when the general mind, is well informed, and the social feelings and virtues are duly estimated and widely cultivated, the wildfire will burn in vain, and meet with little or no fuel to support its rage."

ALVEA'RIUM. (*um, i.* n.) From *alveare*, a bee-hive.) That part of the meatus auditorius externus of the ear which contains the wax.

ALVEOLAR. *Alveolaris.* Appertaining to the alveoli, or sockets of the teeth.

ALVEOLATUS. (From *alveus*, a honeycomb.) *Alveolate;* honeycomb-like, having small socket-like cavities.

ALVE'OLUS. (*us, i.* m.) A diminutive of *alveus*, a cavity.) The socket of a tooth.

A'LVEUS. (*us, i.* m.; a cavity.) A cavity.

Alveus ampullescens. That part of the

thoracic duct conveying the chyle to the subclavian vein, which swells out.

ALVEUS COMMUNIS. The common duct, or communication of the ampullæ of the membranaceous semicircular canals in the internal ear, is so termed by Scarpa.

ALVIDU'CUS. (From *alvus*, the belly, and *duco*, to draw.) Having the power of purging.

ALVIFLUXUS. (*us, i.* m.) From *alvus*, and *fluo*, to flow.) A purging of the bowels.

ALVINE. (*Alvinus;* from *alvus.*) Belonging to the belly, stomach, and intestines.

ALVUS. (*us, i.* f. and sometimes m. *ab alluendo, quâ sordes alluuntur.*) The belly, stomach, and entrails.

A'LYCE. (*e, es.* f.; from αλυω, to be anxious.) That anxiety which attends low fevers.

ALY'PIA. (*Alypia;* from *α*, neg. and λυπη, pain.) Without pain; formerly applied to a purgation of the humours without pain.

ALY'PIAS. (So called because it purges without pain.) A species of turbith, the *Globularia alypum.* Some write the word *alypon*, and define white turbith. Galen used *alypum*, αλυπον, for a minorative, or a medicine that gently purges.

ALYSIS. (Αλυσις, a wandering.) See *Alusia.*

ALY'SMUS. (*us, i.* m. Αλυσμος, restlessness, inquietude.) An anxiety or restlessness from an oppression about the præcordia.

ALY'SSUM. (*um, i.* n.; from *α*, neg. and λυσσα, the bite of a mad dog: so called because it was foolishly thought to be a specific in the cure of the bite of a mad dog.) Mad-wort. See *Marrubium alyssum.*

ALYSSUM GALENI. See *Marrubium.*

ALYSSUM PLINII. See *Galium album.*

ALYSSUM VERTICILLATUM. The *Marrubium verticillatum.*

ALZE'MAFOR. Cinnabar.

A'LZUM. *Aldum; Aldrum.* The name of the tree which produces gum bdellium, according to some ancient authors.

A'MA. (Αμα, together.) A word frequently used in composition.

AMADINE. A substance, the properties of which are intermediate between those of starch and gum. See *Starch.*

AMADOU. A variety of the *Boletus igniarius*, found on old ash and other trees. It is boiled in water to extract its soluble parts, then dried and beat with a mallet to loosen its texture. It has now the appearance of very spongy doe-skin leather. It is lastly impregnated with a solution of nitre, and dried, when it is called spunk, or German tinder; a substance much used on the Continent for lighting fires, either from the collision of flint and steel, or from the sudden condensation of air in the atmospheric pyrophorus.

AMA'LGAM. (*Amalgama;* from αμα, and γαμειν, to marry.) A substance produced by mixing mercury with a metal, the two being thereby incorporated. See *Alloy.*

AMAME'LIS. (From αμα, and μηλεα, an apple.) The bastard medlar of Hippocrates.

AMANI'TÆ. (*Amanita, æ.* f.; from *α*, priv. and μανια, madness: so called, because they are eatable and not poisonous, like some others.) A tribe of fungous productions, called mushrooms, truffles, and morells, and by the French, champignons.

AMARA DULCIS. Bitter sweet. See *Solanum dulcamara.*

AMA'RACUS. (From *α*, neg. and μαραινω, to decay; because it keeps its virtues a long time.) Marjoram. See *Origanum.*

Amaranth, esculent. See *Amaranthus.*

AMARA'NTHUS. (*us, i.* m.; from *α*, neg. and μαραινω, to decay: because the flower, when cut, does not soon decay.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Pentandria.*

AMARANTHUS OLERACEUS. Esculent amarinth. The leaves of this, and several other species, are eaten in India the same as cabbage is here.

AMA'RUS. Bitter. The principal bitters used medicinally are,

1. The pure bitters: *gentiana lutea, humulus lupulus*, and *quassia amara.*

2. Styptic bitters: *cinchona officinalis, croton cascarilla, quassia simarouba.*

3. Aromatic bitters: *artemisia absinthium, anthemis nobilis, hyssopus*, &c. See *Gentianine.*

AMATORIA FEBRIS. (From *amo*, to love: so called because it takes during that period of a girl's life in which the passion of love generally influences the system.) See *Chlorosis.*

AMATORIA VENEFICIA. (From *amo*, to love, and *veneficium*, witchcraft.) Philters. Love-powders.

AMATO'RIUS. (From *amo*, to love: so named because it is much used in ogling.) The name of a muscle of the eye. See *Rectus inferior oculi.*

AMATZQUI'TI. An Indian term. See *Arbutus unedo.*

AMAURO'SIS. (*is, is.* f. Αμαυρωσις; from αμαυροω, to darken or obscure.) A disease of the eye, called also *Gutta serena*, and *Amblyopia*, attended with a diminution or total loss of sight, without any visible injury to the organ.

This is the gutta serena of the Arabic writers; whence the term *drop serene* of our own tongue. The most common cause is a paralysis of the retina, usually in conjunction with a paralysis and dilatation of the iris. Occasionally, however, the iris is ri-

gidly contracted; its debility being accompanied with great irritability; and hence, offering two varieties; to which a third may be added, from the diseases, assuming, at times, an intermittent type.

It would be easy to admit other varieties, if we were to attend to all that has been written on the subject, and adopt all the opinions that have been delivered; for we are told of cases in which the pupil has not been permanently immoveable, but has contracted on exposure to an intense light, and of others in which the pupil, instead of being black, has evinced a pale or nebulous appearance. In the first of these exceptions the disease has not acquired completion, and the other is allowed for occasionally in the definition. It will often be found nothing more than an incipient cataract.

Under the one or other of these varieties amaurosis is also found, occasionally, as a symptom or sequel in hysteria, convulsion, and lues.

The existence of an amaurosis is known by the specific symptoms of the pupil being peculiarly black and dilated, and the want of contractibility in the iris on exposure to a strong light. Its commencement is often accompanied with pain in the head, which diminishes as the disease increases. Yet it occasionally steals on without pain; and if it be confined to one eye only, it will sometimes exist for months, or perhaps years, without a person's being sensible of it: as, in such cases, it is only traced by the patient's accidentally closing his sound eye alone, and then finding himself in darkness, or by some other incident.

The black cataract has sometimes been confounded with it, or mistaken for it, as has also that modification of the capsular cataract in which the posterior lamina of the capsule is alone opake.

The occasional cause is, therefore, for the most part, incapable of being followed up. Richter contends that it is often dependent upon a dyspeptic state of the digestive organs; and it has often occurred suddenly upon a plethoric state of the vessels, apoplexy, cephalæa, a blow on the head, or some other injury of the sensorium. It is also well known to be temporarily produced by the juice of the solanum, or atropa bella donna; and in one or two instances permanently from an accidental immission into the eye of the poison of a serpent or spider. It has likewise been induced by a flash of lightning, by insolation or undue exposure to the rays of the sun, by a suppressed catarrh, suppressed hæmorrhages, or venesection when rendered habitual, suppressed exanthems, and eruptions of various kinds, especially porrigo, herpes, and scabies, by some sudden strain or other violence; or by some overwhelming passion of the mind, as wrath or terror. It has also appeared as a sequel or metastasis upon fevers; and succeeded to the use of poisonous cosmetics. There are a few cases in which it has proved hereditary.

The prognostics are generally unfavourable, except where the disease exists as a symptomatic affection. Where we can decidedly trace its existence to plethora, whether entonic or atonic, or to some violent injury to the head, bleeding and purgatives are clearly indicated, but have frequently failed: for, in the exquisitely tender organ of the eye, palsy is often induced before these evacuations can relieve the oppression. In the spasmodic variety, active emetics, frequently repeated, and resolutely persevered in at each time, till the system becomes weakened, as in the treatment for the epidemic ophthalmy, have certainly been at times found successful. Blisters and sternutatories also demand attention: the first should be applied to the temples; the second is best formed of turbeth mineral, with about ten times its proportion of mild snuff, or any other light powder. The vapour of ammonia, æther, or camphire, mixed with hot water, has sometimes also afforded benefit.

Where it has followed or repelled eruptions, it has been occasionally found to yield to setons and blisters, or a restoration of the suppressed efflorescence: and, as in other diseases, what has sometimes proved the sources of its production, has been found its best remedy, so that the cause has become the cure. Thus it has at times yielded to the violence of a fever, to that of a sudden blow on the head, to a strong light, to a paroxysm of convulsions. Electricity, and especially voltaism, have probably been serviceable in some instances; at least the assertions to this effect are very numerous, though in various cases these have sometimes been altogether unsuccessful; nor is the magnet without its recommendations, having been applied to the upper part of the spine, while minute bags filled with iron filings were placed on the eyes; and in an imperfect case of the complaint, Weber conceives he derived benefit. The chief dependencies besides have been on camphire, cajeput, musk, mercury, iron, bark, arnica, and externally the pulsatilla nigra. Of the arnica or German leopard's bane, Pellier, as well as Collier, speaks warmly. The latter recommends it in all nervous atonies, whether general or local. He employed the flowers of the plant in decoction, in the proportion of about half an ounce to a pint of the strained liquid, which may be taken in a day or day and a-half. Richter, Schmücker, and other German writers, declare it to be of no avail. The pulsatilla is certainly better entitled to attention. "I would recommend it," says Dr. Cullen, with his usual liberality, "to the attention of my countrymen, and particularly to a repetition of trials in that

disease so frequently otherwise incurable, the amaurosis. The negative experiments of Bergius and others are not sufficient to discourage all trials, considering that the disease may depend upon different causes, some of which may yield to remedies though others do not. When distilled with water, it gives forth a terebinthinate substance, resembling camphire, which necessarily possesses a stimulant, and hence a medicinal power. Whence the *Euphrasia officinalis*, or eye-bright, obtained the character it once possessed as a specific in this disease, it is difficult to say. By Hildanus and Lientaud, however, it was chiefly confined, even in its zenith of popularity, to the amaurosis of old age. Its chief sensible quality is that of being a mild astringent. Rue, which rivalled it at one time, and by Milton is put upon a level with it, has far better pretensions when used externally in the form of a potent infusion: for it unites the properties of volatile pungency and bitterness; both which, as concentrated in strong chamomile tea, have been occasionally found highly serviceable in an incipient state of this disease produced by weakness.

The narcotics, if they have ever been serviceable in any way, can only have been so in the spasmodic variety. Of these, aconite has been chiefly popular in Germany: it has been strongly recommended by many writers of reputation, and has sometimes been given, by gradual augmentation, to the amount of a drachm daily. Chevillard combined the use of antimonials with blisters; but cold applied externally, and cold bathing, as recommended by Warner, will often be as much entitled to our attention as any other process.

Dr. Powell relates a case of sudden loss of vision, preceded by an acute headach, in which an emetic was found, during the act of vomiting, abruptly to restore sight to the right eye (for both were affected), with a sensation as if a flash of lightning had taken place, but the vision was soon again lost. More than a twelvemonth afterwards the patient tried emetics again; when, after the use of the second, the pupils of the eyes recovered the power of dilating and contracting on exposure to light, and preserved it till death; but the power of vision was not restored. During the whole of this case of blindness, the sense of hearing was peculiarly acute.

Amazonius. A kind of pastil, or lozenge, formerly used against flatulency and vomitings, composed of aniseed, wormwood, myrrh, pepper, smallage, castor, opium, and cinnamon.

AMBE. (Αμβη. *Ambe, es.* f.; the edge of a rock: from αμβαινω, to ascend.) An old chirurgical machine for reducing dislocations of the shoulder, and so called, because its extremity projects like the prominence of a rock. Its invention is imputed to Hippocrates. The ambe is the most ancient mechanical contrivance for the above purpose, but it is not used at present.

A'mbela. (Arabian.) The cornered hazelnut, the bark of which is purgative.

AMBER. See *Succinum*.

Amber seed. See *Hibiscus.*

AMBERGRIS. (*Ambragrisea, æ.* f.) A concrete, found in very irregular masses, floating on the sea near the Molucca islands, Madagascar, Sumatra, on the coast of Coromandel, Brazil, America, China, and Japan. It has also been taken out of the intestines of the *Physeter macrocephalus*, the spermaceti whale. As it has not been found in any whales but such as are dead or sick, its production is generally supposed to be owing to disease, though some have a little too peremptorily affirmed it to be the cause of the morbid affection. As no large piece has ever been found without a greater or less quantity of the beaks of the *Sepia octopodia*, the common food of the spermaceti whale, interspersed throughout its substance, there can be little doubt of its originating in the intestines of the whale; for if it were occasionally swallowed by it only, and then caused disease, it would be frequently found without these, when it is met with floating or thrown upon the shore.

Ambergris is found of various sizes, generally in small fragments, but sometimes so large as to weigh near two hundred pounds. When taken from the whale, it is not so hard as it becomes afterward on exposure to the air. Its specific gravity ranges from 780 to 926. If good, it adheres like wax to the edge of a knife with which it is scraped, retains the impression of the teeth or nails, and emits a fat odoriferous liquid on being penetrated with a hot needle. It is generally brittle; but, on rubbing it with the nail, it becomes smooth like hard soap. Its colour is either white, black, ash-coloured, yellow, or blackish; or it is variegated, namely, grey with black specks, or grey with yellow specks. Its smell is peculiar, and not easy to be counterfeited. At 144° it melts, and at 212° is volatilised in the form of a white vapour. But, on a red-hot coal, it burns, and is entirely dissipated. Water has no action on it; acids, except nitric, act feebly on it; alkalies combine with it, and form a soap; æther and the volatile oils dissolve it; so do the fixed oils, and also ammonia, when assisted by heat; alcohol dissolves a portion of it, and is of great use in analysing it, by separating its constituent parts. According to Bouillon la Grange, who has given the latest analysis of it, 3820 parts of ambergris consist of adipocire 2016 parts, a resinous substance 1167, benzoic acid 425, and coal 212. But Bucholtz could find no benzoic acid in it. Dr. Ure examined two different specimens with considerable attention. The

one yielded benzoic acid, the other, equally genuine to all appearance, afforded none.

An alkoholic solution of ambergris, added in minute quantity to lavender water, tooth powder, hair powder, wash balls, &c. communicates its peculiar fragrance. Its retail price being in London so high as a guinea per oz. leads to many adulterations. These consist of various mixtures of benzoin, labdanum, meal, &c. scented with musk. The greasy appearance and smell which heated ambergris exhibits, afford good *criteria*, joined to its solubility in hot æther and alkohol.

It has occasionally been employed in medicine, but its use is mostly confined to the perfumer. Dr. Swediaur took thirty grains of it without perceiving any sensible effect. A sailor, who took half an ounce of it, found it a good purgative. — *Ure's Chem. Dict.*

The medical qualities of ambergris are stomachic, cordial, and antispasmodic. It is very seldom used in this country.

AMBITION. See *Pathemata animi.*

AMBLO'SIS. (Αμϐλωσις. *Amblosis, is.* f.; from αμϐλοω, to cause abortion.) A miscarriage.

Amblo'ticus. (From αμϐλοω, to cause abortion.) Amblotic, or having the power to occasion abortion.

Amblyaphia. (*a, æ.* f.; from αμϐλος, dull.) Numbness.

AMBLYGONITE. A greenish-coloured mineral that occurs in granite, along with green topaz and tourmaline, near Pinig, in Saxony. It seems to be a species of spodumine.

AMBLYO'PIA. (*a, æ.* f.; from αμϐλος, dull, and ωψ, the eye.) *Amblyosmus, Amblytes.* Hippocrates means by this word dimness of sight, to which old people are subject. Paulus Actuarius, and the best modern writers, seem to think that amblyopia means the same thing as the incomplete amaurosis. See *Amaurosis.*

AMBLYO'SMUS. See *Amblyopia.*

AMBLYTES. See *Amblyopia.*

A'MBO. An Indian name of the mango.

A'MBON. (From αμϐαινω, to ascend.) Celsus uses this term to signify the margin or tip of the sockets in which the heads of the large bones are lodged.

A'mbone. The same as ambe.

A'MBRA. 1. Amber. See *Succinum.* 2. An aromatic gum.

Ambra cineracea. Grey amber.

AMBRAGRISEA. See *Ambergris.*

A'mbram. Amber.

AMBREINE. (*Ambreina, æ.* f.; from amber.) A fatty substance obtained from ambergris, somewhat like to cholesterine and adipocire.

Ambre'tte. See *Hibiscus abelmoschus.*

AMBULATION. Walking. The best of all exercises to preserve health, and without a proper quantity of which health deteriorates.

AMBULATI'VUS. (From *ambulo*, to walk: so called because it walks or creeps, as it were, about the body.) A species of herpes.

A'mbulo. (From αυϐαλλω, to cast forth.) A periodical flatulent disease, caused, according to Michaelis, by vapours shooting through various parts of the body.

AMBU'STIO. (*tio, onis.* f.; from *amburo*, to burn.) A burn, or scald, which is a lesion of the body, occasioned by the application of heat; but the latter term is applicable only where this is conveyed through the medium of some fluid. The consequences are more or less serious, according to the extent of the injury, or the particular part affected: sometimes even proving fatal, particularly in irritable constitutions. The life of the part may be at once destroyed by these accidents, or mortification speedily follow the violent inflammation excited; but when slighter, it usually produces an effusion of serum under the cuticle, like a blister. When the injury is extensive, considerable fever is apt to supervene, sometimes a comatose state, and a remarkable difficulty of breathing often precedes death. In the treatment of these accidents, two very different methods have been pursued. The more ancient plan consists in antiphlogistic means, giving cooling purgatives, &c. and even taking blood, where the irritation is great; employing at the same time cold applications, and where the skin is destroyed, emollient dressings; opium was also recommended to relieve the pain, notwithstanding stupor might attend.

Mr. Cleghorn, a brewer at Edinburgh, was very successful in these cases by a treatment materially different; first bathing the part with vinegar, usually a little warmed, till the pain abated; then, if there were any destruction of the parts, applying poultices, and finely-powdered chalk immediately on the sore, to absorb the discharge: in the mean time allowing the patient to live pretty well, and abstaining from active purgatives, &c. More recently, a surgeon at Newcastle, of the name of Kentish, has deviated still more from the ancient practice; applying first oil of turpentine, alkohol, &c. heated as much as the sound parts could bear, and gradually lessening the stimulus; in the mean time supporting the patient by a cordial diet, æther, &c. and giving opium largely to lessen the irritation. Now, the cases chiefly under his care were of persons scorched very extensively by the explosion of carburetted hydrogene in mines; and probably where the injury is over a large part of the surface, or where the constitution is weakly, it may be hazardous to pursue the antiphlogistic plan, or to use cold applications, which, while intended to keep down action, are wearing out the power of the part. If any extraneous substance be forced into the burnt part, it should be of course removed: and sometimes where a limb is

irrecoverably injured, amputation may be necessary.

AMBUSTUM. (*um, i.* n.) A burn or scald. See *Ambustio.*

Ame'lla. The same as achmella.

AMENORRHŒA. (*a, æ.* f.; from α, priv. μην, a month, and ῥεω, to flow.) A partial or total obstruction of the menses in women from other causes than pregnancy and old age. The menses should be regular as to quantity and quality; and that this discharge should observe the monthly period, is essential to health. See *Menstruation.* When it is obstructed, nature makes her efforts to obtain for it some other outlet. When these efforts of nature fail, the consequence may be, chlorosis, fever, pulmonic diseases, spasmodic affections, hysteria, epilepsy, &c. according to the general habit and disposition of the patient.

Dr. Cullen's species are,

1. *Emansio mensium;* that is, when the menses do not appear so early as is usually expected. See *Chlorosis.*

2. *Suppressio mensium,* when, after the menses appearing and continuing as usual for some time, they cease without pregnancy occurring.

3. *Amenorrhœa difficilis,* or *Dysmenorrhœa,* when this flux is too small in quantity, and attended with great pain, &c.

The causes of a suppression of the menses appear mostly to operate by inducing a constriction of the extreme vessels; such as cold, fear, and other depressing passions, an indolent life, the abuse of acids, &c. It is sometimes symptomatic of other diseases, in which considerable debility occurs, as phthisis pulmonalis. When the discharge has been some time interrupted, particularly in persons previously healthy, hæmorrhages will often happen from other outlets, the nose, stomach, lungs, &c. even in some instances a periodical discharge of blood from an ulcer has occurred. The patient generally becomes obstinately costive, often dyspeptic; colic-pains, and various hysterical symptoms, likewise are apt to attend. The means of chief efficacy in restoring the uterine function are those calculated to relax spasm, assisted sometimes by such as increase arterial action, particularly in protracted cases. The former will be employed with most probability of success, when symptoms of a menstrual effort appear. They are, especially, the hip-bath, fomentations to the hypogastrium, sitting over a vessel of hot water, so that the vapour may be applied to the pudenda; with antispasmodic medicines, as the compound galbanum pill, castor, &c. but especially opium. If the patient be plethoric, venæsection should be premised. In cases of long standing, the object will be to bring about a determination of blood to the uterus. This may be accomplished by emmenagogues, of which savine and cantharis are most to be relied upon; though the latter would be improper, if hæmaturia had occurred. Certain cathartics are also very useful, particularly aloes, which appear to operate especially on the rectum, and thus sympathetically influence the uterus. Weak electric shocks passed through the hypogastrium, may likewise contribute to the cure.

In cases of scanty and painful menstruation, the means pointed out above as calculated to take off constriction of the uterine vessels, should be resorted to; especially the hip-bath, and the free use of opium.

Amentaceæ plantæ. Amentaceous plants. A division of plants in natural arrangements of botanists.

AMENTA'CEUS. Amentaceous: having an amentum or catkin; as the willow, birch, beech, poplar, &c.

AME'NTIA. (*a, æ.* f.; from α, priv. and *mens,* the mind.) Idiotism. Imbecility of intellect, by which the relations of things are either not perceived, or not recollected. When it originates at birth, it is called *amentia congenita,* natural stupidity; when from the infirmities of age, *amentia senilis,* dotage or childishness; and when from some accidental cause, *amentia acquisita.*

AMEN'TUM. (*um, i.* n.; derived from its fancied resemblance to a cat's-tail, and, by Festus, from the Greek ἀμμα, a bond or thong.) Catkin; called also *Julus, Nucamentum, Catulus.* A species of inflorescence, considered by some as a species of calyx. It is a simple peduncle covered with numerous chaffy scales, under which are the flowers or parts of fructification. The distinctions of catkins are into,

1. *Cylindrical:* as in *Corylus avellana, Beta alba, Alnus.*

2. *Globose:* as in *Fagus sylvatica, Platanus orientalis, Urtica pilulifera.*

3. *Ovate:* as in the female *Pinus sylvestris.*

4. *Filiform:* seen in *Fagus pumila,* and *Castanea pumila.*

5. *Attenuate,* slender towards the end: as in *Fagus castanea.*

6. *Thick:* as in *Juglans regia.*

7. *Imbricate,* scaly: as in *Juniperus communis,* and *Salix fusca.*

8. *Paleaceous,* chaffy: as in *Pinus sylvestris.*

9. *Naked:* the scales being so small or wanting, that the parts of fructification appear naked, as in *Excoccaria.*

American balsam. See *Myroxylon peruiferum.*

AMETHY'STUS. (*us, i.* m.; from α, neg. and μεθυσκω, to be inebriated: so called, because, in former times, according to Plutarch, it was thought to prevent drunkenness.) — *Ruland. in Lex Chem.*

1. The amethyst. A gem of a violet colour, and great brilliancy.

2. Amethystine: as *Amathysta pharmaca.* Medicines which were said to have the power either to resist or remove the effects of wine. — *Galen.*

AMIANTHUS. A mineral. A species of asbestos. See *Asbestos*.

AMI'CULUM. A little short cloak. It is the same as the amnios, but anciently meant a covering for the pubes of boys, when they exercised in the gymnasium. — *Rhodius*.

AMIDINE. A substance produced according to Saussure, when we abandon the paste of starch to itself, at the ordinary temperature, with or without the contact of air.

A'MIDUM. See *Amylum*.

AMINÆ'US. 1. The *Vinum aminæum* is produced in Aminæa, formerly a province of Italy; called also Salernum.

2. A strong wine vinegar.

3. Galen mentions *Aminæum neapolitanum*, and *Aminæum siculum*.

A'MMI. (Αμμι. *Ammi*, *mi*. n.; from αμμος, sand, from its likeness to little gravel-stones.) 1. The name of a genus of plants in the Linnæan system.

2. The pharmacopœial name of the herb bishop's weed, of which there are two sorts. See *Sison ammi*, and *Ammi majus*.

AMMI MAJUS. The systematic name for the *Ammi vulgare* of the shops. The seeds of this plant, *Ammi—foliis inferioribus pinnatis, lanceolatis serratis; superioribus, multifidis, linearibus*, of Linnæus; are less powerful than those of the *Sison ammi*, but were exhibited with the same views.

AMMI VE'RUM. See *Sison ammi*.

AMMI VULGARE. See *Ammi majus*.

AMMION. *Ammium*. Cinnabar.

AMMOCHO'SIA. (From αμμος, sand, and χεω, to pour.) A remedy for drying the body by sprinkling it with hot sand. — *Oribasius*.

AMMO'NIA. (*a*, *æ*. f.; so called because it is obtained from sal ammoniac, which received its name from being dug out of the earth near the temple of Jupiter Ammon.) Ammonia gas. The substance so called, is an aëriform or alkaline air. "There is a saline body, formerly brought from Egypt, where it was separated from soot by sublimation, but which is now made abundantly in Europe, called sal ammoniac. From this salt pure ammonia can be readily obtained by the following process: Mix unslaked quicklime with its own weight of sal ammoniac, each in fine powder, and introduce them into a glass retort. Join to the beak of the retort, by a collar of caoutchouc, (a neck of an India rubber bottle answers well,) a glass tube about 18 inches long, containing pieces of ignited muriate of lime. This tube should lie in a horizontal position, and its free end, previously bent obliquely by the blowpipe, should dip into dry mercury in a pneumatic trough. A slip of porous paper, as an additional precaution, may be tied round the tube, and kept moist with æther. If a gentle heat from a charcoal chauffer or lamp be now applied to the bottom of the retort, a gaseous body will bubble up through the mercury. Fill a little glass tube, sealed at one end, with the gas, and transfer it, closely stopped at the other end, into a basin containing water. If the water rise instantly and fill the whole tube, the gas is pure, and may be received for examination.

Ammonia is a transparent, colourless, and consequently invisible gas, possessed of elasticity, and the other mechanical properties of the atmospherical air. Its specific gravity is an important datum in chemical researches, and has been rather differently stated. Now as no aëriform body is more easily obtained in a pure state than ammonia, this diversity, among accurate experimentalists, shows the nicety of this statical operation. Biot and Arago make it $=0{\cdot}59669$ by experiment, and by calculation from its elementary gases, they make it $=0{\cdot}59438$. Kirwan says, that 100 cubic inches weigh 18·16 gr. at 30 inches of bar. and 61° F., which compared to air reckoned 30·519, gives 0·59540. Sir H. Davy determines its density to be $=0{\cdot}590$, with which estimate the theoretic calculations of Dr. Prout, in the sixth volume of the Annals of Philosophy, agree.

This gas has an exceedingly pungent smell, well known by the old name of spirits of hartshorn. An animal plunged into it speedily dies. It extinguishes combustion; but being itself to a certain degree combustible, the flame of a taper immersed in it, is enlarged before going out. It has a very acrid taste. Water condenses it very rapidly.

Water is capable of dissolving easily about one-third of its weight of ammoniacal gas, or 460 times its bulk. Hence, when placed in contact with a tube filled with this gas, water rushes into it with explosive velocity.

Ammoniacal gas, perfectly dry, when mixed with oxygene, explodes with the electric spark, and is converted into water and nitrogene, as has been shown in an ingenious paper by Dr. Henry. But the simplest, and perhaps most accurate mode of resolving ammonia into its elementary constituents, is that first practised by Berthollet, the celebrated discoverer of its composition. This consists in making the pure gas traverse very slowly an ignited porcelain tube of a small diameter.

The alkaline nature of ammonia is demonstrated, not only by its neutralising acidity, and changing the vegetable reds to purple or green, but also by its being attracted to the negative pole of a voltaic arrangement. When a pretty strong electric power is applied to ammonia in its liquid or solid combinations, simple decomposition is effected; but in contact with mercury, very mysterious phenomena occur. If a globule of mercury be surrounded with a little water of ammonia, or placed in a little cavity in a piece of sal ammoniac, and then subjected to the voltaic power by two wires, the negative touching the mercury, and the positive the ammoniacal compound, the glo-

bule is instantly covered with a circulating film, a white smoke rises from it, and its volume enlarges, whilst it shoots out ramifications of a semi-solid consistence over the salt. The amalgam has the consistence of soft butter, and may be cut with a knife. Whenever the electrisation is suspended, the crab-like fibres retract towards the central mass, which soon, by the constant formation of white saline films, resumes its pristine globular shape and size. The enlargement of volume seems to amount occasionally to ten times that of the mercury, when a small globule is employed. Sir H. Davy, Berzelius, and Gay Lussac and Thénard, have studied this singular phenomenon with great care. They produced the very same substance by putting an amalgam of mercury and potassium into the moistened cupel of sal ammoniac. It becomes five or six times larger, assumes the consistence of butter, whilst it retains its metallic lustre.

What takes place in these experiments? In the second case, the substance of metalic aspect which we obtain is an ammoniacal hydruret of mercury and potassium. There is formed, besides, muriate of potash. Consequently a portion of the potassium of the amalgam decomposes the water, becomes potash, which itself decomposes the muriate of ammonia. Thence result hydrogene and ammonia, which, in the nascent state, unite to the undecomposed amalgam. In the first experiment, the substance which, as in the second, presents the metallic aspect, is only an ammoniacal hydruret of mercury; its formation is accompanied by the perceptible evolution of a certain quantity of chlorine at the positive pole. It is obvious, therefore, that the salt is decomposed by the electricity. The hydrogene of the muriatic acid, and the ammonia, both combine with the mercury.

Ammonia is not affected by a cherry-red heat. According to Guyton de Morveau, it becomes a liquid at about 40° — 0°, or at 0° the freezing point of mercury; but it is uncertain whether the appearances he observed may not have been owing to hygrometric water, as happens with chlorine gas. The ammoniacal liquid loses its pungent smell as its temperature sinks, till at — 50° it gelatinises, if suddenly cooled; but if slowly cooled, it crystallises.

Oxygene, by means of electricity, or a mere red heat, resolves ammonia into water and nitrogene. When there is a considerable excess of oxygene, it acidifies a portion of the nitrogene into nitrous acid, whence many fallacies in analysis have arisen. Chlorine and ammonia exercise so powerful an action on each other, that when mixed suddenly, a sheet of white flame pervades them. The simplest way of making this fine experiment, is to invert a matrass, with a wide mouth and conical neck, over another with a taper neck, containing a mixture of sal ammoniac and lime, heated by a lamp. As soon as the upper vessel seems to be full of ammonia, by the overflow of the pungent gas, it is to be cautiously lifted up, and inserted, in a perpendicular direction, into a wide-mouthed glass decanter or flask, filled with chlorine. On seizing the two vessels thus joined with the two hands covered with gloves, and suddenly inverting them, like a sand-glass, the heavy chlorine and light ammonia, rushing in opposite directions, unite, with the evolution of flame. As one volume of ammonia contains, in a condensed state, one and a half of hydrogene, which requires for its saturation just one and a half of chlorine, this quantity should resolve the mixture into muriatic acid and nitrogene, and thereby give a ready analysis of the alkaline gas. If the proportion of chlorine be less, sal ammoniac and nitrogene are the results. The same thing happens on mixing the aqueous solutions of ammonia and chlorine. But if large bubbles of chlorine be let up in ammoniacal water of moderate strength, luminous streaks are seen in the dark to pervade the liquid, and the same reciprocal change of the ingredients is effected.

Gay Lussac and Thénard state, that when 3 parts of ammoniacal gas and 1 of chlorine are mixed together, they condense into sal ammoniac, and azote, equal to 1-10th of the whole volume, is given out.

Iodine has an analogous action on ammonia; seizing a portion of its hydrogene to form hydriodic acid, whence hydriodate of ammonia results; while another portion of iodine unites with the liberated nitrogene, to form the explosive pulverulent iodide.

Cyanogene and ammoniacal gas begin to act upon each other whenever they come into contact, but some hours are requisite to render the effect complete. They unite in the proportion nearly of 1 to $1\frac{1}{2}$, forming a compound which gives a dark orange-brown colour to water, but dissolves in only a very small quantity of water. The solution does not produce prussian blue with the salts of iron.

By transmitting ammoniacal gas through charcoal ignited in a tube, prussic or hydrocyanic acid is formed.

The action of the alkaline metals on gaseous ammonia is very curious. When potassium is fused in that gas, a very fusible olive-green substance, consisting of potassium, nitrogene, and ammonia, is formed; and a volume of hydrogene remains, exactly equal to what would result from the action on water of the quantity of potassium employed. Hence, according to Thénard, the ammonia is divided into two portions. One is decomposed, so that its nitrogene combines with the potassium, and its hydrogene remains free, whilst the other is absorbed in whole or in part by the nitroguret of potassium. Sodium acts in the same manner. The olive substance is opake, and it is only when in plates of extreme thinness that it

appears semitransparent; it has nothing of the metallic appearance; it is heavier than water; and, on minute inspection, seems imperfectly crystallised. When it is exposed to a heat progressively increased, it melts, disengages ammonia, and hydrogene, and nitrogene, in the proportions constituting ammonia; then it becomes solid, still preserving its green colour, and is converted into a nitroguret of potassium or sodium. Exposed to the air at the ordinary temperature, it attracts only its humidity, but not its oxygene, and is slowly transformed into ammoniacal gas, and potash or soda. It burns vividly when projected into a hot crucible, or when heated in a vessel containing oxygene. Water and acids produce also sudden decomposition, with the extrication of heat. Alkalies or alkaline salts are produced. Alkohol likewise decomposes it with similar results. The preceding description of the compound of ammonia with potassium, as prepared by Gay Lussac and Thénard, was controverted by Sir H. Davy.

The experiments of this accurate chemist led to the conclusion, that the presence of moisture had modified their results. In proportion as more precautions are taken to keep every thing absolutely dry, so in proportion is less ammonia regenerated. He seldom obtained so much as 1-10th of the quantity absorbed; and he never could procure hydrogene and nitrogene in the proportions constituting ammonia; there was always an excess of nitrogene. The following experiment was conducted with the utmost nicety. $3\frac{1}{2}$ gr. of potassium were heated in 12 cubic inches of ammoniacal gas; 7·5 were absorbed, and 3·2 of hydrogene evolved. On distilling the olive-coloured solid in a tube of platina, 9 cubical inches of gas were given off, and half a cubical inch remained in the tube and adapters. Of the 9 cubical inches, one-fifth of a cubical inch only was ammonia; 10 measures of the permanent gas mixed with 7·5 of oxygene, and, acted upon by the electrical spark, left a residuum of 7·5. He infers that the results of the analysis of ammonia, by electricity and potassium, are the same.

On the whole, we may legitimately infer that there is something yet unexplained in these phenomena. The potassium separates from ammonia as much hydrogene as an equal weight of it would from water. If two volumes of hydrogene be thus detached from the alkaline gas, the remaining volume, with the volume of nitrogene, will be left to combine with the potassium, forming a triple compound, somewhat analogous to the cyanides, a compound capable of condensing ammonia.

When ammoniacal gas is transmitted over ignited wires of iron, copper, platina, &c. it is decomposed completely, and though the metals are not increased in weight, they have become extremely brittle. Iron, at the same temperature, decomposes the ammonia, with double the rapidity that platinum does. At a high temperature, the protoxide of nitrogene decomposes ammonia.

Of the ordinary metals, zinc is the only one which liquid ammonia oxidises and then dissolves. But it acts on many of the metallic oxides. At a high temperature the gas deoxidises all those which are reducible by hydrogene. The oxides soluble in liquid ammonia, are the oxide of zinc; the protoxide and peroxide of copper; the oxide of silver; the third and fourth oxides of antimony; the oxide of tellurium; the protoxides of nickel, cobalt, and iron; the peroxide of tin, mercury, gold, and platinum. The first five are very soluble, the rest less so. These combinations can be obtained by evaporation, in the dry state, only with copper, antimony, mercury, gold, platinum, and silver; the four last of which are very remarkable for their detonating property. See the particular metals.

All the acids are susceptible of combining with ammonia, and they almost all form with it neutral compounds. Gay Lussac made the important discovery, that whenever the acid is gaseous, its combination with ammoniacal gas takes place in a simple ratio of determinate volumes, whether a neutral or a subsalt be formed.

Ammoniacal salts have the following general characters: —

1st, When treated with a caustic fixed alkali or earth, they exhale the peculiar smell of ammonia.

2d, They are generally soluble in water, and crystallisable.

3d, They are all decomposed at a moderate red heat; and if the acid be fixed, as the phosphoric or boracic, the ammonia comes away pure.

4th, When they are dropped into a solution of muriate of platina, a yellow precipitate falls."— *Ure's Chem. Dict.*

The preparations of ammonia in use are,

1. Liquor of ammonia. See *Ammoniæ liquor.*

2. The subcarbonate of ammonia. See *Ammoniæ subcarbonas*, and *Ammoniæ subcarbonatis liquor.*

3. The acetate of ammonia. See *Ammoniæ acetatis liquor.*

4. The muriate of ammonia. See *Ammoniæ murias.*

5. Ammoniated iron. See *Ferrum ammoniatum.*

6. Several tinctures and spirits, holding ammonia in solution.

Ammonia acetata. See *Ammoniæ acetatis liquor.*

Ammonia, argentate of. Fulminating silver.

Ammonia muriata. See *Ammoniæ murias.*

AMMONIA PRÆPARATA. See *Ammoniæ subcarbonas.*

AMMONIAC, SAL. (Called *ammoniac*, because it was found in Egypt, near the temple of Jupiter Ammon.) See *Ammoniæ murias.*

Ammoniaco-magnesian phosphate. See *Calculus.*

AMMONI'ACUM. (Αμμονιακον. *Ammoniacum, i.* n.; so called from *Ammonia*, whence it was brought.) See *Heracleum gummiferum.*

AMMONIÆ ACETATIS LIQUOR. Solution of acetate of ammonia; formerly called *Aqua ammoniæ acetatæ.* Take of subcarbonate of ammonia, two ounces; dilute acetic acid, four pints. Add the acid to the salt, until bubbles of gas shall no longer arise, and mix. The effervescence is occasioned by the escape of carbonic acid gas, which the acetic acid expels, and neutralises the ammonia. Four pints of distilled vinegar, of the usual strength (specific gravity 1·009) require about seven drachms of the recently prepared subcarbonate of ammonia of the pharmacopœia for their saturation; but the strength of the distilled vinegar, and the composition of the subcarbonate, are both liable to vary, so that the best method of proceeding consists in adding the subcarbonate to the distilled vinegar, till the tests of turmeric and litmus show that it is neutralised. The solution thus prepared is generally of a brownish tint, but it may be rendered colourless and pellucid by filtering it through a little well-burned and recently powdered charcoal. If at first exactly neutral, it is apt to become slightly alkaline by keeping, in consequence of the escape of a little carbonic acid.

Acetate of ammonia is very difficult of crystallisation, and extremely soluble both in alkohol and water. In its dry state it should consist, according to theory, of

1 proportional of acetic acid		= 50
1 ———	ammonia	= 17
		67

If the acid rather predominate, the solution is more grateful to the taste; and provided that acid be correctly prepared, the proportions here given will be found sufficient. Where the acid cannot be depended on, it will be right to be regulated rather by the cessation of effervescence than by quantity.

This preparation was formerly known in the shops under the name of *spirit of Mindererus.* When assisted by a warm regimen, it proves an excellent and powerful sudorific; and, as it operates without quickening the circulation, or increasing the heat of the body, it is admissible in febrile and inflammatory diseases, in which the use of stimulating sudorifics are attended with danger. Its action may likewise be determined to the kidneys, by walking about in the cool air. The common dose is half an ounce, either by itself, or along with other medicines, adapted to the same intention.

AMMONIÆ BICARBONAS. See *Ammoniæ subcarbonas.*

AMMONIÆ CARBONAS. See *Ammoniæ subcarbonas.*

AMMONIÆ LIQUOR. Liquor of ammonia: the *alkali volatile causticum* and *aqua ammoniæ puræ* of former pharmacopœias. Take of muriate of ammonia eight ounces; lime newly prepared, six ounces; water, four pints. Pour on the lime a pint of the water; then cover the vessel, and set them by for an hour; then add the muriate of ammonia, and the remaining water previously made boiling hot, and cover the vessel again; strain the liquor when it has cooled; then distil from it twelve fluid ounces of the solution of ammonia into a receiver cooled to the temperature of 50°. The specific gravity of this solution should be to that of distilled water, as 4·960 to 1000.

Lime is capable of decomposing muriate of ammonia at a temperature much below that of boiling water; so that when the materials are mixed, a solution of ammonia and of muriate of lime is obtained. This being submitted to distillation, the ammonia passes over with a certain portion of the water, leaving behind the muriate of lime dissolved in the rest. The proportion of water directed seems, however, unnecessarily great, which obliges the operator to employ larger vessels than would otherwise suffice. But the process now directed is certainly much easier, more economical, and more uniform in its results, than that of former Pharmacopœias.

This preparation is colourless and transparent, with a strong peculiar smell; it parts with the ammonia in the form of gas, if heated to 130 degrees, and requires to be kept, with a cautious exclusion of atmospherical air, with the carbonic acid of which it readily unites: on this latter account, the propriety of keeping it in small bottles, instead of a large one, has been suggested.

Water of ammonia is very rarely given internally, although it may be used in doses of ten or twenty drops, largely diluted, as a powerful stimulant in asphyxia and similar diseases. Externally, it is applied to the skin as a rubefacient, and in the form of gas to the nostrils, and to the eyes as a stimulant; in cases of torpor, paralysis, rheumatism, syncope, hysteria, and chronic ophthalmia.

AMMONIÆ MURIAS. *Ammonia muriata. Sal ammoniacus.* A saline concrete formed by the combination of the muriatic acid with ammonia. This salt is obtained from several sources.

1. It is found near to volcanoes, where it appears in the form of an efflorescence, or groups of needles, separate or com-

pacted together, generally of a yellow or red colour, and mixed with arsenic and orpiment; but no use is made of that which is procured in this way. This native sal ammoniac is distinguished by mineralogists into, 1st, *Volcanic*, which occurs in efflorescences imitative shapes, and crystallised in the vicinity of burning beds of coal, both in Scotland and England, at Solfaterra, Vesuvius, Ætna, &c. 2d, *Conchoidal*, which occurs in angular pieces, it is said, along with sulphur, in beds of indurated clay, or clay-slate, in the country of Bucharia.

2. In Egypt it is made in great quantities from the soot of camel's dung, which is burnt at Cairo instead of wood. This soot is put into large round bottles, a foot and a half in diameter, and terminating in a neck two inches long. The bottles are filled up with this matter to within four inches of the neck. Each bottle holds about forty pounds of soot, and affords nearly six pounds of salt. The vessels are put into a furnace in the form of an oven, so that only the necks appear above. A fire of camel's dung is kindled beneath it, and continued for three days and three nights. On the second and the third day the salt is sublimated. The bottles are then broken, and the salt is taken out in cakes. These cakes, which are sent just as they have been taken out of the bottles in Egypt, are convex, and unequal on the one side; on the middle of this side they exhibit each a tubercle corresponding to the neck of the bottle in which it was prepared. The lower side is concave, and both are sooty.

3. In this country sal ammoniac is likewise prepared in great quantities. The volatile alkali is obtained from soot, bones, and other substances known to contain it. To this the sulphuric acid is added, and the sulphate of ammonia so formed is decomposed by muriate of soda, or common salt, through a double affinity. The liquor obtained in consequence of this decomposition contains sulphate of soda and muriate of ammonia. The first is crystallised, and the second sublimated so as to form cakes, which are then exposed to sale.

Ammoniacal muriate has a poignant, acrid, and urinous taste. Its crystals are in the form of long hexahedral pyramids; a number of them are sometimes united together in an acute angular direction, so as to exhibit the form of feathers. Rome de Lille thinks the crystals of ammoniacal muriate to be octahedrons bundled together. This salt is sometimes, but not frequently, found in cubic crystals in the middle of the concave hollow part of the sublimated cakes. It possesses one singular physical property, a kind of ductility or elasticity, which causes it to yield under the hammer, or even the fingers, and makes it difficult to reduce to a powder. Muriate of ammonia is totally volatile, but a very strong fire is requisite to sublime it. It is liable to no alteration from air; it may be kept for a long time without suffering any change; it dissolves very readily in water. Six parts of cold water are sufficient to dissolve one of the salt. A considerable cold is produced as the solution takes place, and this cold is still keener when the salt is mixed with ice. This artificial cold is happily applied to produce several phenomena, such as the congelation of water on certain occasions, the crystallisation of certain salts, the fixation and preservation of certain liquids, naturally very subject to evaporation, &c.

Ammoniæ nitras. A salt called also *Alkali volatile nitratum*, *Sal ammoniacus nitrosus*, *Ammonia nitrata*, composed of the nitric acid and ammonia, the virtues of which are internally diuretic and deobstruent, and externally resolvent and sialogogue.

Ammoniæ spiritus aromaticus. See *Spiritus ammoniæ aromaticus*.

Ammoniæ spiritus compositus. See *Spiritus ammoniæ aromaticus*.

Ammoniæ spiritus fœtidus. See *Spiritus ammoniæ fœtidus*.

Ammoniæ spiritus succinatus. See *Spiritus ammoniæ succinatus*.

Ammoniæ subcarbonas. Subcarbonate of ammonia. This preparation was formerly called *ammonia præparata*, and *sal volatilis salis ammoniaci*, and *sal volatilis*. It is made thus: — Take of muriate of ammonia, a pound; of prepared chalk, dried, a pound and a half. Reduce them separately to powder; then mix them together, and sublime in a heat gradually raised, till the retort becomes red.

In the above process, muriate of ammonia is decomposed by carbonate of lime, and a compound of carbonic acid, ammonia and water is obtained, which may be termed *hydrated sesquicarbonate of ammonia*; for it consists of 1 proportional of ammonia, $1\frac{1}{2}$ of carbonic acid, and 1 of water: or if we double these numbers, to avoid the fraction, its composition will stand thus: —

2 proportionals of ammonia		$17 \times 2 = 34$
3 ———	carbonic acid	$22 \times 3 = 66$
2 ———	water - -	$9 \times 2 = 18$
		118

Such appears, from the experiments of Mr. R. Phillips, to be the nature of the compound called "subcarbonate of ammonia." In its formation, the carbonic acid is derived from the chalk, and the ammonia from the muriate, the water being formed at the expense of the oxygene of the lime, and the hydrogene of the muriatic acid; the residue in the retort being chloride of calcium, as shown in the following diagram: —

Subcarbonate of Ammonia.

Muriate of Ammonia.

Ammonia + Carbonic Acid.

Water.

Muriatic Acid. Lime.

Hydrogene + Oxygene.

Chlorine + Calcium.

Carbonate of Lime.

This salt is prepared on the large scale by the wholesale manufacturer, and occurs in the market cheap and pure. Large quantities are also made from the products of the distillation of coal in gas works: this, however, is rarely pure, and acts upon vegetable colours in the manner of an alkali. It should be kept in well-stopped bottles, for when exposed to the air it gradually loses ammonia, becomes opake, pulverulent, and less pungent, and ultimately passes into a *hydrated vicarbonate* of ammonia, composed of—

1 proportional of ammonia	- - -	17
2 ——— carbonic acid	$22 \times 2 =$	44
2 ——— water - -	$9 \times 2 =$	18
		79

When very pure it is in a crystalline form, but seldom very regular. Its crystals are so small, that it is difficult to determine their figure. The taste and smell of this salt are the same with those of pure ammonia, but much weaker. It turns the colour of violets green, and that of turmeric brown. It is soluble in rather more than twice its weight of cold water, and in its own weight of hot water; but a boiling heat volatilises it. When pure, and thoroughly saturated, it is not perceptibly alterable in the air; but when it has an excess of ammonia, it softens and grows moist. It cannot be doubted, however, that it is soluble in air; for if left in an open vessel, it gradually diminishes in weight, and its peculiar smell is diffused to a certain distance. Heat readily sublimes, but does not decompose it.

It has been prepared by the destructive distillation of animal substances, and some others, in large iron pots, with a fire increased by degrees to a strong red-heat, the aqueous liquor that first comes over being removed, that the salt might not be dissolved in it. Thus we had the *salt of hartshorn, salt of soot, essential salt of vipers*, &c. If the salt were dissolved in the water, it was called *spirit* of the substance from which it was obtained. Thus, however, it was much contaminated by a fœtid animal oil, from which it required to be subsequently purified, and is much better fabricated by mixing one part of muriate of ammonia and two of carbonate of lime, both as dry as possible, and subliming in an earthen retort.

Sir H. Davy has shown that its component parts vary, according to the manner of preparing it. The lower the temperature at which it is formed, the greater the proportion of acid and water. Thus, if formed at the temperature of 300°, it contains more than fifty per cent. of alkali; if at 60°, not more than twenty per cent.

This salt possesses nervine and stimulating powers, and is highly beneficial in the dose of from two to eight grains, in nervous affections, debilities, flatulency, and acidity from dyspepsia.

The carbonate and bicarbonate of ammonia are not used medicinally.

Ammoniæ subcarbonatis liquor. Solution of subcarbonate of ammonia. Take of subcarbonate of ammonia, four ounces; distilled water, a pint. Dissolve the subcarbonate of ammonia in the water, and filter the solution through paper. This preparation possesses the properties of ammonia in its action on the human body. See *Ammoniæ subcarbonas.*

Ammoniated copper. See *Cuprum ammoniatum.*

Ammoniated iron. See *Ferrum ammoniatum.*

Ammoniated iron, tincture of. See *Tinctura ferri ammoniati.*

Ammoniated copper, liquor of. See *Cupri ammoniati liquor.*

Ammo'nion. (From *αμμος*, sand.) Aëtius uses this term to denote a collyrium of great virtue in many diseases of the eye, which was said to remove sand or gravel from the eyes.

AMMONI'TES. Petrifactions, which have likewise been distinguished by the name of *cornua ammonis*, and are called *snake-stones* by the vulgar, consist chiefly of limestone. They are found of all sizes, from the breadth of half an inch to more than two feet in diameter; some of them rounded, others greatly compressed, and lodged in different strata of stones and clays. They appear to owe their origin to shells of the nautilus kind.

AMMO'NIUM. (*um, i.* n.; because the base of *ammonia.*) Berzelius first gave this name to a supposed metal which with oxygene he conceives to form the alkali called ammonia. It is now generally used by all chemists. See *Ammonia.*

AMMONIURET. (*Ammoniuretum, i.* n.) A compound of ammonia, and a metallic oxide, or an alkali: as ammoniuret of gold, silver, zinc, &c.

AMNE'SIA. (*a, æ.* f.; from *α*, priv. and *μνησις*, memory.) Forgetfulness.

AMNESTIA. (*a, æ.* f.; from *α*, priv. and *μνησις*, memory.) Forgetfulness. Want of memory.

A'MNIOS. (*os, i.* n.; from *αμνος*, a lamb, or lamb's skin.) *Amnion.* The soft internal membrane which surrounds the fœtus. It is very thin and pellucid in the early stage of pregnancy, but acquires considerable thickness and strength in the latter months. The amnios contains a thin watery fluid, in which the fœtus is suspended. This fluid is called the liquor amnii, or water of the amnion, and by the nurses *the waters.* The quantity, in proportion to the size of the different parts of the ovum, is greatest by far in early pregnancy. At the time of parturition, in some cases, it amounts to or exceeds four pints; and, in others, it is scarcely equal to as many ounces. It is usually in the largest quantity when the child has been some time dead, or is born in a weakly state. This fluid is generally transparent, often milky, and sometimes of a yellow, or light brown colour, and very different in consistence; and these alterations seem to depend upon the state of the constitution of the parent. It does not coagulate with heat, like the serum of the blood; and, chemically examined, it is found to be composed of phlegm, earthy matter, and sea-salt, in different proportions in different subjects, by which the varieties in its appearance and consistence are produced. It has been supposed to be excrementitious; but it is generally thought to be secreted from the internal surface of the ovum, and to be circulatory as in other cavities. It was formerly imagined, that the fœtus was nourished by this fluid, of which it was said to swallow some part frequently; and it was then asserted, that the qualities of the fluid were adapted for its nourishment. But there have been many examples of children born without any passage to the stomach; and a few of children in which the head was wanting, and which have nevertheless arrived at the full size. These cases fully prove that this opinion is not just, and that there must be some other medium by which the child is nourished, besides the waters. The incontrovertible uses of this fluid are, to serve the purpose of affording a soft bed for the residence of the fœtus, to which it allows free motion, and prevents any external injury during pregnancy: and inclosed in the membranes, it procures the most gentle, yet efficacious, dilatation of the os uteri, and soft parts, at the time of parturition. Instances have been recorded, in which the waters of the ovum are said to have been voided so early as in the sixth month of pregnancy, without prejudice either to the child or parent. The truth of these reports seems to be doubtful, because when the membranes are intentionally broken, the action of the uterus never fails to come on, when all the water is evacuated. A few cases have occurred to me, says Dr. Denman, in practice, which might have been construed to be of this kind; for there was a daily discharge of some colourless fluid from the vagina, for several months before delivery; but there being no diminution of the size of the abdomen, and the waters being regularly discharged at the time of labour, it was judged that some lymphatic vessel near the os uteri had been ruptured, and did not close again till the patient was delivered. He also met with one case, in which, after the expulsion of the placenta, there was no sanguineous discharge, but a profusion of lymph, to the quantity of several pints, in a few hours after delivery; but the patient suffered no inconvenience except from surprise.

AMNIOTIC. (*Amnioticus;* from *amnios:* so called because it is obtained from the membrane of that name.) Of or belonging to the amnios.

Amniotic acid. *Acidum amnioticum.* A peculiar acid said to be found in the liquor of the amnios of the cow.

AMO'MUM. (*um, i.* n.; from an Arabian word, signifying a pigeon, the foot of which it was thought to resemble.) The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Monogynia.*

Amomum cardamomum. The former systematic name for the *Cardamomum minus.* See *Elettaria cardamomum.*

Amomum granum paradisi. The systematic name of the plant which affords the grains of paradise. It is also called *Cardamomum majus, Meleguetta, Maniguetta,* and *Cardamomum piperatum.*

Grains of paradise, or the greater cardamom seeds are contained in a large brown, somewhat triangular, flask, the thickness of one's thumb and pyramidal. The seeds are angular, and of a reddish brown colour, smaller than pepper, and resemble very much the seeds of the *Cardamomum minus.* They are extremely hot, and similar in virtue to pepper.

Amomum verum. True stone parsley. The fruit is about the size of a grape, of a strong and grateful aromatic taste, and penetrating smell. The seeds are given as a carminative.

Amomum zingiber. A former systematic

name of the plant which affords ginger. See *Zingiber officinale.*

AMOR. (*or, oris.* m.) Love. See *Pathemata animi.*

AMO'RGE. See *Amurca.*

AMPELITE. The aluminous ampelite, is the alum slate; and the graphic, the graphic slate.

AMPELOSA'GRIA. (*a, æ.* f.; from αμπελος, a vine, and αγριος, wild.) See *Bryonia.*

AMPHEMERI'NUS. (From αμφι, about, and ημερα, a day.) Daily. Febris amphemerina, is a one-day fever; and also a quotidian intermittent.

AMPHIARTHRO'SIS. (Αμφιαρθρωσις. *is, is.* f.; from αμφι, both, and αρθρωσις, an articulation: so called from its partaking both of diarthrosis and synarthrosis.) A mixed species of connection of bones, which admits of an obscure motion, as is observed in the metacarpal and metatarsal bones, and the vertebræ.

AMPHIBIA. The name of the third class of animals in the Linnæan system, including those which possess, in a certain degree, the power of respiration, and are thereby enabled to live either in water or upon land.

AMPHIBIOUS. Having the power of living in the air and in water.

AMPHIBIUM. (*um, i.* n.; from αμφι, both ways, and βιος, life.) An animal; or one that lives both on land and in the water.

AMPHIBLESTROI'DES. (From αμφιβληστρον, a net, and ειδος, a resemblance.) Retiform, or net-like; a term which has been applied to the retina of the eye.

AMPHIBOLE. Some species of actinolite and hornblende have this name.

AMPHIBOLITES. Trap rocks are so called in geology, the basis of which is hornblende.

AMPHIBRA'NCHIA. (From αμφι, about, and βραγχια, the jaws.) The fauces or parts about the tonsils, according to Hippocrates and Foësius.

AMPHICAU'STIS. (From αμφι, about, and καυστις, ripe corn.) 1. A sort of wild barley.

2. The private parts of a woman.— *Eustachius.*

AMPHIDEON. (From αμφι, on both sides, and δαιω, to divide.) *Amphidæum, Amphidium.* The os tincæ, or mouth of the womb, which opens both ways.

AMPHIDIARTHRO'SIS. The same as *Amphiarthrosis.*

AMPHIGENE. A name of Vesuvian.

AMPHIME'TRION. (From αμφι, about, and μητρα, the womb.) *Amphimetrium.* The parts about the womb. — *Hippocrates.*

A'MPHIPLEX. (From αμφι, about, and πλεκτω, to connect.) According to Rufus Ephesius, the part situated between the scrotum and anus, and which is connected with the thighs.

AMPHIPNEU'MA. (From αμφι, about, and πνευμα, breath.) A difficulty of breathing. — *Hippocrates.*

AMPHI'POLOS. (*Amphipolus;* from αμφι, about, and πολεω, to attend.) One who attends the bed of a sick person, and administers to him. — *Hippocrates.*

AMPHISMI'LA. (From αμφι, on both sides, and σμιλη, an incision-knife.) A dissecting knife, with an edge on both sides. — *Galen.*

AMPLECTENS. Embracing, clasping.

AMPLEXICAULIS. (From *amplector*, to surround, and *caulis*, a stem.) Embracing or clasping the stem. *Folium amplexicaule* is a leaf, the base of which surrounds the stem, as in *Papaver somniferum* and *Carduus marianus*; and the *Senecio hirsutus* has a leaf-stalk which embraces the stem at its base.

AMPU'LLA. (*a, æ.* f. Αμβολλα; from αναβαλλω, to swell out.) A bottle.

1. In *chemistry*, all bellied vessels are so called, as bolt-heads, receivers, cucurbits, &c.

2. In *anatomy*, applied by Scarpa to the dilated portions of the membranaceous semicircular canals, just within the vestibulum of the ear.

3. In *botany*, a small membranaceous bag attached to the roots and the immersed leaves of some aquatic plants, rendering them buoyant. — *Thompson.*

AMPULLE'SCENS. (From *ampulla*, a bottle.) The most tumid part of the thoracic duct is called *alveus ampullescens.*

AMPULLULA. (*a, æ.* f.; diminutive of *ampulla.*) A little bottle which enlarges in the middle, being as it were bellied: applied by anatomists to a canal or bag, which is a little enlarged in the centre; and by Lieberkuhn to the tumid extremities of the villi of the intestines.

AMPUTA'TION. (*Amputatio, onis.* f.; from *amputo*, to cut off.) A surgical operation, which consists in the removal of a limb or viscus: thus we say, a leg, a finger, the penis, &c. when cut off, are amputated; but when speaking of a tumour or excrescence, it is said to be removed, or dissected out.

AMULET. (*Amuletum, i.* n.; from αμμα, a bond, because it was tied round the person's neck, or rather from αμυνω, to defend.) An amulet, or charm, by wearing which the person was supposed to be defended from the admission of all evil; in particular, an antidote against the plague.

AMU'RCA. (From αμεργω, to press out.) *Amorge.* 1. A small herb, the expressed juice of which is used in dyeing.

2. The sediment of the olive, after the oil has been pressed from it; recommended by Hippocrates and Galen as an application to ulcers.

AMU'TICUS. (From αμυττω, to scratch.) A medicine that, by vellicating or scratching, as it were, the bronchia, stimulates it to the discharge of whatever is to be thrown off the lungs.

A'MYCHE. (*e, es.* f.; from αμυσσω, to scratch.) 1. A laceration or exulceration of the skin: a slight wound. — *Hippocrates.*

2. Scarification. — *Galen.*

Amy'cticus. (From αμυσσω, to vellicate.) Having the power of lacerating: hence *amyctica*, medicines which stimulate and vellicate the skin, according to Cælius Aurelianus.

AMY'GDALA. (*a, æ.* f. Αμυγδαλη; from αμυσσω, to lancinate: so called, because after the green husk is removed from the fruit, there appear upon the shell certain fissures, as it were lacerations.)

1. The fruit called the almond. See *Amygdalus communis.*

2. The gland-like body of the throat, of which there are two, are sometimes termed, from their resemblance, *Amygdalæ*, or almonds of the throat.

Amygdala amara. The bitter almond. See *Amygdalus communis.*

Amygdala dulcis. The sweet almond. See *Amygdalus communis.*

Amygdalæ oleum. See *Amygdalus.*

AMYGDALOIDES. (From *amygdalus*, an almond, and ειδος, resemblance.) Amygdaloid: almond-like.

1. A name given to some parts of the body and to parts of vegetables and minerals, which resemble almonds.

2. A compound mineral, consisting of spheroidal particles or vesicles of lithomarge, green earth, calc spar, steatite imbedded in a basis of fine-grained green-stone or wacke, containing sometimes, also, crystals of hornblende.

AMYGDALUS. (*us, i.* m.; from *amygdala*, the derivation of which look to.) The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Monogynia.* The almond-tree.

Amygdalus communis. The systematic name of the plant which affords the common almond. *Amygdalus—foliis serratis infimis glandulosis, floribus sessilibus geminis*, of Linnæus.

The almond-tree is a native of Barbary. The same tree produces either bitter or sweet. Sweet almonds are more in use as food than medicine; but they are said to be difficult of digestion, unless extremely well comminuted. Their medicinal qualities depend upon the oil which they contain in the farinaceous matter, and which they afford on expression, nearly in the proportion of half their weight. It is very similar to olive oil; perhaps rather purer, and is used for the same purposes. The oil thus obtained is more agreeable to the palate than most of the other expressed oils, and is therefore preferred for internal use, being generally employed with a view to obtund acrid juices, and to soften and relax the solids, in tickling coughs, hoarseness, costiveness, nephritic pains, &c. Externally it is applied against tension and rigidity of particular parts. The milky solutions of almonds in watery liquors, usually called emulsions, possess, in a certain degree, the emollient qualities of the oils, and have this advantage over pure oil, that they may be given in acute or inflammatory disorders, without danger of the ill effects which the oil might sometimes produce by turning rancid. The officinal preparations of almonds are the expressed oil, the confection, and the emulsion; to the latter, the addition of gum-arabic is sometimes directed, which renders it a still more useful demulcent in catarrhal affections, stranguries, &c.

Bitter almonds yield a large quantity of oil, perfectly similar to that obtained from sweet almonds, but the matter remaining after the expression of the oil, is more powerfully bitter than the almond in its entire state. Great part of the bitter matter dissolves by the assistance of heat, both in water and rectified spirit; and a part arises also with both menstrua in distillation. Bitter almonds have been long known to be poisonous to various brute animals; and some authors have alleged that they are also deleterious to the human species; but the facts recorded upon this point appear to want further proof. However, as the noxious quality seems to reside in that matter which gives it the bitterness and flavour, it is very probable, that when this is separated by distillation, and taken in a sufficiently concentrated state, it may prove a poison to man, as is the case with the common laurel, to which it appears extremely analogous.

The poisonous principle is now known to be that which gives it the peculiar bitter and flavour. It may be obtained by distillation with water: it then appears a volatile oil, generally heavier than water, having the concentrated odour of the bitter almond, and partaking of some of the chemical properties, of the hydrocyanic acid. It is this ingredient which renders bitter almonds intensely poisonous to some animals, and not unfrequently they produce deleterious effects upon the human system.

The distilled oil is virulently active, and the symptoms attendant on poisoning by it are, in some respects, marked and peculiar. They have been thus enumerated by Dr. Granville, in his Treatise on Prussic Acid. "Stupor and numbness, with oppression and a sense of weight at the summit of the head; yawning, and an irresistible disposition to sleep; vertigo and dizziness of sight. All or any of these preliminary symptoms, according to the quantity of the poison taken, are generally observed by the practitioner, if sent for in time. The pulse is found to be rather strong at first, but flags soon after, and becomes either frequent, wiry, and small, or slow and vibrating. A paralytic state of the extremities is next remarked, the pupil remains unalterably dilated, the sensibility of the organs of sense is greatly diminished. Every animal function seems

impaired, except respiration, which is very rarely indeed accelerated or difficult. Vomiting and hiccough shortly precede the aggravation of every nervous symptom, when life ebbs fast, and becomes at last extinct."

From various experiments, it appears that this and analagous poisons operate upon the nervous system; that through the medium of the nerves, the influence of the poison is conveyed to the brain, the functions of which are more or less impaired; that the organs of respiration are thus secondarily affected, but that the action of the heart continues for a long time unimpaired, circulating veinous blood: hence, if respiration be artificially performed, so as to aërate the blood, it sometimes happens that the animal permanently recovers.

Essential oil of bitter almonds is largely prepared for the use of perfumers, confectioners, and cooks, who generally use what is called essence of almonds, or a solution of ʒij. of the oil, in ʒvj. of alkohol: this is also the most convenient form for pharmaceutical purposes. One hundred weight of the bitter almond cake remaining in the press after the separation of the fixed oil, is put into the still, with about 400 gallons of water, this large proportion being necessary to prevent the formation of a mucilaginous magma, from which the volatile oil will not pass off, and which often, if brought to boil, rises up into the head and worm of the still. The produce of the oil is liable to much variation, 1 cwt. of cake yielding from 2 ounces to $2\frac{3}{4}$ by weight. It often deposits a considerable portion of white crystallised matter, which is apparently a peculiar vegetable compound. The oil appears to be composed of hydrocyanic acid in union with volatile oil.

There is so much difference in the strength of the diluted hydrocyanic acid, usually sold for medicinal use, that it is difficult to state any precise dose in which it may be administered.

Bergius tells us, that bitter almonds, in the form of emulsion, cured obstinate intermittents, after the bark had failed. A simple water is distilled from bitter almonds, after the oil is pressed out, which possesses the same qualities, and in the same degree, as that drawn from cherry-stones. These afforded, formerly, the now-exploded *Aqua cerasorum nigrorum*, or black-cherry water.

Amygdalus persica. The systematic name of the common peach-tree. The fruit is known to be grateful and wholesome, seldom disagreeing with the stomach, unless this organ is not in a healthy state, or the fruit has been eaten to excess, when effects similar to those of the other dulco-acid summer fruits may be produced. The flowers, including the calyx, as well as the corolla, are the parts of the persica used for medicinal purposes. These have an agreeable but weak smell, and a bitterish taste. Bouldue observes, "that when distilled, without addition, by the heat of a water-bath, they yield one-sixth their weight, or more, of a whitish liquid, which communicates to a considerable quantity of other liquids a flavour like that of the kernels of fruits. These flowers have a cathartic effect, and, especially to children, have been successfully given in the character of a vermifuge; for this purpose, an infusion of a drachm of the flowers dried, or half an ounce in their recent state, is the requisite dose. The leaves of the peach are also found to possess an anthelmintic power, and from a great number of experiments appear to have been given with invariable success both to children and adults. However, as the leaves and flowers of this plant manifest, in some degree, the quality of those of the lauro-cerasus, they ought to be used with caution.

A'myla. (From *amylum*, starch.) This term has been applied to some chemical fæcula, or in highly pulverised residuum. Obsolete.

AMY'LEON. *Amylion.* Starch.

AMY'LINE. A substance intermediate between gum and starch. It is soluble in boiling water, and the solution yields, by evaporation, a pale semitransparent brittle substance, insoluble in alkohol, but soluble in ten times its weight of cold water.

A'MYLUM. (*um, i.* n. Αμυλον; from α, priv. and μυλη, a mill, because it was formerly made from wheat, without the assistance of a mill.) Starch; called also *Amyleon* and *Amylion.* A white, insipid, combustible substance, insoluble in cold water, but forming a jelly with boiling water. It exists chiefly in the white and brittle parts of vegetables, particularly in tuberose roots, and the seeds of the gramineous plants. It may be extracted by pounding these parts, and agitating them in cold water, when the parenchyma, or fibrous parts, will first subside; and these being removed, a fine white powder, diffused through the water, will gradually subside, which is the starch. Or the pounded or grated substance, as the roots of arum, potatoes, acorns, or horse-chestnuts, for instance, may be put into a hair-sieve, and the starch washed through with cold water, leaving the grosser matters behind. Farinaceous seeds may be ground and treated in a similar manner. Oily seeds require to have the oil expressed from them before the farina is extracted.

Starch is one of the constituent parts in all mealy farinaceous seeds, fruits, roots, and other parts of plants. Our common starch is made from wheat. It is not necessary that the grain be first bruised in mills. The entire corn, well cleansed, is soaked in cold water until the husks separate; and the grains, having become quite soft, give out, by pressure, a milky fluid. The grains are then taken out of the water by means of

a sieve, put into a coarse linen sack, and transferred into the treading-tub, where they are trodden, after cold water has been poured upon them.

By this operation the starchy part is washed out, and mingling with the water makes it milky. The water is now drawn off, running through a sieve into the settling tub. Fresh water is again effused upon the grains, and the same operation is continued till the water in the treading-tub is no longer rendered milky. The starch here precipitates by repose from the water that held it suspended; during which, especially in a warm season, the mucilaginous saccharine matter of the flour, that was dissolved by the water, goes into the acetous fermentation. From this cause the starch grows still purer and whiter. The water is next let off from the starch, which is several times more washed with clear fresh water; the remaining part of which is suffered to drip through linen cloths supported by hurdles, upon which the wet starch is placed. When the starch is fully subsided, it is wrapt in, wrung between these cloths, or pressed, to extort still more of the remaining liquid.

It is afterwards cut into pieces, which are laid in airy places on slightly burnt bricks to be completely dried, partly by the free currency of air, and partly by the bricks imbibing their moisture. Lastly, the outer crust is scraped off, and they are broken into smaller pieces.

Several substances agreeing in essential characters with the starch of wheat have long been used as common articles of food, especially in the diet of children and invalids. One of the commonest and most pleasant is the arrow-root (see *Maranta arundinacea*), but for which the starch obtained from potatoes is often substituted. Another is sago, obtained from the pith of a species of palm. Tapioca and cassava are also principally starch, and they are procured from the *Jatropha manihot*; and analogous to these is salep, the root of our *Orchis mascula*.

If starch be subjected to distillation, it gives out water impregnated with empyreumatic acetous acid, a little red or brown oil, a great deal of carbonic acid, and carburetted hydrogene gas. Its coal is bulky, easily burned, and leaves a very small quantity of potash and phosphate of lime. If when diffused in water it be exposed to a heat of 60° F., or upward, it will ferment and turn sour; but much more so if it be not freed from the gluten, extract, and colouring matter. Thus, in starch-making, the farina ferments and becomes sour, but the starch that does not undergo fermentation is rendered the more pure by this process. Some water already soured is mixed with the flour and water, which regulates the fermentation, and prevents the mixture from becoming putrid; and in this state it is left about ten days in summer, and fifteen in winter, before the scum is removed, and the water poured off. The starch is then washed out from the bran, and dried, first in the open air, and finally in an oven.

With boiling water starch forms a nearly transparent mucilage, emitting a peculiar smell, neither disagreeable nor very powerful. This mucilage may be dried, and will then be semitransparent, and much resembling gum, all the products of which it affords. When dissolved, it is much more easily digested and nutritious than before it has undergone this operation.

Both acids and alkalies combined with water dissolve it. It separates the oxides of several metals from their solutions, and takes oxygene from many of them. It is found naturally combined with all the immediate principles of vegetables, and may easily be united with most of them by art.

When starch is triturated with iodine, it forms combinations of various colours. When the proportion of iodine is small, these compounds are violet; when somewhat greater, blue; and when still greater, black.

We can always obtain the finest blue colour, by treating starch with an excess of iodine, dissolving the compound in liquid potash, and precipitating by a vegetable acid. The colour is manifested even at the instant of pouring water of iodine into a liquid which contains starch diffused through it. Hence iodine becomes an excellent test for detecting starch; and starch for detecting iodine. Besides these combinations, it appears that there is another of a white colour, in which the iodine exists in very small quantity. All of them possess peculiar properties.

Starch is not affected in the cold by water, alkohol, or æther. But it dissolves readily when triturated with potash water.

Starch is convertible into sugar by dilute sulphuric acid. To produce this change we must take 2000 parts of starch, diffuse them in 8000 parts of water, containing 40 parts of strong oil of vitriol; and boil the mixture for 36 hours in a basin of silver or lead, taking care to stir the materials with a wooden rod during the first hour of ebullition. At the end of this time, the mass having become liquid, does not require to be stirred, except at intervals. In proportion as the water evaporates, it ought to be replaced. When the liquid has been sufficiently boiled, we must add to it chalk and animal charcoal, then clarify with white of egg, filter the mixture through a flock of wool, and then concentrate the liquid till it has acquired a syrupy consistence. After this, the basin must be removed from the fire, in order that, by cooling, the greater part of the sulphate of lime may fall down. The pure syrup is now to be decanted off, and evaporated to the

proper dryness. The greater the quantity of acid employed, the less ebullition is required to convert the starch into the saccharine matter.

The discovery of the preceding process is due to Kirchoff, of St. Petersburgh.

The presence of sulphuric acid is not indispensable for obtaining sugar from starch. It may also be obtained by leaving the starch to itself, either with or without contact of air, or by mixing it with dried gluten. At the same time, indeed, several other products are formed. M. Théod. de Saussure's interesting observations on this subject are published in the *Annales de Chimie et de Physique*, xi. 379. The starch, brought to the state of a pulpy mass, must be left to spontaneous decomposition. The products are, 1st, a sugar, like the sugar of grapes; 2d, Gum, like that from roasted starch; 3d, Amidine, a body whose properties are intermediate between those of starch and gum; and, 4th, An insoluble substance, like ligneous matter. In these experiments, the mass on which he operated was made by pouring 12 parts of boiling water on 1 of starch. When it was fermented by dried gluten, he obtained —

	Without contact of air.	With contact of air.
Sugar,	47·4	49·7
Gum,	23·0	9·7
Amadine,	8·9	5·2
Amalaceous lignin,	10·3	9·2
Lignin with charcoal,	A trace	0·3
Undecomposed starch,	4·0	3·8

Potatoe starch differs perceptibly from that of wheat; it is more friable; is composed of ovoid grains about twice the size of the other.

As starch forms the greatest part of flour, it cannot be doubted but that it is the principal alimentary substance contained in our bread. In a medical point of view, it is to be considered as a demulcent; and accordingly it forms the principal ingredient of an officinal lozenge in catarrhs, and a mucilage prepared from it often produces excellent effects, both taken by the mouth and in the form of clyster, in dysenteries and diarrhœa, from irritation of the intestines. Milk and starch, with the addition of suet finely shred, and incorporated by boiling, was the soup employed by Sir John Pringle in dysenteries, where the mucous membrane of the intestines had been abraded. Externally, surgeons apply it as an absorbent in erysipelas.

AMY'RIS. (*is, is.* f.; from α, intensive, and μυρον, ointment, or balm: so called from its use, or smell.) The name of a genus of plants in the Linnæan system. Class, *Octandria*; Order, *Monogynia*, of which two species are used in medicine.

Amyris elemifera. The systematic name of the plant from which it is supposed we obtain the resin called *gum-elemi*. It is described by Linnæus, *Amyris—foliis ternis quinato-pinnatisque subtus tomentosis.* Elemi is brought here from the Spanish West Indies: it is most esteemed when softish, somewhat transparent, of a pale whitish colour, inclining a little to green, and of a strong, though not unpleasant smell. It is only used in ointments and plasters, and is a powerful digestive.

Amyris gileadensis. The systematic name of the balsam, or balm of Gilead, or balsam of Mecca plant, from which the *opobalsamum* is obtained. It has been called by a variety of names, as *Balsamum genuinum antiquorum, Balsamelæon, Ægyptiacum balsamum, Balsamum Asiaticum, Balsamum Judaicum, Balsamum Syriacum, Balsamum e Mecca, Balsamum Alpini, Oleum balsami, Carpobalsamum,* and *Xylobalsamum*. *Amyris—foliis ternatis integerrimis, pedunculis unifloris lateralibus,* of Linnæus. This tree grows spontaneously, particularly near to Mecca, on the Asiatic side of the Red Sea. The juice of the fruit is termed *carpobalsamum* in the pharmacopœias, and that of the wood and branches obtained by making incisions into the bark *xylobalsamum.* The best sort is a spontaneous exudation from the tree, and is held in so high estimation by the Turks, that it is rarely, if ever, to be met with genuine among us. The medicinal virtues of the genuine balsam of Gilead have been highly rated, undoubtedly with much exaggeration. The common balsam of Mecca is scarcely used; but its qualities seem to be very similar to those of the balsam of Tolu, with perhaps more acrimony. The dose is from 15 to 50 drops.

A'myum. (From α, priv. and μυς, muscle.) A limb so emaciated that the muscles scarcely appear.

ANA. In medical prescriptions it means "of each." See *A*.

ANA'BASIS. (From αναβαινω, to ascend.) 1. An ascension, augmentation, or increase of a disease, or paroxysm. It is usually meant of fevers. — *Galen.*

2. A species of the *Equisetum*, or horse-tail plant.

Anaba'ticus. (From αναβαινω, to ascend or increase.) Increasing or augmenting; formerly applied to a continual fever, *febris anabatica*, when it increased in malignity.

ANABE'XIS. (From αναβηττω, to cough up.) An expectoration.

ANABLE'PSIS. (*is, eos.* f.; from ανα, and βλεπω, to see again.) The recovery of sight after it has been lost.

Anablysis. (*is, eos.* f.; from ανα, and βλυζω, to gush out again.) Ebullition, or effervescence.

Ana'bole. (*e, es.* f.; from αναβαλλω, to cast up.) The discharge of any thing by vomit; also dilatation, or extension. — *Galen.*

Anabroche'sis. (*is, is.* f.; from ανα, and

βροχεω, to reabsorb.) The reabsorption of matter.

Anabrochi'smos. (*Anabrochismus;* from αναβροχεω, to reabsorb.) The taking up and removing the hair on the eyelids, when they become troublesome. — *Galen, Ægineta,* and others.

ANABRO'SIS. (*is, is.* f.; from αναβρωσκω, to devour.) A corrosion of the solid parts, by sharp and biting humours. — *Galen.*

ANACA'RDIUM. (*um, i.* n.; from ανα, without, and καρδια, a heart: so called because the pulp of the fruit, instead of having the seed inclosed, as is usually the case, has the nut growing out of the end of it.) Without heart. The name of a genus of plants. Class, *Enneandria;* Order, *Monogynia.*

Anacardium occidentale. The cashew-nut; called also *Acajou* and *Acajuba.* The oil of this nut is an active caustic, and employed as such in its native country; but neither it, nor any part of the fruit, is used medicinally in this country. It is a useful marking ink, as any thing written on linen or cotton with it is of a brown colour, which gradually grows blacker, and is very durable.

Anacardium orientale. The Malacca bean. See *Avicennia tomentosa.*

ANACATHA'RSIS. (*is, is.* f.; from ανα, and καθαιρομαι, to purge up.) An expectoration of mucus, or a purgation by spitting. In this sense the word is used by Hippocrates and Galen.

Blanchard denotes, by this word, medicines which operate upwards, as vomiting, expectoration, &c.

ANACATHA'RTICUS. (*Anacatharticus;* from ανακαθαιρομαι, to purge upwards.) Anacathartic. Promoting expectoration, or vomiting.

Ana'chron. Mineral alkali.

ANA'CLASIS. (*is, is.* f.; from ανακλαω, to bend back.) A reflection or recurvature of any of the members, according to Hippocrates.

ANA'CLISIS. (*is, is.* f.; from ανακλενω, to recline.) A couch, or sick-bed. — *Hippocrates.*

Anaco'che. (From ανακωχεω, to retard.) Delay in the administration of medicines; also slowness in the progress of a disease. — *Hippocrates.*

ANACŒLIA'SMUS. (*us, i.* m.; from ανα, and κοιλια, the bowels.) A gentle purge, which was sometimes used to relieve the lungs.

Anacolle'ma. (From ανα, and κολλαω, to glue together.) A collyrium made of agglutinant substances, and stuck on the forehead. — *Galen.*

Anaconcholi'smos. (From ανακογχολιζω, to sound as a shell: so called because the noise made in the throat is like the sound of a shell.) A gargarism. — *Galen.*

ANACTE'SIS. (From ανακταομαι, to recover.) Restoration of strength; recovery from sickness. — *Hippocrates.*

ANACUPHI'SMA. (From ανακουφιζω, to lift up.) A kind of exercise mentioned by Hippocrates, which consists in lifting the body up and down, like our weigh-jolt and dumb-bells.

Anacyce'sis. (From ανακυκαω, to mix.) The mixture of substances, or medicines, by pouring one upon another.

ANACY'CLEON. (*Anacycleus, i.* m.; from ανακυκλοω, to wander about.) A mountebank or wandering quack.

ANACYRI'OSIS. (From ανα, and κυρος, authority.) By this word, Hippocrates means that gravity and authority which physicians should preserve among sick people and their attendants.

ANADIPLO'SIS. (From αναδιπλοω, to reduplicate.) A reduplication or frequent return of a paroxysm, or disease. — *Galen.*

Ana'dosis. (From ανα, upwards, and διδωμι, to give.) 1. A vomit.

2. (From ἀναδίδωμι, to distribute.) The distribution of aliment all over the body.

3. Digestion.

Ana'drome. (From ανω, upwards, and δρεμω, to run.) 1. A pain which runs from the lower extremities to the upper parts of the body. — *Hippocrates.*

2. A reflux of the humours.

Anæ'des. (From α, priv. and αιδως, shame.) Shameless. Hippocrates uses this word metaphorically for without restraint; and applies it to water rushing into the aspera arteria.

ANÆMIA. (*a, æ.* f.; from α, priv. and αιμα, blood.) Without blood; that is, a deficiency of blood, or the state of the body after a great loss of blood.

ANÆSTHE'SIA. (*a, æ.* f. Αναισθησια; from α, priv. and αισθανομαι, to feel.) Loss of the sense of touch. Diminished or lost sense of feeling. The sense of touch or feeling is often diminished, and sometimes destroyed; occasional and local numbness is common to most people. Any pressure from a bandage, or from one limb upon another, by obstructing the flow or activity of the nervous fluid, will produce this, when the limb is commonly said to be asleep. Slight motion takes this off when the irregular flux of the sensorial power, on its first return, produces a sense of pricking, as though a ball of needles was in the part, and pushing in every direction. When numbness occurs without obvious pressure, it shows a tendency to a paralytic state, and should be watched. Local stimulants and tonics are likely to be beneficial. There is sometimes a total insensibility of touch, mostly partial, but sometimes general, over the whole surface of the body. These are very rare cases, and mostly symptomatic of apoplexy, palsy, catalepsy, hysteria, syncope, or some nervous and mental inquie-

tude. The best remedies are friction, stimulating applications of camphire, ammonia, and spirits, also galvanism and electricity.

ANAGA'LLIS. (*is, idis.* f.; from αναγελαω, to laugh, because, by curing the spleen, it disposes persons to be cheerful.)

1. The name of a genus of plants in the Linnæan system.

2. The pharmacopœial name of the *Anagallis arvensis.*

Anagallis arvensis. The systematic name for the *Anagallis—foliis indivisis, caule procumbente,* of Linnæus. A small and delicately formed plant, which does not appear to possess any particular properties.

Anagargali'ctum. (From ανα, and γαργαρεων, the throat.) A gargarism, or wash for the throat.

Anagargari'stum. A gargle.

ANAGLY'PHE. (*e, is.* f.; from αναγλυφω, to engrave.) A part of the fourth ventricle of the brain was formerly thus called, from its resemblance to a pen, or style. See *Calamus scriptorius.*

ANAGNO'SIS. (*is, is.* f.; from αναγινωσκω, to know.) The persuasion, or certainty, by which medical men judge of a disease from its symptoms. — *Hippocrates.*

ANA'GRAPHE. (*e, es.* f.; from αναγραφω, to write.) A prescription or receipt.

ANAIMIA. See *Anæmia.*

ANAL. (*Analis;* from *anus,* the fundament.) Appertaining to the anus, or extremity of the great gut.

ANALCINE. (So called from its becoming feebly electrical by heat.) Cubic zeolite. A mineral found in granite, gneiss, trap rocks, and lavas, at Calton Hill, Edinburgh, in Bohemia and Ferroe islands.

Anale'ntia. A fictitious term used by Paracelsus for epilepsy.

ANALE'PSIA. (*a, æ.* f.; from ανα, and λαμβανω, to take again.) A species of epilepsy, which proceeds from a disorder of the stomach, and with which the patient is apt to be seized very often and suddenly.

ANALE'PSIS. (*is, is.* f.; from αναλαμβανω, to restore.) A recovery of strength after sickness.

ANALE'PTIC. (*Analepticus;* from αναλαμβανω, to recruit or recover.) That which recovers the strength which has been lost by sickness.

ANALOGY. (*Analogia, æ.* f.; from ανα, and λογος, a discourse.) A resemblance which several things bear to each other in some respects, though different in others. In medicine, the term is applied to a certain relation between diseases, in virtue whereof we may reason and conclude from one to another, and them all, much in the same manner: *e. g.* a pleurisy, being a species of inflammation produced like inflammation of other parts, is to be treated like them. This method of deduction was called by the ancients *medicina rationalis* and *dogmatica,* in opposition to the empirical, which was conducted by appearances only, without theory.

ANALO'SIS. (Αναλωσις. *is, is.* f.; from αναλισκω, to consume.) 1. A diminution of a disease in opposition to an augmentation.

2. A consumption, or wasting.

ANA'LYSIS. (Αναλυσις. *is, is.* f.; from αναλυω, to resolve.) The resolution of any matter into its primary and constituent parts. The processes and experiments which chemists have recourse to, are extremely numerous and diversified, yet they may be reduced to two species, which comprehend the whole art of chemistry. The first is, *analysis,* or decomposition; the second, *synthesis,* or composition. In *analysis,* the parts of which bodies are composed are separated from each other; thus, if we reduce cinnabar, which is composed of sulphur and mercury, and exhibit these two bodies in a separate state, we say we have decomposed, or analysed cinnabar. But if, on the contrary, several bodies be mixed together, and a new substance be produced, the process is then termed chemical composition, or *synthesis:* thus, if, by fusion and sublimation, we combine mercury with sulphur, and produce cinnabar, the operation is termed chemical composition, or composition by synthesis. Chemical analysis consists of a great variety of operations. In these operations, the most extensive knowledge of such properties of bodies as are already discovered must be applied, in order to produce simplicity of effect, and certainty in the results. Chemical analysis can hardly be executed with success by one who is not in possession of a considerable number of simple substances in a state of great purity, many of which, from their effects, are called reagents. The word analysis is often applied by chemists to denote that series of operations, by which the component parts of bodies are determined, whether they be merely separated, or exhibited apart from each other; or whether these distinctive properties be exhibited by causing them to enter into new combinations, without the perceptible intervention of a separate state; and, in the chemical examination of bodies, analysis or separation can scarcely ever be effected, without synthesis taking place at the same time.

ANAMNE'SIS. (*is, is.* f.; from αναμιμνησκω, to remember.) 1. Remembrance, or recollection of what has been done. — *Galen.*

2. Applied by some writers to the study of the signs by which the cause of a disease is detected. — *Ananas.*

ANAMNE'STICUS. (From the same.) Anamnestic; that which strengthens the memory.

ANA'NAS. The egg-shaped pine-apple. See *Bromelia ananas.*

Ana'nce. (From αναγκαζω, to compel.) Necessity. It is applied to any desperate operation. — *Hippocrates.*

Anaphalanti'asis. (From αναφαλαντος, bald.) A thinness of hair upon the eyebrows. — *Gorræus.*

Ana'phora. (From αναφερω, to bring up.) An expectoration: applied to a spitting of blood. — *Gorræus.*

ANAPHORY'XIS. (From αναφορυσσω, to grind down.) The reducing of any thing to dust, or a very fine powder.

ANAPHRODI'SIA. (*a, æ.* f.; from α, priv. and αφροδισια, the feast of Venus.) Impotence. Want of the generative power. See *Sterility.*

Anaphro'meli. (From α, neg. αφρος, froth, and μελι, honey.) Clarified honey.

ANAPLA'SIS. (Αναπλασις, *confirmatio; reparatio.* From αναπλασσω, to restore again.) A restoration of flesh where it has been lost; also the reuniting a fractured bone. — *Hippocrates.*

ANAPLERO'SIS. (Αναπληρωσις, *repletio;* from αναπληροω, to fill again.) The restitution, or filling up of wasted parts. — *Galen.*

Anaplero'ticus. (From the same.) Renewing flesh: incarnative, or that which fills up a wound so as to restore it to its original shape. — *Galen.*

Anapleu'sis. (From αναπλευω, to float upon.) The rotting of a bone, so that it drops off, and lies upon the flesh. Exfoliation, or separation of a bone. — *Hippocrates, Ægineta,* &c.

ANAPNEU'SIS. (From αναπνεω, to respire.) Respiration.

ANA'PNOE. Respiration.

ANAPTO'SIS. (From αναπιπτω, to fall back.) A relapse.

Ana'ptysis. A cough attended with a free expectoration.

Anarrhegni'mia. (From ανα, and ῥηγνυμι, to break again.) *Anarrhexis.* A fracture; also the fresh opening of a wound.

ANARRHŒ'A. (From ανα, upwards, and ῥεω, to flow.) A flux of humours from below upwards. — *Schneider de Catarrho.*

Anarrho'pia. (From ανα, upwards, and ῥεπω, to creep.) A flux of humours, from below upwards. — *Hippocrates.*

A'NAS. (*as, atis.* f.; from νεω, to swim, *à nando.*) 1. A duck or drake.

2. The name of an extensive genus of birds in the Linnæan system of ornithology, of the order *Anseres.* It comprehends the swans, geese, ducks, teel, and widgeon.

Anas anser. The goose, called also *Anser domesticus.* The flesh of the tame goose is somewhat similar to that of the duck, and requires the assistance of spirituous and stimulating substances to enable the stomach to digest it. Both are very improper for weak stomachs.

Anas cygnus. The swan. The flesh of the young swan or cygnet is tender, and a great delicacy. See *Cygnus mutus.*

Anas domestica. The tame duck. The flesh of this bird is difficult of digestion, and requires that warm and stimulating condiments be taken with it to enable feeble stomachs to digest it.

Anas olus. The tame and dumb swan.

ANASA'RCA. (*a, æ.* f.; from ανα, through, and σαρξ, flesh; that is to say, the word water being understood, among the flesh.) A dropsy, from a serous fluid collected between the skin and flesh in the cellular membrane of the limbs, or any other part of the body.

Anasarca consists in a considerable collection of serous fluid in the cellular membrane immediately under the skin; sometimes this fluid penetrates the skin, and exudes through the pores of the cuticle; at other times it is too thick to strain through, and raises the epidermis in blisters. The skin, not giving passage to the water, is distended and hardened, so as to give firmness to the tumour which is formed. Under these circumstances, erythematic inflammation readily comes on. The anasarca is not confined to the subcutaneous cellular membrane, but occupies likewise that which is between the muscles, and unites their fibres, that which envelops different organs and forms their parenchyma, and that which accompanies and surrounds vessels. The serous fluid passing from cell to cell, gravitates towards the parts most dependent, and forms a swelling of the feet and loins more commonly than elsewhere.

The cellular membrane and the shut cavities of the body are constantly moistened by an animal vapour, which is exhaled by the capillary arteries. When this vapour, which is destined to prevent the adherence of parts, is secreted in too great quantity, and retained too long in the cell or cavity where it is accumulated, it is condensed, and forms a serous fluid. Again, when the quantity of effused fluid is too considerable to be at once taken up by the absorbents, the serosity collects in these parts; or even if the quantity given out is not more abundant than is natural, provided the absorption be diminished or in any way obstructed, there is occasion given for the preternatural accumulation of this fluid. Anasarca then consists either in an augmented exhalation, or in a diminished absorption of serous exhalation.

Anasarca may be divided into idiopathic or primitive, and secondary or symptomatic. It is, in character, first, active, and with excess of tone; secondly, passive, or marked by debility.

Active or *sthenic* anasarca springs from an increased exhalation, an over action of the extreme vessels. Passive or *asthenic* anasarca, on the other hand, is the result of diminished absorption, of a defective power in those vessels which reconduct the fluid into the veins and emunctory organs.

Anasarca with debility is endemic in the damp and cold borders of lakes and

rivers which are subject to inundations. It is common among the poor who inhabit ground-floors, and other dark and damp apartments, where the air is not free. Spring and autumn, when the weather is cold and moist, bring most cases of asthenic anasarca. The other predisposing causes are a lymphatic temperament, childhood, old age, pregnancy, sedentary life, wet clothes long worn, copious drinking of cold water, excess in the use of spirituous liquors, depressing passions, exhaustion from long abstinence and a spare regimen, excessive evacuations of blood or of semen, severe diseases both acute and chronic, as exanthematous maladies, diarrhœa, dysentery, diabetes, swellings, and distentions of the viscera, chronic rheumatism, palsy, scurvy, syphilis, and especially diseases of the heart and large blood-vessels. Anasarca may be induced also by the improper treatment of cutaneous diseases, by the suppression of habitual evacuations, by the interruption of the urinary excretions, and by artificial hæmorrhage.

The circumstances which predispose to active or *sthenic* anasarca are, a sanguine plethoric habit of body, adult age, food too nourishing or too exciting, excessive labour and fatigue, continued exposure to atmospherical vicissitudes, the suppression of natural or habitual evacuations and hæmorrhages, acute rheumatism, exposure to cold air during the desquamation of eruptive diseases. In females, the periods of the establishment and cessation of the menses.

Anasarca with debility comes on, in general, slowly, and with appearances which denote a deficiency of vital energy. The infiltration of the cellular membrane is generally noticed first in the lower extremities; sometimes the face is puffy, and the swelling gradually extends to the rest of the body. The pulse varies; the skin becomes pale, frequently of a milky whiteness; its heat commonly diminishes, it is soft to the touch, though without its proper moistness; and, as its elasticity is lessened, it is easily depressed, and preserves the mark of the finger. The swelling is most evident in the evening, and after the patient has been long in the upright position, but after lying down diminishes or disappears. As this preternatural accumulation of fluid gains ground, distending the skin, compressing the vessels, the nerves, the muscles, &c., the mobility of the body is diminished, the vitality of the skin altered; the slightest cause will produce hæmorrhage, inflammation erysipelas, often gangrene. The urine is generally scanty, deep red, and depositing a copious sediment. There is generally great thirst.

Active or *sthenic* anasarca comes on more suddenly, the skin is sensible, sometimes reddened, and more elastic than in the other species. The pulse is generally hard, and vibrating, and full. The eyes are bright, the tongue red and dry, and great thirst prevails. The patient complains of singing in the ears, headach, and flying pains in the loins and limbs. The urine is in small quantities, and coagulates on being heated. The blood when drawn shows the buffy coat.

Dr. Cullen divides anasarca into five species:

1. *Anasarca serosa:* as when the due discharge of serum is suppressed, &c.

2. *Anasarca oppilata:* as when the blood-vessels are considerably pressed, which happens to many pregnant women, &c.

3. *Anasarca exanthematica:* this happens after ulcers, various eruptive disorders, and particularly after *erysipelas* and *scarlatina.*

4. *Anasarca anœmia* happens when the blood is rendered extremely poor from considerable losses of it.

5. *Anasarca debilium:* as when feebleness is induced by long illness, &c.

The morbid anatomy of anasarca, considered apart from those other diseases which accompany or give birth to this condition, does not teach us much. The cellular membrane is distended by a serous fluid which has at times the consistence of jelly, and the muscular fibre is bleached: and some writers speak of redness and induration of the cellular membrane when the effusion has been sudden and from excited action. The chemical composition of the fluid is water with more or less albumen, mucus, muriates of potash and soda, sulphate of soda, phosphate of lime, of iron, and magnesia.

The morbid conditions with which anasarca are complicated, are so many and so various, (as will be understood from the causes before enumerated as producing the disease,) that no general statement can be made of the appearances after death. See *Hydrops.*

The probable result of anasarca will be judged of from considering the obstinacy of the disease, and the manner of its origin. When it comes on without complication with other morbid conditions, it is less dangerous than when it is attended by a preternatural state of important organs, as those of the circulation, respiration, &c. Yet the dropsical effusion may occasionally be removed, while the accompanying disease continues. Anasarca is liable to relapses; and this condition, once established, predisposes to the recurrence of the disease. It may be lessened and removed, particularly when it is more simple and acute in its origin, by a critical discharge by the skin, the kidneys, by a sudden hæmorrhage, &c.

The treatment of anasarca may be considered as aiming at three objects. 1st, To remove the predisposing causes of the disease. 2dly, To evacuate the accumulated fluid. 3dly, To re-establish the natural condition of the system, the general debility of

which must be in many cases looked upon as the proximate cause of the effusion: though there are other occasions where this must be attributed to an excessive or irregular action.

With regard to the first indication, it is not always in our power to go back to the origin of those circumstances which have led to the disease, as, from the long-continued operation of the cause, a morbid habit or effect has been established before we begin to act. By altering the mode of life with respect to locality, to diet, to exhaustion, &c. or, on the other hand, by avoiding excessive stimulus or over excitement, we prepare for the spontaneous recovery of the disease, and we facilitate the operation of our remedies. The diseases which produce anasarca as a sequel, or which accompany it and keep up the condition of effusion, are sometimes beyond our reach, and then we can only alleviate the accidental symptoms, of which effusion is one; sometimes they have run their course, and must be looked upon as an original cause, but not as one still in operation, as we see in cases of anasarca after fevers and exanthematous complaints. But anasarca being much more frequently a symptomatic than an idiopathic condition, must, in most cases, be associated with the primary disorder when we resolve upon a plan of cure.

The second plan, that of evacuating the collected serum, is generally pursued by administering emetics, purgatives, diuretics, or sudorifics, which excite in different ways the absorbents, and derive the fluid by the emunctories. Spontaneous vomiting has often acted very powerfully upon dropsy; and emetics may be employed with marked benefit in recent cases of anasarca. By Sydenham, and the older practitioners, antimonial vomits were much used, their efficacy depending, in all probability, upon their exciting at the same time the action of the stomach, intestines, and kidneys. Of late years, however, the use of emetics, both in this and other diseases, is considerably lessened.

The employment of purgatives is more common in cases of dropsy, and those which cause a large secretion of water are of great utility. Elaterium is one of the most powerful of hydragogue purges; in doses of from a quarter or half a grain to two grains, repeated every three or four hours for five or six times in succession, it is often very efficacious.

The oil of the *Croton tiglium*, a single drop or two at a dose, is frequently used with success, but proves sometimes too acrid and irritating.

The *Melampodium*, or black hellebore, is a very ancient and useful evacuant.

The class of saline purges is well adapted to anasarca.

The cream of tartar, either alone, in two drachm doses, or combined with jalap, scammony, or other cathartic gum-resins, is a popular and safe purge in dropsies.

Another method of evacuating the excessive fluid is by diuretics: many of these not acting solely on the kidneys, but affecting the circulating and absorbent systems. Digitalis, in doses carefully regulated, is, in this way, very serviceable. Squills are a favourite and useful diuretic. Colchicum is often used with advantage. The taraxacum in decoction, and combined with diuretic salts, as the acetate of potash, is much used. There are many other diuretics, as the juniper, spartium, &c. which require management, and combination with other auxiliary remedies. During the administration of diuretics, the patient should not be restricted from drinking freely of diluent potations, notwithstanding the prejudice which considers this indulgence as injurious, and the surface of the body should be kept cool.

On the other hand, an attempt is at times made, by giving diaphoretics, to restore the action of the skin, which in all cases of anasarca is impeded; but here we do not find our remedies very sure in their effect. The vapour bath has, however, been frequently useful in promoting the effect of diaphoretics.

Mercury is an agent of the greatest utility in anasarca. It acts sometimes by resolving the tumours and obstructions which have given origin to the dropsy, sometimes by exciting the lymphatic system, and it is generally of use as an adjunct to the other purgatives and diuretics which have been spoken of. The effect of the long-continued use of mercury is, however, to debilitate, and this must be remembered in cases marked by great exhaustion.

The fluid effused in anasarca is sometimes invited to escape by means of scarifications and incisions, sometimes by issues and blisters. Great relief is occasionally given in these ways to rigid and over distended parts. But they are attended with this danger, that any solution of continuity in a dropsical limb leads frequently to troublesome inflammation of an erysipelatous character, and to gangrene.

The third object in the treatment of anasarca — that of restoring the natural tone of the system, must be brought about by the gradual administration of tonics, by a regulated system of nutriment and exercise, and by combining those agents which gently excite and exhilarate.

ANASPA'SIS. (Ἀνάσπασις, *retractio*; from ἀνα, and σπαω, to draw together.) Hippocrates uses this word to signify a contraction of the stomach.

ANA'SSYTOS. (*Anassytus*; from ἀνα, upwards, and σευομαι, to agitate.) Driven forcibly upwards. Hippocrates applies this epithet to air rushing violently upwards, as in hysteric fits.

Anasta'lticus. (From αναςελλω, to contract.) Styptic or refrigerating.

ANA'STASIS. (*is, eos. f.*; from αναςημι, to cause to rise.) 1. A recovery from sickness; a restoration of health.

2. It likewise signifies a migration of humours, when expelled from one place and obliged to remove to another. — *Hippocrates.*

ANASTOMO'SIS. (*is, es.* f.; from ανα, through, and ςομα, a mouth.) The communication of vessels with one another.

ANASTOMO'TICUS. (From ανα, through, and ςομα, the mouth.) Anastomotic: that which opens the pores and mouths of the vessels, as cathartics, diuretics, deobstruents, and sudorifics.

ANATASE. A mineral found only in Dauphiny and Norway.

Ana'tes. (From *nates*, the buttocks.) A disease of the anus. — *Festus*, &c.

ANATO'MY. (Ανατομια, or ανατομη. *Anatomia, æ.* f. and *Anatome, es.* f.; from ανα, and τεμνω, to cut up.) The dissection or dividing of organised substances to expose the structure, situation, and uses of parts. Anatomy is divided into that of animals strictly so called, also denominated *zootomy*, and that of vegetables or *phytotomy*.

The anatomy of brute animals and vegetables is comprised under the term comparative anatomy, because their dissections were instituted to illustrate or compare by analogy their structure and functions with those of the human body.

Anatomy comparative. The dissection of brutes, fishes, polypi, plants, &c. to illustrate, or compare them with the structure and functions of the human body.

ANATRE'SIS. (*is, is.* f.; from ανα, and τιτραω, to perforate.) A perforation like that which is made upon the skull by trepanning.

Anatri'be. (From ανατριβω, to rub.) Friction all over the body.

Anatri'psis. Friction all over the body. — *Moschion de Morb. Mulieb.* and *Galen.*

Ana'tris. Mercury. — *Ruland.*

Ana'tron. (Arabian.) The name of a lake in Egypt, from which natron was produced. See *Soda.*

Ana'trope. (*e, es.* f.; from ανατρεπω, to subvert.) *Anatrophe, Anatropha.* A relaxation of the stomach, with loss of appetite and nausea. Vomiting; indigestion. — *Galen.*

Ana'trum. See *Soda.*

ANAU'DIA. (*a, æ.* f.; from α, priv. and αυδη, the speech.) Dumbness; privation of voice; catalepsy. — *Hippocrates.*

Ana'xyris. (From αναξυρις, the sole: so called because its leaf is shaped like the sole of the shoe.) The herb sorrel.

ANCEPS. (*eps, ipitis.* adjective.) Two-edged; that is, compressed, having the edges sharp like a two-edged sword: applied to stems and leaves of plants, as in the *Sisymbrium striatum, Iris griminea*, and leaves of the *Typha latifolia.*

A'NCHA. (Arabian, to press upon, as being the support of the body.) The same as *Coxa.* The thigh. — *Avicenna, Forestius,* &c.

A'NCHILOPS. (*ops, opis.* m.; from αγχι, near, and ωψ, the eye.) A disease in the inward corner of the eye. See *Ægilops.*

ANCHORA'LIS. (From αγκων, the elbow.) The *processus anchoralis* is the projecting part of the elbow on which we lean, called generally the olecranon. See *Ulna.*

Anchoralis processus. See *Ulna.*

ANCHOVY. See *Clupea encrasicolus.*

Anchovy pear. See *Grias cauliflora.*

ANCHU'SA. (*a, æ.* f.; from αγχειν, to strangle: from its supposed constringent quality; or, as others say, because it strangles serpents.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The name in some pharmacopœias for the alkanet root and bugloss. See *Anchusa officinalis*, and *Anchusa tinctoria.*

Anchusa officinalis. The officinal bugloss. In some pharmacopœias it is called also *Buglossa, Buglossum angustifolium majus, Buglossum vulgare majus, Buglossum sylvestre,* and *Buglossum sativum.* It is the *Anchusa —foliis lanceolatis strigosis, spicis secundis imbricatis, calycibus quinque partitis,* of Linnæus. It was formerly esteemed as a cordial in melancholic and hypochondriacal diseases. It is seldom used in modern practice, and then only as an aperient and refrigerant.

Anchusa tinctoria. The systematic name of the anchusa or alkanna of the pharmacopœias. The alkanet plant, called also *Anebium.* This plant grows wild in France, but is cultivated in our gardens. The root is externally of a deep purple colour. To oil, wax, turpentine, and alkohol, it imparts a beautiful deep red colour, for which purpose it is used. Its medicinal properties are scarcely perceptible.

A'nchyle. See *Ancyle.*

ANCHYLOBLEPHARON. See *Ancyloblepharon.*

ANCHYLOMERI'SMA. (From αγχυλομαι, to bend.) A concretion, or growing together of the soft parts. — *Sagar.*

ANCHYLO'SIS. (*is, is.* f.; from αγχυλομαι, to bend.) A stiff joint; called also *Anchyle, Ancyle, Ankylose,* and *Acinesia.* It is divided into the *true* and *spurious,* according as the motion is entirely or but partly lost. This state may arise from various causes, as tumefaction of the ends of the bones, caries, fracture, dislocation, &c. also dropsy of the joint, fleshy excrescences, aneurisms, and other tumours. It may also be owing to the morbid contraction of the flexor muscles, induced by the limb being long kept in a particular position, as a relief to pain after burns, mechanical injuries, &c. The rickets, white swellings, gout, rheuma-

tism, palsy, from lead particularly, and some other disorders, often lay the foundation of anchylosis: and the joints are very apt to become stiff in advanced life. Where the joint is perfectly immovable, little can be done for the patient; but in the spurious form of the complaint, we must first endeavour to remove any cause mechanically obstructing the motion of the joint, and then to get rid of the morbid contraction of the muscles. If inflammation exist, this must be first subdued by proper means. Where extraneous matters have been deposited, the absorbents must be excited to remove them; and where the parts are preternaturally rigid, emollient applications will be serviceable. Fomentations, gentle friction of the joint and of the muscles, which appear rigid, with the camphire liniment, &c. continued for half an hour or more two or three times a day; and frequent attempts to move the joint to a greater extent, especially by the patient exerting the proper muscles, not with violence, but steadily for some time, are the most successful means; but no rapid improvement is to be expected in general. Sometimes, in obstinate cases, rubbing the part with warm brine occasionally, or applying stimulant plasters, of ammoniacum, &c. may expedite the cure; and in some instances, particularly as following rheumatism, pumping cold water on the part every morning has proved remarkably beneficial. Where there is a great tendency to contraction of the muscles, it will be useful to obviate this by some mechanical contrivance. It is proper to bear in mind, where, from the nature of the case, complete anchylosis cannot be prevented, that the patient may be much less inconvenienced by its being made to occur in a particular position; that is, in the upper extremities generally a bent, but in the hip or knee an extended one.

A'NCINAR. Borax.

ANCIPITIUS. (From *anceps.*) Two-edged: applied to a leaf which is compressed and sharp at both edges, as that of the *Typha latifolia.*

ANCIROME'LE. See *Ancylomele.*

A'NCON. (*on, onis.* m.; from αγκαζομαι, to embrace; απο του αγκεισθαι ετερω οςεω το οςεον: because the bones meeting and there uniting, are folded one into another.) The elbow.

ANCONE'US. (From αγκων, the elbow.) A small triangular muscle, situated on the back part of the elbow. *Anconeus minor* of Winslow, *Anconeus vel cubitalis Riolani* of Douglas. It arises from the ridge, and from the external condyle of the humerus, by a thick, strong, and short tendon: from this it becomes fleshy, and, after running about three inches obliquely backwards, it is inserted by its oblique fleshy fibres into the back part or ridge of the ulna. Its use is to extend the fore-arm.

ANCONEUS EXTERNUS. See *Triceps extensor cubiti.*

ANCONEUS INTERNUS. See *Triceps extensor cubiti.*

ANCONEUS MAJOR. See *Triceps extensor cubiti.*

ANCONEUS MINOR. See *Anconeus.*

Anconoid process. See *Ulna.*

ANCONOIDEUS. (From αγκων, the elbow.) Anconoid: belonging to the elbow.

A'NCTER. (*er, eros.* m. Αγκτηρ; a bond or button.) A fibula, or button, by which the lips of wounds are held together. — *Gorræus.*

ANCTERIA'SMUS. (*us, i.* m.; from αγκτηρ, a button.) The operation of closing the lips of wounds together by loops, or buttons. — *Galen.*

ANCU'BITUS. The disease formerly so called was one of the eyes, in which there is an appearance of sand or little stones sprinkled on them.

A'NCUS. A term formerly applied to those who have a distorted elbow.

A'NCYLE. (From αγκυλος, crooked.) *Anchyle.* A contracted or stiff joint. — *Galen.* See *Anchylosis.*

ANCYLION. See *Ancyloglossum.*

ANCYLOBLE'PHARON. (*Ancyloblepharum, i.* n.; from αγκυλη, a hook, and βλεφαρον, an eyelid.) An adhesion of the eyelids. A disease of the eye, by which the eyelids are closed together.

ANCYLOGLO'SSUM. (*um, i.* n.; from αγκυλη, a hook, and γλωσσα, the tongue.) *Ancylion* of Ægineta. Tongue-tied. A contraction of the frænulum of the tongue.

ANCYLOME'LE. (*e, es.* f.; from αγκυλος, crooked, and μηλη, a probe.) *Anchyromele, Ancíromele.* A crooked probe, or a probe with a hook, with which surgeons searched wounds. — *Galen,* &c.

ANCYLO'SIS. See *Anchylosis.*

ANCYLO'TOMUS. (From αγκυλη, a hook, and τεμνω, to cut.) A crooked chirurgical knife, or bistoury. A knife for loosening the tongue; not now used.

A'NCYRA. (Αγκυρα, an anchor.) A chirurgical hook. Epicharmus uses this word for the membrum virile, according to Gorræus.

ANCYROI'DES. (From αγκυρα, an anchor, and ειδος, a likeness.) The coracoid process of the scapula was so called, from its likeness to the beak of an anchor. See *Scapula.*

ANCYROME'LE. See *Ancylomele.*

ANDALUSITE. A massive mineral, of a flesh, and sometimes rose-red colour, belonging to primitive countries, and first found in Andalusia in Spain.

Anderson's pills. These consist of Barbadoes aloes, with a proportion of jalap, and oil of aniseed.

ANDI'RA. A tree of Brazil, the fruit of

which is bitter and astringent, and used as a vermifuge.

ANDRANATO'MIA. (*a, æ.* f.; from *ανηρ*, a man, and *τεμνω*, to cut.) *Andranatome.* The dissection of the human body, particularly of the male. — *M. Aur. Severinus, Zootome Democrit.*

ANDRAPODOCAPE'LUS. (From *ανδροποδον*, a slave, and *καπηλος*, a dealer.) A crimp. Galen calls by this name the person whose office it was to anoint and slightly to wipe the body, to cleanse the skin from foulness.

ANDREOLITE. A species of crop-stone.

ANDROCŒTE'SIS. (*is, is.* f.; from *ανηρ*, a man, and *κοιτεω*, to cohabit with. 1. The venereal act.

2. The infamous act of sodomy. — *Moschion*, &c.

ANDRO'GYNUS. (*Androgynos. Androgynus, i.* m.; from *ανηρ*, a man, and *γυνη*, a woman.) 1. An hermaphrodite.

2. An effeminate person. — *Hippocrates.*

3. A plant is said to be androgenous, which produces both male and female flowers from the same root, some flowers having stamens only, and others only pistils; as the walnut, beech, hornbeam, nettle, &c.

ANDRO'MACHUS, of *Crete*, was physician to the Emperor Nero. He invented a composition, supposed to be an antidote against poison, called after him, *Theriaca Andromachi*, which he dedicated to that Emperor in a copy of Greek verses still preserved.

ANDRO'NION. The name of a pastil invented by an ancient physician, named Andro, composed of, according to Ægineta's prescription, the scales of copper, burnt copper, sal ammoniac and alum, shavings of verdigris, and frankincense, all wrought up with wine. It was much esteemed against carbuncles and herpetic eruptions.

ANDROPO'GON. (*on, onis.* m.; from *ανηρ*, a man, and *πωγων*, a beard.) The name of a genus of plants in the Linnæan system. Class, *Polygamia*; Order, *Monœcia.*

ANDROPOGON NARDUS. The systematic name of Indian nard or spikenard; called also *Spica nardi* and *Spica indica.* The root of this plant is an ingredient in the mithridate and theriaca; it is moderately warm and pungent, accompanied with a flavour not disagreeable. It is said to be used by the Orientals as a spice.

ANDROPOGON SCHÆNANTHUS. The systematic name of the camel-hay, or sweet-rush; called also *Juncus odoratus, Fœnum camelorum*, and *Juncus aromaticus.* The dried plant is imported into this country from Turkey and Arabia. It has an agreeable smell, and a warm, bitterish, not unpleasant taste. It was formerly employed as a stomachic and deobstruent.

ANDROSÆMUM. (*um, i.* n.; from *ανηρ*, a man, and *αιμα*, blood: and so called, because the fingers become of a blood-red if rubbed with it.) See *Hypericum androsæmum.*

ANDROTOME. (*e, es.* f.; from *ανηρ*, a man, and *τεμνω*, to cut.) The dissection of man.

ANDRO'TOMIA. (*a, æ.* f.; from *ανηρ*, a man, and *τεμνω*, to cut.) Androtomy, or human dissection, particularly of the male.

ANDRUM. The name of a species of hydrocele epidemic, on the coast of Malabar.

ANDRY, NICHOLAS, born at Lyons in 1658, and lived to the age of 84. Besides a Treatise on Worms, and other minor publications, and contributions in the Medical and Philosophical Journals, he was author of a work, still esteemed, called "Orthopédie," or the art of preventing and removing deformities in children; which he proposed to effect by regimen, exercise, and various mechanical contrivances.

ANE'BIUM. (From *αναβαινω*, to ascend: so called from its quick growth.) The herb alkanet. See *Anchusa.*

ANEILE'SIS. (From *ανειλεω*, to roll up.) *Aneilema.* An involution of the intestines, such as is caused by flatulence and gripes. — *Hippocrates.*

ANE'MIA. (*a, æ.* f.; from *ανεμος*, wind.) Flatulence.

ANE'MONE. (*e, es.* f.; from *ανεμος*, wind: so named, because it does not open its flowers till blown upon by the wind.) Anemone. The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Polygynia.* The wind-flower.

ANEMONE HEPATICA. The hepatica, or herb trinity. *Hepatica nobilis* of the pharmacopœias, and *herba trinitatis.* This plant possesses mildly astringent and corroborant virtues, with which intentions infusions of it have been drunk as tea; or the powder of the dry leaves given, to the quantity of half a spoonful at a time.

ANEMONE NEMOROSA. The systematic name of the *Ranunculus albus* of the pharmacopœias. The bruised leaves and flowers are said to cure tinea capitis applied to the part. The inhabitants of Kamshatka, it is believed, poison their arrows with the root of this plant.

ANEMONE PRATENSIS. The *Pulsatilla nigricans* of the pharmacopœias. This plant, *Anemone — pedunculo involucrato, petalis apice reflexis, foliis bipinnatis*, of Linnæus, has been received into the Edinburgh pharmacopœia, upon the authority of Baron Stoerck, who recommended it as an effectual remedy for most of the chronic diseases affecting the eye, particularly amaurosis, cataract, and opacity of the cornea, proceeding from various causes. He likewise found it of great service in venereal nodes, nocturnal pains, ulcers, caries, indurated glands, suppressed menses, serpignous eruptions, melancholy, and palsy. The plant, in its

recent state, has scarcely any smell; but its taste is extremely acrid, and, when chewed, it corrodes the tongue and fauces.

ANENCE'PHALUS. (*us, i.* m.; from α, priv. and εγκεφαλος, the brain.) 1. A monster without brains.

2. Foolish. — *Galen de Hippocrate.*

A'NEOS. A loss of voice and reason.

ANEPITHY'MIA. (*a, æ.* f.; from α, priv. and επιθυμια, desire.) Loss of appetite.

A'NERIC. *Anerit.* Sulphur vivum.

A'NESIS. (*is, eos.* f.; from ανιημι, to relax.) A remission, or relaxation, of a disease or symptom. — *Aëtius*, &c.

ANE'SUM. See *Anisum.*

ANET. See *Anethum graveolens.*

ANE'THUM. (*um, i.* n. Ανηθον; from ανευ, afar, and θεω, to run: so called because its roots run out a great way.)

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia.*

2. The pharmacopœial name of the common dill. See *Anethum graveolens.*

ANETHUM FŒNICULUM. Sweet fennel, the *fœniculum* of the shops. *Anethum — fructibus ovatis*, of Linnæus. The seeds and roots of this indigenous plant are directed by the colleges of London and Edinburgh. The seeds have an aromatic smell, and a warm sweetish taste, and contain a large proportion of essential oil. They are stomachic and carminative. The root has a sweet taste, but very little aromatic warmth, and is said to be pectoral and diuretic.

ANETHUM GRAVEOLENS. Dill. Anet. *Anethum* of the shops. *Anethum — fructibus compressis*, of Linnæus. This plant is a native of Spain, but cultivated in several parts of England. The seeds are directed for use by the London and Edinburgh Pharmacopœias: they have a moderately warm, pungent taste, and an aromatic, but sickly smell. There is an essential oil, and a distilled water, prepared from them, which are given in flatulent colics, and dyspepsia. They are also said to promote the secretion of milk.

ANE'TICUS. (From ανιημαι, to relax.) That which assuages pain, according to Andr. Tiraquell.

ANETUS. (*us, i.* f.; from ανιημι, *remitto.*) An intermittent fever. See *Ague.*

ANEURI'SMA. (*a, atis.* neut. Ανευρυσμα; from ανευρυνω, to dilate.) An aneurism or preternatural tumour, formed by the dilatation of an artery. A genus of disease ranked by Cullen in the class *Locales*, and order *Tumores.* There are three species of aneurism: —

1. The *true aneurism*, *Aneurisma verum*, which is known by the presence of a pulsating tumour. The artery either seems only enlarged at a small part of its tract, and the tumour has a determinate border, or it seems dilated for a considerable length, in which circumstance the swelling is oblong, and loses itself so gradually in the surrounding parts, that its margin cannot be exactly ascertained. The first, which is the most common, is termed *circumscribed true aneurism;* the last, the *diffused true aneurism.* The symptoms of the circumscribed true aneurism, take place as follows: the first thing the patient perceives, is an extraordinary throbbing in some particular situation, and, on paying a little more attention, he discovers there a small pulsating tumour, which entirely disappears when compressed, but returns again as soon as the pressure is removed. It is commonly unattended with pain or change in the colour of the skin. When once the tumour has originated, it continually grows larger, and at length attains a very considerable size. In proportion as it becomes larger, its pulsation becomes weaker, and, indeed, it is almost quite lost, when the disease has acquired much magnitude. The diminution of the pulsation has been ascribed to the coats of the artery losing their dilatable and elastic quality, in proportion as they are distended and indurated; and, consequently, the aneurismal sac being no longer capable of an alternate diastole and systole from the action of the heart. The fact is also imputed to the coagulated blood, deposited on the inner surface of the sac, particularly in large aneurisms, in which some of the blood is always interrupted in its motion. In true aneurisms, however, the blood does not coagulate so soon nor so often as in false ones. Whenever such coagulated blood lodges in the sac, pressure can only produce a partial disappearance of the swelling. In proportion as the aneurismal sac grows larger, the communication into the artery beyond the tumour is lessened. Hence, in this state, the pulse below the swelling becomes weak and small, and the limb frequently cold and œdematous. On dissection, the lower continuation of the artery is found preternaturally small and contracted. The pressure of the tumour on the adjacent parts also produces a variety of symptoms, ulcerations, caries, &c. Sometimes an accidental contusion, or concussion, may detach a piece of coagulum from the inner surface of the cyst, and the circulation through the sac be obstructed by it. The coagulum may possibly be impelled quite into the artery below, so as to induce important changes. The danger of an aneurism arrives when it is on the point of bursting, by which occurrence the patient usually bleeds to death; and this sometimes happens in a few seconds. The fatal event may generally be foreseen, as the part about to give way becomes particularly tense, elevated, thin, soft, and of a dark purple colour.

2. The *false* or *spurious aneurism*, *Aneurisma spurium*, is always owing to an aperture in the artery, from which the blood gushes

into the cellular substance. It may arise from an artery being lacerated in violent exertions; but the most common occasional cause is a wound. This is particularly apt to occur at the bend of the arm, where the artery is exposed to be injured in attempting to bleed. When this happens, as soon as the puncture has been made, the blood gushes out with unusual force, of a bright scarlet colour and in an irregular stream, corresponding to the pulsation of the artery. It flows out, however, in an even and less rapid stream when pressure is applied higher up than the wound. These last are the most decisive marks of the artery being opened; for blood often flows from a vein with great rapidity, and in a broken current, when the vessel is very turgid and situated immediately over the artery, which imparts its motion to it. The surgeon endeavours precipitately to stop the hæmorrhage by pressure; and he commonly occasions a *diffused false aneurism.* The external wound in the skin is closed, so that the blood cannot escape from it; but insinuates itself into the cellular substance. The swelling thus produced is uneven, often knotty, and extends upwards and downwards, along the tract of the vessel. The skin is also usually of a dark purple colour. Its size increases as long as the internal hæmorrhage continues, and, if this should proceed above a certain pitch, mortification of the limb ensues.

3. The *varicose aneurism, Aneurisma varicosum.* This was first described by Dr. W. Hunter. It happens when the brachial artery is punctured in opening a vein: the blood then rushes into the vein, which becomes varicose. Aneurisms may happen in any part of the body, except the latter species, which can only take place where a vein runs over an artery. When an artery has been punctured, the tourniquet should be applied, so as to stop the flow of blood by compressing the vessel above; then the most likely plan of obviating the production of spurious aneurism appears to be applying a firm compress immediately over the wound, and securing it by a bandage, or in any other way, so as effectually to close the orifice, yet not prevent the circulation through other vessels; afterwards keeping the limb as quiet as possible, enjoining the antiphlogistic regimen, and examining daily that no extravasation has happened, which would require the compress being fixed more securely, previously applying the tourniquet, and pressing the effused blood as much as possible into the vessel. If there should be much coldness or swelling of the limb below, it will be proper to rub it frequently with some spirituous or other stimulant embrocation. It is only by trial that it can be certainly determined when the wound is closed; but always better not to discontinue the pressure prematurely. The same plan may answer, when the disease has already come on, if the blood can be entirely, or even mostly, pressed into the artery again; at any rate by determining the circulation on collateral branches, it will give greater chance of success to a subsequent operation. There is another mode, stated to have sometimes succeeded, even when there was much coagulated blood; namely, making strong pressure over the whole limb, by a bandage applied uniformly, and moistened to make it sit closer, as well as to obviate inflammation; but this does not appear so good a plan, at least in slighter cases. If however the tumour be very large, and threatens to burst, or continues spreading, the operation should not be delayed. The tourniquet being applied, a free incision is to be made into the tumour, the extravasated blood removed, and the artery tied both above and below the wound, as near to it as may be safe; and if any branch be given off between, this must be also secured. It is better not to make the ligatures tighter than may be necessary to stop the flow of blood; and to avoid including any nerve if possible. Sometimes, where extensive suppuration or caries has occurred, or gangrene is to be apprehended, amputation will be necessary; but this must not be prematurely resolved upon, for often after several weeks the pulse has returned in the limb below. In the true aneurism, when small and recent, cold and astringent applications are sometimes useful; or making pressure on the tumour, or on the artery above, may succeed: otherwise an operation becomes necessary to save the patient's life; though unfortunately it oftener fails in this than in the spurious kind, gangrene ensuing, or hæmorrhage. This chiefly arises from the arteries being often extensively diseased, so that they are more likely to give way, and there is less vital power in the limb. A great improvement has been made in the mode of operating in these cases by Mr. John Hunter, and other modern surgeons, namely, instead of proceeding as already explained in the spurious aneurism, securing the artery some way above, and leaving the rest in a great measure to the powers of nature. It has been now proved by many instances, that when the current of the blood is thus interrupted, the tumour will cease to enlarge, and often be considerably diminished by absorption. There is reason for believing, too, that the cures effected spontaneously, or by pressure, have been usually owing to the trunk above being obliterated. There are many obvious advantages in this mode of proceeding; it is more easy, sooner performed, and disorders the system less, particularly as you avoid having a large unhealthy sore to be healed; besides there is less probability of the vessel being diseased at some distance from the tumour. In the popliteal aneurism, for example, the artery may be secured rather below the middle of the thigh, where it is easily come at. The

tourniquet therefore being applied, and the vessel exposed, a strong ligature is to be passed round it; or, which is perhaps preferable, two ligatures a little distant, subsequently cutting through the artery between them, when the two portions contract among the surrounding flesh. It is proper to avoid including the nerve or vein, but not unnecessarily detach the vessel from its attachments. For greater security, one end of each ligature, after being tied, may be passed through the intercepted portion of artery, that they may not be forced off. Then the wound is to be closed by adhesive plaster, merely leaving the ends of the ligatures hanging out, which will after some time come away. However, it must be remembered that hæmorrhage is liable to occur when this happens, even three or four weeks after the operation: so that proper precautions are required to check it as soon as possible; likewise the system should be lowered previously, and kept so during the cure. When a true aneurism changes into the spurious form, which is known by the tumour spreading, becoming harder, and with a less distinct pulsation, the operation becomes immediately necessary. When an aneurism is out of the reach of an operation, life may be prolonged by occasional bleeding, a spare diet, &c.; and when the tumour becomes apparent externally, carefully guarding it from injury. In the varicose aneurism an operation will be very seldom if ever required, the growth of the tumour being limited.

Aneurisma spurium. See *Aneurisma*.

Aneurisma varicosum. See *Aneurisma*.

Aneurisma verum. See *Aneurisma*.

ANE'XIS. (From ανεχω, to project.) A swelling, or protuberance.

ANGEIOLO'GY. (*Angeiologia*, *æ*. f.; from αγγειον, a vessel, and λογος, a discourse.) A dissertation, or discourse, on the vessels of the body.

ANGEIOTI'SMUS. (*us*, *i*. m.; from αγγειον, a vessel, and τεμνω, to cut.) An angeiotomist, or dissector of the vessels.

ANGEIO'TOMY. (*Angeiotomia*, *æ*. f.; from αγγειον, a vessel, and τεμνω, to cut.)

1. The dissection of the blood-vessels and absorbents of an animal body.

2. The opening of a vein, or an artery.

ANGE'LICA. (*a*, *æ*. f.: so called from its supposed angelic virtues.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*. Angelica.

2. The pharmacopœial name of the garden angelica. See *Angelica archangelica*.

Angelica archangelica. The systematic name for the *angelica* of the shops, called also *Milzadella*. *Angelica—foliorum impari lobato*, of Linnæus. A plant, a native of Lapland, but cultivated in our gardens. The roots of angelica have a fragrant, agreeable smell, and a bitterish, pungent taste. The stalk, leaves, and seeds, which are also directed in the pharmacopœias, possess the same qualities, though in an inferior degree. Their virtues are aromatic and carminative. A sweetmeat is made, by the confectioners, of this root, which is extremely agreeable to the stomach, and is surpassed only by that of ginger.

Angelica, garden. See *Angelica archangelica*.

Angelica pilula. Anderson's Scotch pill.

Angelica sativa. See *Angelica sylvestris*.

Angelica sylvestris. Wild angelica; called also *Angelica sativa*. *Angelica—foliis æqualibus ovato-lanceolatis serratis*, of Linnæus. This species of angelica possesses similar properties to the garden species, but in a much inferior degree. It is only used when the latter cannot be obtained. The seeds, powdered and put in the hair, kill lice.

Angelica, wild. See *Angelica sylvestris*.

ANGELICUS. (From *angelus*, an angel.) Angelical. Some plants, parts of animals, and compounds, are so called from their supposed superior virtues.

Angelicus pulvis. The submuriate of mercury.

ANGELI'NA. *Angelina zanoni acostæ*. A tree of vast size, sometimes about sixteen feet thick, growing in rocky and sandy places in Malabar, in the East Indies. It bears ripe fruit in December. The dried leaves heated are said to alleviate pains and stiffness of the joints, and dismiss swelling of the testes caused by external violence, and are also said to be used in the cure of venereal complaints. A decoction is recommended in the West Indies to kill worms. Its operation is similar to that of jalap.

Angelinæ cortex. See *Angelina*.

Angeloca'cos. See *Myrobalanus indica*.

ANGER. *Ira*. See *Pathemata animi*.

ANGIGLO'SSUS. (*us*, *i*. m.; from αγκυλη, a hook, and γλωσσα, the tongue.) A persons who stammers.

ANGI'NA. (*a*, *æ*. f.; from αγχω, to strangle; because it is often attended with a sense of strangulation.) A sore throat. See *Cynanche*.

Angina lini. A name used by some of the later Greek writers to express what the more ancient writers of this nation called *linozostres*, and the Latins *epilinum*: which is the *cuscuta*, or dodder, growing on the *linum*, or flax; as that on the thyme was called *epithymum*. See *Cuscuta*.

Angina maligna. See *Tonsillitis*.

Angina parotidea. See *Parotitis*.

Angina pectoris. The name given to a disease first described by Dr. W. Heberden, and so called from the seat of the disorder, and the sense of strangulation and anxiety with which it is attended. Dr. Heberden's

account of it is published in the second volume of the *London Medical Transactions.* See *Syncope anginosa.*

ANGINA POLYPOSA. See *Croup.*

ANGINA TONSILLARIS. See *Tonsillitis.*

ANGINA TRACHEALIS. See *Croup.*

ANGIOCARPI. The name given by Persoon to a division of funguses which bear their seeds internally. They are either hard and membranous, or tough and leathery.

ANGIOCARPUS. (From Αγγειον, a vessel, and καρπος, fruit.) A seed-vessel.

ANGIOLO'GIA. (*a, æ.* f.; from αγγειον, a vessel, and λογος, a discourse.) Angiology, or the doctrine of the blood-vessels and absorbents.

ANGIOSPERMIA. (*a, æ.* f.; from αγγος, a vessel, and σπερμα, a seed.) 1. The name of an order of plants in the class *Didynamia* of the sexual system of Linnæus, the seeds of which are lodged in a pericarpium or seed-vessel.

2. Those plants are so called, the seeds of which are inclosed in a covering or vessel.

A'NGLICUS. (From *Anglia*, England.) Belonging to England: applied as the trivial name to plants, animals, diseases, &c. Thus the sweating-sickness, which was so endemic and fatal in England, was called *Sudor anglicanus.* See *Sudor anglicus.*

ANGO'LAM. A very tall tree of Malabar, possessing vermifuge powers.

ANGO'NE. (*e, es.* f.; from αγχω, to strangle.) A nervous sort of quinsy, or hysteric suffocation, where the fauces are contracted and stopped up without inflammation.

A'NGOR. (*or, oris.* m.; from *ango*, to trouble.) Agony, or intense bodily pain. — *Galen.*

A'NGOS. (Αγγος. *os, eos.* n. a vessel.) A vessel. A receptacle of humours or fluids: applied sometimes by Hippocrates to the uterus.

ANGUILLA. (*a, æ.* f.; an eel.) See *Muræna anguilla.*

ANGUIS. (*is, is.* m. and f.) A serpent.

ANGULATUS. Angled. Used very generally to designate stems, leaves, petioles, &c. which present several acute angles in their circumference.

ANGULOSUS. Angular.

A'NGUS. (From *angor*, anguish; because of their pain.) A bubo in the groin. — *Fallopius de Morbo Gallico.*

ANGUSTIFO'LIUM. (From *angustus*, narrow, and *folium*, a leaf.) Narrow-leaved: applied to plants, as *Epilobium angustifolium*, &c.

ANGUSTU'RA. The name of a place in South America, from whence a bark is imported. See *Cusparia.*

ANHELA'TION. See *Dyspnœa.*

ANHELITUS. (*us, ûs.* m.; from *anhelo*, to breathe with difficulty.) Anhelation. See *Dyspnœa.*

ANHYDRITE. A mineral sulphate of lime.

ANHYDROS. (*ros, ri.* m.) A name given by the ancient Greeks to express one of those kinds of *Strychna*, or nightshades, which, when taken internally, caused madness.

ANHYDROUS. (From α, neg. and ὑδωρ, water.) Without water.

ANICE'TON. (From α, priv. and νικη, victory.) A name of a plaster invented by Crito, and so called because it was thought an infallible or invincible remedy for achores, or scald-head. It was composed of litharge, alum, and turpentine, and is described by Galen.

Anil. The name of the Indigo plant.

A'NIMA. (*a, æ.* f.; a pure Latin word, from ανεμος, breath.) A soul: whether rational, sensitive, or vegetative.

1. It is sometimes used by *physicians* to denote the principle of life in the body; in which sense Willis calls the blood, *anima brutalis.*

2. By *chemists* it was used figuratively for the volatile principle in bodies, whereby they were capable of being raised by the fire.

3. By the old writers on *botany, materia medica,* and *pharmacy*, it was frequently employed to denote its great efficacy: hence *anima hepatis, aloës, rhabarbari,* &c.

ANIMA ALOËS. Refined aloes.

ANIMA ARTICULORUM. See *Hermodactylus.*

ANIMA HEPATIS. Sal martis.

ANIMA PULMONUM. The soul of the lungs. A name given to saffron, on account of its use in asthmas.

ANIMA RHABARBARI. The best rhubarb.

ANIMA SATURNI. A preparation of lead.

ANIMA VENERIS. A preparation of copper.

ANIMAL. (*al, alis.* n.) An organised body endowed with life and voluntary motion. An animal is composed of certain elements which enter into the composition of the bodies of all animals. These are solid, liquid, gaseous, and inconfinable.

1. *Solid Elements.* Phosphorus, sulphur, carbon, iron, manganese, potassium, lime, soda, magnesia, silica, and alumina.

2. *Liquid Elements.* Muriatic acid; water, which in this case may be considered as an element, enters into the organisation, and constitutes three-fourths of the bodies of animals.

3. *Gaseous Elements.* Oxygene, hydrogene, azote.

4. *Inconfinable Elements.* Caloric, light, electric and magnetic fluids.

These diverse elements, united with each other, three and three, four and four, &c. according to laws still unexplained, form what we name the proximate principles of animals.

Proximate Materials, or Principles. These are divided into azotised and non-azotised.

1. The *azotised* are: albumen, fibrine, gelatine, mucus, cheese-curd principle, urea,

uric acid, osmazome, colouring matter of the blood.

2. The *non-azotised* are; the acetic, benzoic, lactic, formic, oxalic, rosacic acids; sugar of milk, sugar of diabetic urine, picromel, yellow colouring matter of bile, and of other liquids or solids which become yellow accidentally, the blistering principle of cantharides, spermaceti, biliary calculus, the odoriferous principles of ambergris, musk, castor, civet, &c. which are scarcely known, except for their faculty of acting on the organ of smell.

Animal fats are not immediate, simple, proximate principles. It is proved that human fat, that of the pig, of the sheep, &c. are principally formed by two fatty bodies, *stearine* and *elaïn*, which present very different characters, that may be easily separated.

Neither is the butter of the cow a simple body; it contains acetic acid, a yellow colouring principle, an odorous principle, which is very manifest in fermented cheese.

We must not reckon amongst these substances adipocire, a matter which is seen in bodies long buried in the earth: it is composed of *margarine,* of a fluid acid fat, of an orange colouring principle, and of a peculiar odorous substance. Nor must this substance be confounded with spermaceti and the biliary calculus, which are themselves very different from each other. It does not contain a single principle analogous to them.

Organic Elements. The materials or principles above mentioned combine amongst themselves, and from their combination arise the organic elements, which are solid or liquid. The laws or forces that govern these combinations are entirely unknown.

Organic Solids. The solids have sometimes the form of canals, sometimes that of large or small plates, at other times they assume that of membranes. In man the total weight of solids is generally eight or nine times less than that of liquids. This proportion is nevertheless variable according to many circumstances.

The ancients believed that all the organic solids might be reduced by ultimate analysis to simple fibres, which they supposed were formed of earth, oil, and iron. Haller, who admitted this idea of the ancients, owns that this fibre is visible only to the eye of the mind. *Invisibilis est ea fibra sola; mentis acie distinguimus.* This is just the same as if he had said that it does not exist at all, which nobody at present doubts.

The ancients also admitted secondary fibres, which they supposed to be formed by particular modifications of the simple fibre. Thence, the nervous, muscular, parenchymatous, osseous fibre.

Chaussier has lately proposed to admit four sorts of fibres, which he calls *laminary, nerval, muscular,* and *albuginous.*

Science was nearly in this state when Pinel conceived the idea of distinguishing the organic solids, not by fibres, but by tissues or systems. Bichât applied it to all the solid parts of the bodies of animals. The classification of Bichât has been perfected by Dupuytren and Richerand.

Classification of the Tissues.

1. Cellular		System.
2. Vascular	Arterial	
	Venous	
	Lymphatic	
3. Nervous	Cerebral	
	Ganglaic	
4. Osseous		
5. Fibrous	Fibrous	
	Fibro-cartilaginous	
	Dermoid	
6. Muscular	Voluntary	
	Involuntary	
7. Erectile		
8. Mucous		
9. Serous		
10. Horny or Epidermic	Hairy	
	Epidermoid	
11. Parenchymatous, Glandular		

These systems, associated with each other and with the fluids, compose the *organs,* or instruments of life. When many organs tend by their action towards a common end, we name them, collectively considered, an *apparatus.* The number of apparatus, and their disposition, constitute the differences of animals. — *Magendie.*

Animal acid. That acid which is obtained from the animal kingdom.

Animal action. See *Action.*

Animal heat. *Color animalis.* An inert body which does not change its position, being placed amongst other bodies, very soon assumes the same temperature, on account of the tendency of caloric to equilibrium. The body of man is very different: surrounded by bodies hotter than itself, it preserves its inferior temperature as long as life continues; being surrounded with bodies of a lower temperature, it maintains its temperature more elevated. There are, then, in the animal economy, two different and distinct properties, the one of producing heat, the other of producing cold. We will examine these two properties. Let us first see how heat is produced.

The respiration appears to be the principal, or at least the most evident, source of animal heat. In fact, experience demonstrates that the heat of the blood increases nearly a degree in traversing the lungs; and as it is distributed to all the parts of the body from the lungs, it carries the heat every where into the organs; for we have also seen that the heat of the veins is less than that of the arteries.

This development of heat in the respiration appears, as we have already said, to proceed from the formation of carbonic acid, whether it takes place directly in the lungs, or happens afterwards in the arteries, or in the parenchyma of the organs. Some very

good experiments by Lavoisier and De Laplace, lead to this conclusion. They placed animals in a *calorimeter*, and compared the quantity of acid formed by the respiration with the quantity of heat produced in a given time: except a very small proportion, the heat produced was that which would have been occasioned by the quantity of carbonic acid which was formed.

It has also been proved by the experiments of Brodie, Thillage, and Legallois, that if the respiration of an animal is incommoded, either by putting it in a fatiguing position, or in making it respire artificially, its temperature lowers, and the quantity of carbonic acid that it forms becomes less. In diseases, when the respiration is accelerated, the heat increases, except in particular circumstances. The respiration is then a focus in which caloric is developed.

In considering for an instant only this source of heat in the economy, we see that the caloric must be distributed to the different parts of the body in an unequal manner; those farthest from the heart, those that receive least blood, or which cool more rapidly, must generally be colder than those that are differently disposed.

This difference partly exists. The extremities are colder than the trunk; sometimes they present only 89°, or 91° F., and often much less, while the cavity of the thorax is about 104° F.: but the extremities have a considerable surface relative to their mass; they are farther from the heart, and receive less blood than most of the organs of the trunk.

On account of the extent of their surface and distance from the heart, the feet and hands would probably have a temperature still lower than that which is peculiar to them, if these parts did not receive a greater proportional quantity of blood. The same disposition exists for all the exterior organs that have a very large surface; as the nose, the pavilion of the ear, &c.: their temperature is also higher than their surface and distance from the heart would seem to indicate.

Notwithstanding the providence of nature, those parts that have large surfaces lose their caloric with greater facility; and they are not only habitually colder than the others, but their temperature often becomes very low: the temperature of the feet and hands in winter is often nearly as low as 32° F. It is on this account we expose them so willingly to the heat of our fires.

Amongst other means that we instinctively employ to remedy or prevent coldness, are motion, walking, running, leaping, which accelerate the circulation; pressure, shocks upon the skin, which attract a great quantity of blood into the tissue of this membrane. Another equally effective means consists in diminishing the surface in contact with the bodies that deprive us of caloric. Thus we bend the different parts of the limbs upon each other, we apply them forcibly to the trunk when the exterior temperature is very low. Children and weak persons often take this position when in bed. In this respect it would be very proper that young children should not be confined too much in their swathing clothes, to prevent them from thus bending themselves.

Our clothes preserve the heat of our bodies; for the substance of which they are formed being bad conductors of caloric, they prevent that of the body from passing off.

According to what has been said, the combination of the oxygene of the air with the carbon of the blood is sufficient for the explanation of most of the phenomena presented by the production of animal heat; but there are several which, if real, could not be explained by this means. Authors worthy of credit have remarked, that, in certain local diseases, the temperature of the diseased place rises several degrees above that of the blood taken at the left auricle. If this is so, the continual renewal of the arterial blood is not sufficient to account for this increase of heat.

This second source of heat must belong to the nutritive phenomena which take place in the diseased part.

There is nothing forced in this supposition: for most of the chemical combinations produce elevations of temperature, and it cannot be doubted that both in the secretions and in the nutrition, combinations of this sort take place in the organs.

By means of these two sources of heat, life can be maintained though the external temperature is very low, as that of winter in the countries near the pole, which descends sometimes to — 42° F. Generally such an excessive cold is not supported without great difficulty, and it often happens that the parts most easily cooled are mortified: many of the military suffered these accidents in the wars of Russia. Nevertheless, as we easily resist a temperature much lower than our own, it is evident that we are possessed of the faculty of producing heat to a great degree.

The faculty of producing cold, or, in more exact terms, of resisting foreign heat, which has a tendency to enter our organs, is more confined. In the torrid zone, it has happened that men have died suddenly when the temperature has approached 122° F.

But this property is not less real, though limited. Banks, Blagden, and Fordyce, having exposed themselves to a heat of nearly 260°, they found that their bodies had preserved nearly their own temperature. More recent experiments of Berger and Delaroche have shown that by this cause the heat of the body may rise several degrees: for this to take place, it is only necessary that the surrounding temperature should be a

little elevated. Having both placed themselves in a stove of 120°, their temperature rose nearly 6·8° F. Delaroche having remained sixteen minutes in a dry stove at 176°, his temperature rose 9° F.

Franklin, to whom the physical and moral sciences are indebted for many important discoveries, and a great many ingenious views, was the first who discovered the reason why the body thus resists such a strong heat. He showed that this effect was due to the evaporation of the cutaneous and pulmonary transpiration, and that in this respect the bodies of animals resemble the porous vases called *alcarrazas*. These vessels, which are used in hot countries, allow the water that they contain to sweat through them; their surface is always humid, and a rapid evaporation takes place which cools the liquid they contain.

In order to prove this important result, Delaroche placed animals in a hot atmosphere that was so saturated with humidity that no evaporation could take place. These animals could not support a heat but a little greater than their own without perishing, and they became heated, because they had no longer the means of cooling themselves. Thus, there is no doubt that the cutaneous and pulmonary evaporation are the cause which enables man and animals to resist a strong heat. This explanation is also confirmed by the considerable loss of weight that the body suffers after having been exposed to a great heat.

According to these facts, it is evident that the authors who have represented animal heat as fixed, have been very far from the truth. To judge exactly of it, it would be necessary to take into account the surrounding temperature and humidity; the degree of heat of different parts ought to be considered, and the temperature of one part ought not to be determined by that of another.

We have few correct observations upon the temperature proper to the body of man; the latest are due to Edwards and Gentil. These authors observed, that the most suitable place for judging of the heat of the body is the arm-pit. They noticed nearly $2\frac{1}{2}$° of difference between the heat of a young man and that of a young girl: the heat of her hand was a little less than $97\frac{1}{4}$°, that of the young man was 98·4°. The same person observed great differences of heat in the different temperaments. There are also diurnal variations; the temperature may change about two or three degrees from morning to evening. — *Ure's Chem. Dict.*

Animal jelly. See *Gelatina.*

Animal œconomy. See *Œconomy, animal.*

Animal oil. See *Oleum animale.*

ANIMALCULE. (*Animalculum, i.* n.; diminutive of *animal.*) This word is applied in a general manner to those creatures, the true figures of which cannot be discerned without the help of glasses, and more especially to such as are invisible to the naked eye.

ANIMATION. (*Animatio;* from *animo*, to give life, to animate.) The particular effect produced by the *vis vitæ*, by which life is begun and supported. The fœtus in the womb is said to come to its animation when it begins to act as a true animal after the female that bears it has quickened. Physiologists are not agreed as to the time when the fœtus becomes animated or the female quickened. Some compute it at forty days after conception; others fix it about the term of gestation.

Animation, suspended. See *Asphyxia.*

A'nime gummi. See *Hymenæa courbaril.*

A'nimi deliquium. See *Syncope.*

A'NIMUS. (*us, i.* m.; from ανεμος, wind.) This word is to be distinguished from *anima*, which generally expresses the faculty of reasoning, and *animus*, the being in which that faculty resides.

Anin'ga. A root which grows in the Antilles islands, and is used by sugar-bakers for refining their sugar.

ANISCA'LPTOR. (*or, oris.* m.; from *anus*, the breech, and *scalpo*, to scratch.) The latissimus dorsi is so called, because it is the muscle chiefly instrumental in performing this office. — *Bartholin.*

ANISEED. See *Pimpinella anisum.*

Anisotachys. (From ανισος, unequal, and ταχυς, quick.) Quick and unequal: applied formerly to express such a pulse. — *Gorræus.*

ANI'SUM. (*um, i.* n.; from *a*, neg. and ισος, equal.) See *Pimpinella anisum.*

Anisum sinense. See *Illicium.*

Anisum stellatum. See *Illicium.*

Anisum vulgare. See *Pimpinella.*

ANKLE. The junction of the leg with the foot.

ANNEAL. We know too little of the arrangement of particles to determine what it is that constitutes or produces brittleness in any substance. In a considerable number of instances of bodies which are capable of undergoing ignition, it is found that sudden cooling renders them hard and brittle. This is a real inconvenience in glass and also in steel, when this metallic substance is required to be soft and flexible. The inconveniences are avoided by cooling them very gradually, and this process is called *annealing*. Glass vessels, or other articles, are carried into an oven or apartment near the great furnace, called the leer, where they are permitted to cool, in a greater or less time, according to their thickness and bulk. The annealing of steel, or other metallic bodies, consists simply in heating them, and suffering them to cool again, either upon the hearth of the furnace, or in any other situation where the heat is moderate, or at least the temperature is not very cold.

Annotto. See *Bixa orleana.*

ANNUAL. (*Annuus*, yearly.) Something which returns every year, or closes at the end of the year. In *Botany*, applied to such plants as are of one year's duration, or which continue for the summer season or a few months only; as *Papaver somniferum*, *Helianthus annuus*, *Hordeum*, *Triticum*, &c.

Annuens. (From *annuo*, to nod.) Some muscles of the head were formerly called *musculi annuentes*, because they perform the office of nodding, or bending the head downwards. — *Cowper*, &c.

ANNULAR. (*Annularis*; from *annulus*, a ring, because it is ring-like, or the ring is worn on it, or it surrounds any thing like a ring.) Like a ring; thus, annular bone, cartilage, and hence *digitus annularis*, the ring-finger.

Annular bone. See *Circulus osseus.*

Annular cartilage. See *Trachæa.*

Annularis processus. See *Pons varolii.*

ANNULATUS. (From *annulus*, a ring.) Annulate: having rings, or like to rings.

ANNULUS. (*us*, *i.* m. a ring.) A ring. 1. In *Anatomy*, applied to ring-like parts, openings, &c.; as annulus osseus of the temporal bone of the fœtus, annulus abdominus, &c.

2. In *Botany*, applied to the slender membrane surrounding the stem of the fungi; like a ring or fringe.

Annulus abdominis. The abdominal ring. An oblong separation of tendinous fibres, called an opening, in each groin, through which the spermatic chord in men, and the round ligament of the uterus in women, pass. It is through this part that the abdominal viscera fall in that species of hernia which is called bubonocele. See *Obliquus externus abdominis.*

A'NO. (Ανω, upwards; in opposition to κατω, downwards.) Upwards.

ANOCATHARTIC. (*Anocatharticus*; from ανω, upwards, and καθαιρω, to purge.) Emetic, or that which purges upwards.

ANOCHEI'LUM. (*um*, *i.* n.; from ανω, upwards, and χειλος, the lip.) The upper lip. And *Catocheilon*, the under lip.

ANOCHUS. The imaginary name of a medicine, concerning which many fruitless conjectures have been made.

ANO'DIA. (From α, neg. and οδος, the way.) Hippocrates uses this word for inaccuracy and irregularity in the description and treatment of a disease.

ANODYNE. (*Anodynus*; from α, priv. and ωδυνη, pain.) That which eases pain and procures sleep. Anodyne medicines are divided into three sorts; paregorics, or such as assuage pain; hypnotics, or such as relieve by procuring sleep; and narcotics, or such as ease the patient by stupifying him.

Anodynum martiale. Ferrum ammoniatum precipitated from water by potash.

Anodynum minerale. Sal prunella.

ANO'MALOUS. (*Anomalus*; from α, priv. and νομος, a law.) Irregular; subject to no certain order. Applied to those diseases, the symptoms of which do not appear with that regularity which is generally observed in diseases.

ANO'MPHALOS. (*Anomphalus*; from α, priv. and ομφαλος, the navel.) Without a navel.

ANO'NYMOUS. (*Anonymus*; from α, priv. and ονομα, name.) Nameless; some eminences of the brain are called *columnæ anonymæ*: and it was formerly applied to one of the cricoid muscles.

ANO'RCHIS. (*is*, *idis.* m.; from α, priv. and ορχις, the testicle.) A child is so termed which comes into the world without testicles. This is a very common occurrence. The testicles of many male infants at the time of birth are within the abdomen. The time of their descent is very uncertain, and instances have occurred where they have not reached the scrotum at the age of ten or fifteen.

ANORE'XIA. (*a*, *æ.* f.; from α, priv. and ορεξις, appetite.) Anorexy. A want of appetite, without loathing of food. It is generally symptomatic. See *Dyspepsia.*

ANO'SMIA. (*a*, *æ.* f.; from α, neg. and οζω, to smell.) A loss of the sense of smelling. When it arises from a disease of the Schneiderian membrane, it is termed *Anosmia organica*; and when from no manifest cause, *Anosmia atonica.*

A'NSER. (*er*, *eris.* m.; a goose or gander.) The name of a genus of birds.

Anser dome'sticus. See *Anas anser.*

Anseres. (The plural of *anser*, a goose.) The third order in the Linnæan arrangement of birds.

ANSERI'NA. (*a*, *æ.* f.; from *anser*, a goose: so called because geese eat it.) See *Potentilla anserina.*

ANT. See *Formica rufa.*

Ant, acid of. See *Formic acid.*

ANTACID. (*Antacidus*; from αντι, against, and *acidus*, acid.) That which destroys acidity. The action of antacids in the human stomach is purely chemical, as they merely combine with the acid present, and neutralise it. They are only palliatives, the generation of acidity being to be prevented by restoring the tone of the stomach and its vessels. Dyspepsia and diarrhœa are the diseases in which they are employed. The principal antacids in use are the alkalies; potash, and soda, and their subcarbonates, dissolved in water. The solution of soda, called double soda-water, or that of potash supersaturated with carbonic acid, is more frequently used, as being more pleasant. Ammonia has been recommended as preferable to every other antacid, from 10 to 20 drops of the liquor ammoniæ in a cupful of water. The liquor calcis, or lime water, is likewise used to correct acidi-

ty, two or three ounces being taken occasionally. Creta præparata alone, or with the addition of a small quantity of any aromatic — chelæ cancrorum præparatæ; magnesia also, and its carbonate, are used for the same purpose.

ANTACRID. (*Antacridus*; from αντι, against, and *acridus*, an acrimony.) That which corrects acrimony of the fluids.

ANTAGONIST. (*Antagonistus*, counteracting.) A term applied to those muscles which have opposite functions. Such are the flexor and extensor of any limb, the one of which contracts it, the other stretches it out; and also the abductors and adductors. Solitary muscles are those without any antagonist, as the heart, &c.

ANTA'LGIC. (*Antalgicus*; from αντι, against, and αλγος, pain.) That which relieves pain.

ANTA'LKALINE. (*Antalkalinus*; from αντι, against, and *alkali*, an alkali.) That which possesses the power of neutralising alkalies. All the acids are of this class.

ANTAPHRODISI'AC. (*Antaphrodisiacus*; from αντι, against, and Αφροδιτης, Venus.) Anti-venereal, or whatever extinguishes amorous desires.

Antaphrodi'ticus. The same.

Antapo'dosis. (From ανταποδιδωμι, to reciprocate.) A vicissitude, or return of the paroxysm of fevers. — *Hippocrates.* Called by Galen *epidosis.*

Antaris. Mercury.

Antarthritic. See *Antiarthritic.*

Antasthmatic. See *Antiasthmatic.*

Antatrophic. See *Antiatrophic.*

Anteche'sis. (From αντεχομαι, to resist.) A violent stoppage in the bowels, which resists all efforts to remove it. — *Hippocrates.*

ANTELA'BIUM. (From *ante*, before, and *labium*, a lip.) The extremity of the lip.

Ante'mbasis. (From αντι, mutually, and εμβαινω, to enter.) A coalescence, or union of bone. — *Galen.*

Anteme'ticus. See *Antiemetic.*

Antenea'smus. (From αντι, against, and τεινεσμος, implacable.) Enthusiasm: applied formerly to that species of madness in which the patient endeavours to destroy himself.

Antephialtic. See *Antiphialtic.*

Antepileptic. See *Antiepileptic.*

ANTE'RIOR. Before: applied to what may be situated before another of the same kind; as a muscle, a projection, eminence, lobe, artery, &c.

Anterior auris. *Musculus anterior auris.* One of the common muscles of the ear, situated before the external ear. It arises thin and membranous, near the posterior part of the *zygoma*, and is inserted into a small eminence on the back of the helix, opposite to the concha, which it draws a little forwards and upwards.

Anterior intercostal. *Nervus intercostalis anterior.* This is also called the splanchnic nerve, and is a branch of the great intercostal that is given off in the thorax.

Anterior mallei. See *Laxator tympani.*

ANTHE'LIX. See *Antihelix.*

Anthe'lmia. (*a*, *æ*. f.; from αντι, against, and ελμινς, a worm: so called, because it was thought of great virtue in expelling worms.) The trivial name of the Indian pink. See *Spigelia anthelmia*, and *marilandica.*

ANTHELMINTIC. (*Anthelminticus*; from αντι, against, and ελμινς, a worm.) Whatever procures the evacuation of worms from the stomach and intestines. The greater number of anthelmintics act mechanically, dislodging the worms by the sharpness or roughness of their particles, or by their cathartic operation. Some seem to have no other qualities than those of powerful bitters, by which they either prove noxious to these animals, or remove that debility of the digestive organs, by which the food is not properly assimilated, or the secreted fluids poured into the intestines are not properly prepared; circumstances from which it has been supposed the generation of worms may arise. The principal medicines belonging to this class, are, mercury, gamboge, Geoffræa inermis, tanacetum, aspidium filix mas, spigelia marilandica, artemisia santonica, olea Europæa, stannum pulverisatum, ferri limaturæ, and dolichos pruriens; which see under their respective heads. See *Worm.*

A'NTHEMIS. (*is*, *idis*. fem.; from ανθεω, *floreo*; because it bears an abundance of flowers.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua.*

2. The name in the London Pharmacopœia for chamomile. See *Anthemis nobilis.*

Anthemis cotula. The mayweed, or stinking chamomile; called also *Cotula fœtida*, and *Chamæmelum fœtidum*, in the pharmacopœias. This plant, *Anthemis — receptaculis conicis paleis setaceis, seminibus nudis*, of Linnæus, has a very disagreeable smell; the leaves, a strong, acrid, bitterish taste; the flowers, however, are almost insipid. It is said to have been useful in hysterical affections, but is very seldom employed.

Anthemis nobilis. The common chamomile, called also *Chamæmelum*, *Chamæmelum nobile*, *Chamomilla romana*, and *Euanthemon.* *Anthemis* of the last London pharmacopœia. *Anthemis — foliis pinnato-compositis linearibus acutis subvillosis*, of Linnæus. Both the leaves and flowers of this indigenous plant have a strong though not ungrateful smell, and a very bitter, nauseous taste: but the latter are the bitterer, and considerably more aromatic. They possess tonic and stomachic qualities, and are much

employed to restore tone to the stomach and intestines, and as a pleasant and cheap bitter. They have been long successfully used for the cure of intermittents, as well as of fevers of the irregular nervous kind, accompanied with visceral obstructions. The flowers have been found useful in hysterical affections, flatulent or spasmodic colics, and dysentery; but, from their laxative quality, Dr. Cullen tells us they proved hurtful in diarrhœas. A simple infusion is frequently taken to excite vomiting, or for promoting the operation of emetics. Externally they are used in the *decoctum pro fomento*, and are an ingredient in the *decoctum malvæ compositum*.

Anthemis pyrethrum. The Spanish chamomile; pellitory of Spain. *Pyrethrum* of the pharmacopœias: called likewise *Asterantium*, *Buphthalmum creticum*, *Bellis montana putescens acris*, *Dentaria*, *Herba salivaris*, and *Pes alexandrinus*. *Anthemis — caulibus simplicibus unifloris decumbentibus — foliis pinnato-multifidis*, of Linnæus. This root, though cultivated in this country, is generally imported from Spain. Its taste is hot and acrid, its acrimony residing in a resinous principle. The ancient Romans, it is said, employed the root of this plant as a pickle. In its recent state, it is not so pungent as when dried, and yet if applied to the skin, it produces inflammation. Its qualities are stimulant; but it is never used, except as a masticatory, for relieving toothachs, rheumatic affections of the face, and paralysis of the tongue, in which it affords relief by stimulating the excretory ducts of the salival glands.

ANTHER. (*Anthera*, *æ*. f.; from ἀνθος, a flower.)

I. A part of the fructification of plants: so called by Linnæus, by way of eminence. The male genital organ of plants consists of three parts, the filament, anther or tip, and pollen. The anther is the little head or extremity which rests on the filament.

Different terms are applied to anthers from their *figure*:

1. *Oblong*; as in *Lilium candidum*.
2. *Globose*; as in *Mercurialis annua*.
3. *Semilunar*; as in *Fragaria vesca*.
4. *Angular*; as in *Tulipa gesneriana*.
5. *Linear*; as in the grasses, and *Protea*.
6. *Didymous*; as in *Digitalis purpurea*.
7. *Arrow-shaped*; as in *Crocus sativus*.
8. *Bifid*, parted half way down in two; as in the grasses, and *Erica*.
9. *Peltate*, of a round shield-like shape; as in *Taxus baccata*.
10. *Dentate*, with a tooth-like margin; as in *Taxus baccata*.
11. *Hairy*; as in *Lamium album*.
12. *Bicorn*, with two divisions like horns; as with *Arbutus uva ursi*, and *Vaccinium myrtillis*.
13. *Cristate*, having cartilaginous points.
14. *Crucial*; as in *Mellitis*.
15. *Double*, or *twin-like*; as in *Callisia* and *Hura*.
16. *Rostrate*; as in *Osbeckia*.
17. *Subulate*, or awl-shaped; as in the genus *Roella*.
18. *Cordate*; as in *Cusparia*.
19. *Reniform*, kidney-shaped; as in *Tradescantia*, and *Ginora*.
20. *Trigonal*, or three-cornered; as in the *Rose*.
21. *Tetragonal*, or four-cornered; as in *Cannabis*, and *Dictamnus*.

From their *situation*:

22. *Erect*, with its base upon the apex of the filament; as in *Tulipa gesneriana*.
23. *Incumbent*, lying horizontally upon the filament; as in *Amaryllis formossima*.
24. *Versatile*, when the incumbent anther adheres so loosely to the filament, that the least agitation of the plant puts it in motion; as in *Secale cereale*.
25. *Lateral*, adhering laterally to the filament; as in *Dianthera*.
26. *Sessile*, the filament almost wanting; as in *Aristolochia clematitis*.
27. *Free*, not united to any other anther.
28. *Connate*, united together; as in *Viola odorata*.

II. A compound medicine used by the ancients; so called from its florid colour. — *Galen*. *Ægineta*.

ANTHER'ION. (Ανθερεων. *Antherium*, *i*. n.) The chin.

ANTHODIUM. (*um*, *i*. n.; from ανθος, a flower.) A species of calyx, which contains many flowers, being common to them all.

It is distinguished from its structure into,

1. *Monophyllous*, consisting of one leaflet perfect at its base, but cut at its limb or margin; as in *Tragopogon*.
2. *Polyphyllous*, consisting of several leaflets; as in *Carduus*, and *Centaurea*.
3. *Simple*, consisting of one series of leaflets; as in *Cacalia porophyllum*.
4. *Equal*, when all the leaves of the *Anthodium simplex* are of the same length; as in *Ethulia*.
5. *Imbrecate* or *squamose*; as in *Centaurea cyanus*.
6. *Squarrose*, the leaflets bent backward at their extremities.
7. *Scabrous*, rough, consisting of dry leaflets; as in *Centaurea glastifolia* and *jacea*.
8. *Spinous*, the leaflets having thorns; as in *Cynara scolymus*, and *Centaurea sonchifolia*.
9. *Turbinate*; as in *Tarchonanthus camphoratus*.
10. *Globose*; as in *Centaurea calcitrapa*.
11. *Hemispherical*, round below and flat above; as in *Anthemis*, and *Chrysocoma*.
12. *Cylindrical*, long and round; as with *Eupatorium*.
13. *Calyculate*, the basis surrounded by another small leafy anthodium; as in *Leontodon taraxacum*, *Senecio*, and *Crepis*.

ANTHONY, Saint. (This Saint was supposed to cure erysipelas by miracle. In the Roman missal, he was implored as being the preserver from all sorts of fire.) See *Erysipelas.*

ANTHOPHYLLITE. A massive mineral, of a brown colour, found at Konigsberg, in Norway.

ANTHOPHYLLUS. (*us, i.* m.; from ανθος, a flower, and φυλλον, a leaf: so called from the fragrance of the flowers and the beauty of the leaves.) 1. The clove is so termed when it has been suffered to grow to maturity. — *Bauhin.*

2. (From ανθος, a flower, and φιλεω, to love.) A florist.

A'NTHORA. (*a, æ.* f.; *quasi antithora.* Αντιθορα; from αντι, against, and θορα, monkshood: so called, because it is said to counteract the effects of the thora or monkshood.) A species of wolfs-bane. See *Aconitum anthora.*

ANTHOS. (*os, eos.* n.; from ανθος, a flower.) 1. A flower of any kind.

2. The flower of the rosemary.

Antheos flores. The flowers of the *rosmarinus* are so termed in some pharmacopœias. See *Rosmarinus officinalis.*

ANTHRA'CIA. (*a, æ.* f.; from ανθρακιη, a heap of burning coals.) A carbuncle. See *Anthrax.*

ANTHRACITE. A species of coal.

Anthraco'sis oculi. A red, livid, burning, sloughy, very painful tumour, occurring on the eyelids. — *Ægineta.*

ANTHRAX. (*ax, acis.* m.; from ανθραξ, a small live-coal: so denominated from the redness and fiery heat of the inflammation.) A carbuncle: called also *Anthracia, Anthrocosia, Anthrocoma, Carbunculus, Carbo, Rubinus verus, Codisella, Granatristum, Pruna,* and *Ignis persicus.* A hard and circumscribed inflammatory tumour, which sometimes forms on the cheek, neck, or back, and in a day or two becomes very hard, shining, somewhat œdematous at the sides, and black in the centre, and, at length, and in a short time, highly gangrenous. It then discharges an extremely fœtid sanies from under the black core, which, like a burning coal, continues destroying the surrounding parts. The definition sufficiently points out its relation to the furuncle or boil, especially when the latter assumes an unkindly or malignant character from something peculiar in the part or in the constitution. "The inflammation that produces the carbuncle is, however, of a different nature from any of the former: it is stationary," observes Mr. Hunter, "with respect to place, and is pretty much circumscribed, forming a broad, flat, firm tumour. It begins in the skin, almost like a pimple, and goes deeper and deeper, spreading with a broad base under the skin in the cellular membrane. It produces a suppuration, but not an abscess, somewhat similar to the erysipelatous, when the inflammation passes into the cellular membrane; for, as there are no adhesions, the matter lies in the cells where it was formed, almost like water in an anasarca. This inflammation attacks more beyond the middle age than in it, and very few under it. It is not common in those that have lived well. I never saw but one patient of this kind in an hospital. It appears to have some affinity to the boil; but the boil differs in this respect, that it has more of the true inflammation, therefore spreads less, and is more peculiar to the young than the old, which may be the reason why it partakes more of the true inflammation."

The carbuncle occurs chiefly, perhaps uniformly, in weakly habits, and hence, often in advanced life. But it is not all debilitated persons who have inflammations that exhibit this disease: and we have here, therefore, a striking proof of the influence of idiosyncrasy, or a peculiarity of constitution upon the general laws and progress of inflammation, or of a peculiarity of that part of the constitution in which the inflammation shows itself, and but for which the inflammatory stages of the present disease would in all probability succeed each other in regular order, and the anthrax be reduced to the character of a common and benign abscess. It sometimes appears in a mild, but more frequently in a malignant form: and though it often makes its appearance as a secondary disease in the plague, &c. it occasionally is a primary one.

It was formerly the practice to attempt the cure of carbuncle with violently stimulating applications, as terebinthinate poultices and plasters of the hot gums; and even the actual cautery, and cutting out the whole of the diseased part with the knife: but, in the present day, the practice is much more mild, and consists in applying emollient poultices, until, from the diffused hardness and extent of the carbuncle, the surgeon ascertains the want of power in the constitution to expel the pent-up matter, when, and immediately, several incisions are freely made with the scalpel through the hardened integuments into the quagmire, where the pus is collected; and then fomenting with strong decoctions of chamomile flowers and poppy heads, and applying linseed meal and bread, or other emollient poultices. The constitutional remedies to be depended on are tonics, such as cinchona and cascarilla, with mineral acids, and the free use of wine.

ANTHROPOGRA'PHY. (*Anthropographia, æ.* f.; from ανθρωπος, a man, and γραφω, to write.) Description of the structure of man.

ANTHROPOLO'GY. (*Anthropologia, æ.* f.; from ανθρωπος, a man, and λογος, a discourse.) The description of man.

ANTHROPOMOR'PHOUS. (*Anthropomorphus;* from ανθρωπος, a man, and μορφη, shape.) Of the shape of man: appli-

ed to animals which had the greatest resemblance to man; and to figured stones; and to the root of a plant. See *Atropa mandragora.*

ANTHROPOPHA'GIA. (*a, æ.* f.; from ανθρωπος, a man, and φαγειν, to eat.) The act or habit of eating human flesh.

ANTHROPOPHA'GUS. (*us, i.* m.; from ανθρωπος, a man, and φαγειν, to eat.) A man-eater. The term *anthropophagi* is applied to people who feed on human flesh.

ANTHROPOSCO'PIA. (*a, æ.* f.; from ανθρωπος, a man, and σκοπεω, to inspect or contemplate.) The art of judging or discovering a man's character, disposition, passions, and inclinations, from the lineaments of his body: in which sense it is more extensive than physiognomy.

ANTHROPOSO'PHIA. (*a, æ.* f.; from ανθρωπος, a man, and σοφια, knowledge.) The knowledge of man.

ANTHUS. (*us, i.* m.; from ανθος, a flower.) The name of a bird which is said to live on flowers only.

Anthypnotic. See *Antihypnotic.*

Anthypochondriac. See *Antihypochondriac.*

Anthysteric. See *Antihysteric.*

ANTI. (Ἀντι, *contra*, against.) This Greek preposition is very frequently used in composition, preceding other words, as antibilious, antivenereal, &c.; and means, against bile, the venereal disease, &c.

ANTI'ADES. (From αντιαω, to meet.)

1. The tonsils are so called, because they answer one another.

2. The mumps. — *Nic. Piso.*

3. In some writers, inflammation of the tonsils.

ANTIA'GRA. (From αντιας, a tonsil, and αγρα, a prey.) A tumour of the tonsils. — *Ulpian, Roland,* &c.

ANTIARTHRI'TIC. (*Antiarthriticus;* from αντι, against, and αρθριτις, the gout.) Antiarthritic. Against the gout; that which is calculated to prevent or cure the gout.

ANTIASTHMATIC. (*Antiasthmaticus;* from αντι, against, and ασθμα, an asthma.) Against the asthma; that which relieves or cures asthma.

ANTIATROPHIC. (*Antiatrophicus;* from αντι, against, and ατροφια, an atrophy.) Against an atrophy, or wasting of the body.

ANTICACHE'CTIC. (*Anticachecticus;* from αντι, against, and καχεξια, a cachexy.) Against a cachexy, or bad habit of body.

ANTICA'RDIUM. (*um, i.* n.; from αντι, against, or opposite, and καρδια, the heart.) The hollow at the bottom of the breast, commonly called scrobiculus cordis, or pit of the stomach.

ANTICATARRHAL. (*Anticatarrhalis;* from αντι, against, and καταρρος, a catarrh.) That which relieves a catarrh.

ANTICAUSO'TIC. (*Anticausoticus;* from αντι, against, and καυσος, a burning fever.) Against a burning fever. We read, in *Corp. Pharm.* of Junken, of a *syrupus anticausoticus.*

A'NTICHEIR. (*cheir, cheieros.* f.; from αντι, against, and χειρ, the hand.) The thumb. — *Galen.*

ANTICNE'MION. (From αντι, against, or opposite, and κνημη, the calf of the leg.) That part of the leg which is bare of flesh, and opposite the calf of the leg. The shinbone. — *Galen.*

ANTICO'LIC. (*Anticolicus;* from αντι, against, and κωλικη, the colic.) Against the colic.

ANTIDIA'STOLE. (From αντι, against, and διαστελλω, to distinguish.) An exact and accurate distinction of one disease, or symptom, from another.

ANTIDI'NICUS. (From αντι, against, and δινος, circumgyration.) Against a vertigo, or giddiness. — *Blanchard.*

ANTIDOTARIUM. (*um, i.* n.; from αντιδοτος, an antidote.) A term used by former writers, for what we now call dispensatory; a place where antidotes are prescribed and prepared. There are antidotaries extant of several authors, as those of *Nicholaus, Mesue, Myrepsus,* &c.

ANTIDOTE. (*Antidotum, i.* n.; from αντι, against, and διδωμι, to give.)

1. An antidote.

2. A preservative against sickness.

3. A remedy. — *Galen.*

Antidotus lapis. The philosopher's stone: so called by way of pre-eminence.

ANTIDYSENTE'RIC. (*Antidysentericus;* from αντι, against, and δυσεντερια, a flux.) Against a dysentery.

ANTIEMETIC. (*Antiemeticus;* from αντι, against, and εμεω, to vomit.) That which prevents or stops vomiting.

ANTIEPHIALTICUS. (From αντι, against, and εφιαλτης, the nightmare.) Against the nightmare.

ANTIEPILEPTIC. (*Antiepilepticus;* from αντι, against, and επιληψις, the epilepsy.) Against epilepsy.

ANTIFEBRILE. (*Antifebrilis;* from αντι, against, and *febris*, a fever.) A febrifuge, a remedy against fever.

ANTIHE'CTIC. (*Antihecticus;* from αντι, against, and ἑκτικος, a hectic fever.) Against a hectic fever.

Antihecticum poterii. A medicine invented by Poterius, called also *Antimonium diaphoreticum Joviale,* formerly extolled as effectual in hectic fevers, but now disregarded. It is an oxide of tin and chalybeated regulus of antimony, in consequence of their deflagration with nitre.

ANTIHE'LIX. (*ix, icis.* m.; from αντι, against, and ἑλιξ, the helix: so called from its opposition to the outer circuit, called the helix.) The inner circle of the external ear.

ANTIHELMIN'TIC. See *Anthelmintic.*

ANTIHYPNOTIC. (*Antihypnoticus;* from αντι, against, and ὑπνος, sleep.) Anthypnotic; that which prevents sleep or drowsiness.

ANTIHYPOCHONDRIAC. (*Anti-*

hypochondriacus; from αντι, against, and ὑποχονδριακος, lowness of spirits.) That which is adapted to prevent or cure lowness of spirits.

ANTIHYSTE'RIC. (*Antihystericus*; from αντι, against, and ὑστερικα, hysterics.) That which prevents or relieves hysterics.

ANTILE'PSIS. (From αντιλαμβανω, to take hold of.) The securing of bandages, or ligatures, from slipping. — *Hippocrates.*

ANTILO'BIUM. (*um, i.* n.; from αντι, opposite, and λοβος, the bottom of the ear.) The tragus, or that part of the ear which is opposite the lobe.

ANTILOI'MIC. (*Antiloimicus*; from αντι, against, and λοιμος, the plague, or contagion.) Against the plague, or any kind of contagion.

ANTI'LOPUS. (*us, i.* m.) The antelope. An African beast, resembling a deer, the hoofs and horns of which were formerly given in hysteric and epileptic cases.

ANTILY'SSUS. (From αντι, against, and λυσσα, the bite of a mad dog.) That which is administered against the effect of a mad dog's bite; as *pulvis antilyssus*, &c.

ANTIMO'NIAL. (*Antimonialis*; from *antimonium*, antimony.) A preparation or composition in which antimony is the chief ingredient.

Antimonial powder. See *Antimonialis pulvis.*

ANTIMONIALIS PULVIS. Antimonial powder. Take of sulphuret of antimony, powdered, a pound; hartshorn shavings, two pounds. Mix, and throw them into a broad iron pot, heated to a white heat, and stir the mixture constantly until it acquires an ash colour. Having taken it out, reduce it to powder, and put it into a coated crucible, upon which another inverted crucible, having a small hole in its bottom, is to be luted. Then raise the fire by degrees to a white heat, and keep it so for two hours. Reduce the residuary mass to a very fine powder.

This preparation was introduced into the former London pharmacopœia as a substitute for a medicine of extensive celebrity, Dr. James's powder; to which, however, the present form more nearly assimilates in its dose, and it is more manageable in its administration, by the reduction of the proportion of antimony to one half.

The activity of antimonials entirely depends upon the state of oxidisement of the metal; the protoxide is very active; the peroxide comparatively inert, and requiring, therefore, to be administered in very large doses to produce those effects which result from very small doses of the former; and even then it is but uncertain in its operation. All antimonials, therefore, which are liable to contain the metal in uncertain or indeterminate degrees of oxidisement, or rather which may contain varying proportions of the two oxides, are highly objectionable, and among them none more so than antimonial powder, which sometimes is active and sometimes inert, according as more or less of the protoxide is left in the product.

By the action of heat as above directed, the sulphur is in the first instance burnt off, and the antimony converted into protoxide, as in the process for making glass of antimony; the protoxide itself is volatile, and accordingly at the high temperature above directed, it also is partly volatilised and partly converted into a fixed peroxide, and what remains is chiefly bone-earth, with this peroxide and a trace of protoxide, the quantity and state of the oxide depending upon slight modifications in the process, which can scarcely be controlled. Accordingly, upon submitting pulvis antimonialis, prepared by different persons, and at different times, to analysis, its composition is found to be extremely variable, and in two instances scarcely any oxide of antimony could be detected in it. Mr. Phillips analysed two samples with the following results: —

Peroxide of antimony	35	38
Phosphate of lime	65	62
	100	100

Mr. Brande says, he generally found a greater discordance, and, in some instances, as much as 5 per cent. of protoxide has been detected, contributing, of course, to the activity of the powder.

This preparation of antimony is principally employed as a sudorific in febrile diseases; and, in consequence of its insolubility, it is generally given in pills, or mixed with some syrup or thick vehicle. Small diaphoretic doses of the tartarised antimony are, however, much more certain. See also, *James's powder.*

ANTIMONIC. (From *antimonium*, its base.) Appertaining to antimony.

Antimonic acid. See *Antimony.*

Antimonii butyrum. See *Antimony.*

ANTIMONII OXYDUM. Oxide of antimony. This preparation is now directed to be made by dissolving an ounce of tartarised antimony, and two drachms of subcarbonate of ammonia, separately in distilled water, mixing the solutions, and boiling till the oxide of antimony is precipitated, which is to be washed with water, and dried. This must not be confounded with the old calcined or diaphoretic antimony, being a much more active preparation. See *Antimony.*

In its effects, it will be found to agree pretty much with the antimonium tartarisatum; but it is very little employed.

ANTIMONII SULPHURETUM. Sulphuret of antimony is an abundant natural product, and is found in most mining districts. It is met with in commerce in cakes or loaves which have been fused, and exhibits a brilliant steel-grey, and radiated or fibrous crystaline texture, when broken. In this state it is chiefly imported from Holland and Germany, often contaminated with lead,

iron, and arsenic. If lead be present in any quantity, the texture of the cakes is foliated, and indistinctly striated. Iron is recognised by the brown colour produced by deflagration with nitre, and arsenic by its peculiar odour during volatilisation. Exposed to the joint action of a dull red heat and air, the greater proportion of the sulphur may be burnt off from the sulphuret, and the antimony becomes protoxidised; a slight increase of heat fuses this protoxide, a portion being at the same time volatilised, and the substance on cooling concretes into a reddish brown vitreous mass, known and imported under the name of glass of antimony. It is a protoxide combined with a variable proportion, generally about one-tenth, of sulphuret, and is a very useful article in the pharmaceutical laboratory.

Antimonii sulphuretum præcipitatum. *Sulphur antimonii præcipitatum.* Precipitated sulphuret of antimony. This preparation of antimony appears to have rendered that called kermes mineral unnecessary. It is made thus: — Take of sulphuret of antimony, in powder, two pounds; — of the solution of potash, four pints; — of distilled water, three pints.

Mix: and boil the mixture over a slow fire for three hours, stirring it well, and occasionally adding distilled water, so that the same measure may be preserved. Strain the solution quickly through a double linen cloth, and, while it is yet hot, drop in, gradually, as much sulphuric acid as may be required to precipitate the powder; then wash away the sulphate of potash by hot water; dry the precipitated sulphuret of antimony, and reduce it to powder. In this process, part of the water is decomposed, and its oxygene unites partly with the antimony; the oxide of antimony, as well as the potash, combines with sulphur and hydrogene, forming hydrosulphuret of antimony and hydroguretted sulphuret of potash. If the solution be allowed to cool, the former of these partly precipitates, constituting the kermes mineral; but the addition of the sulphuric acid throws down the whole of it at once, mixed with some sulphur, furnished by the decomposition of the hydroguretted sulphuret of potash.

As an alterative and sudorific, it is in high estimation, and given in diseases of the skin and glands; and, joined with calomel, it is one of the most powerful and penetrating alteratives we are in possession of.

Antimonii tartarizati vinum. Wine of tartarised antimony. Take of tartarised antimony, one scruple; boiling distilled water, eight fluid ounces; rectified spirit, two fluid ounces. Dissolve the tartarised antimony in the boiling distilled water, and add the spirit to the filtered liquor. Four fluid drachms of this contain one grain of tartarised antimony.

Antimonii vitrum. Glass of antimony. This useful preparation is thus made: — Sulphuret of antimony in powder is exposed in a shallow iron dish to a very moderate heat, and is kept constantly stirred to prevent agglutination. If this happens, it must be removed from the fire, and again reduced to powder. When a moderate heat ceases to cause the evolution of sulphureous vapours, the fire must be gradually increased till they again appear, and in this way it may be slowly augmented till the bottom of the dish becomes red hot, and fumes of sulphur are no longer evolved. The grey powder thus obtained answers well for the production of tartarised antimony; but if it is to be vitrified, it must be put into a covered iron crucible, and exposed to a strong heat till it fuses into a clear glass, when it may be poured out upon a brass plate: it should be transparent, and of a bright-brownish red or hyacinthine colour. This preparation was formerly used as a diaphoretic, aperient, and emetic, but it is now properly laid aside.

Antimonious acid. See *Antimony.*

Antimony, bicloride of. See *Antimony.*

Antimony, butter of. See *Antimony.*

Antimony, glass of. See *Antimonii vitrum.*

Antimony, sulphuret of. See *Antimonii sulphuretum.*

Antimony, tartarized. See *Antimonium tartarisatum.*

Antimony, vitrified oxide of. See *Antimonii vitrum.*

ANTIMONITE. A salt formed by the combination of the antimonious acid with alkaline and other bases. See *Antimony.*

Antimonium calcinatum. An oxide of antimony.

Antimonium diaphoreticum. An old name for an oxide of antimony.

Antimonium tartarizatum. Tartarised antimony; tartar emetic: called also *Tartarus emeticus, Tartarum emeticum, Tartarus antimonialis, Tartris antimonii cum potassa*, and *Tartarum stibiatum*. It is obtained by boiling the fusible oxide of antimony with supertartrate of potash; the excess of tartaric acid dissolves the oxide, and a triple salt is obtained by crystallisation. The London Pharmacopœia directs thus: Take of glass of antimony finely levigated, supertartrate of potash in powder, of each a pound; boiling distilled water, a gallon; mix the glass of antimony and the supertartrate of potash well together, and then add them by degrees to the distilled water, which is to be kept boiling and constantly stirred; boil the whole for a quarter of an hour, and then set it by. Filter it when cold, and evaporate the filtered liquor so that crystals may form in it. A solution of this salt in diluted wine is ordered in the Pharmacopœia. See *Antimonii tartarizati vinum.*

Pure tartar emetic is in colourless and transparent tetrahedrons or octohedrons. It

reddens litmus. Its taste is nauseous and caustic. Exposed to the air, it effloresces slowly. Boiling water dissolves half its weight, and cold water a fifteenth part. Sulphuric, nitric, and muriatic acids, when poured into a solution of this salt, precipitate its cream of tartar; and soda, potash, ammonia, or their carbonates, throw down its oxide of antimony. Barytes, strontites, and lime waters, occasion not only a precipitate of oxide of antimony, like the alkalies, but also insoluble tartrates of these earths. That produced by the alkaline hydrosulphurets is wholly formed of kermes; while that caused by sulphuretted hydrogene, contains both kermes and cream of tartar. The decoctions of several varieties of cinchona, and of several bitter and astringent plants, equally decompose tartar emetic: and the precipitate then always consists of the oxide of antimony, combined with the vegetable matter and cream of tartar. Physicians ought therefore to beware of such incompatible mixtures. When tartar emetic is exposed to a red heat, it first blackens, like all organic compounds, and afterwards leaves a residuum of metallic antimony and subcarbonate of potash. From this circumstance, and the deep brownish red precipitate, by hydrosulphurets, this antimonial combination may readily be recognised. The precipitate may further be dried on a filter, and ignited with black flux, when a globole of metallic antimony will be obtained. Infusion of galls is an active precipitant of tartar emetic.

Tartar emetic is the most useful of all the antimonial preparations. Its action is not dependent on the state of the stomach, and, being soluble in water, its dose is easily managed, while it also acts more speedily. In doses of from one to three, four, or five grains, it generally acts powerfully as an emetic, and is employed whenever we wish to obtain the effects which result from full vomiting. As patients are differently affected by this medicine, the safest mode of exhibiting it is: ℞. *Antimonii tartarizati*, gr. iij. *Aquæ distillatæ*, ℥iv. Misce et cola. Dosis ℥ss. omni horæ quadrante, donec supervenerit vomitus.

For children, emetic tartar is not so safe for an emetic as ipecacuanha powder: when great debility of the system is present, even a small dose has been known to prove fatal. Sometimes it proves cathartic. In smaller doses it excites nausea, and proves a powerful diaphoretic and expectorant. As an emetic, it is chiefly given in the beginning of fevers and febrile diseases; when great debility is present, and in the advanced stages of typhoid fever, its use is improper and even sometimes fatal. As a diaphoretic, it is given in small doses, of from an eighth to a quarter of a grain; and as an expectorant, in doses still smaller. Emetic tartar in small doses, combined with calomel, has been found a powerful yet safe alterative in obstinate eruptions of the skin. ℞. *Antimonii tartarizati*, gr. iv. *Hydrargyri submuriatis*, gr. xvj. *Confectionis rosæ gallicæ*, q. s. Divide in pil. xxiv. Capiat i. mane nocteque ex thea sassafras.

In the form of powder, or dissolved in water, it is applied by a pencil to warts and obstinate ulcers: it is also given in the form of clyster, with a view to produce irritation in soporose diseases, apoplexy, ileus, and strangulated hernia. The powder mixed with any fluid, and rubbed on the scrobiculus cordis, excites vomiting. Another property which tartar emetic has, when rubbed on the skin, is that of producing a crop of pustules very like to the small-pox, and with this view it is used against rheumatic pains, white, and other obstinate swellings. The best antidote against the bad effects of too large a quantity of this and other antimonial preparations, is a decoction of the bark of cinchona: in defect of which, tea and other astringents may be used. In a larger dose, this salt is capable of acting as a violent poison. The best antidotes are demulcent drinks, infusions of bark, tea, and sulphuretted hydrogene water, which instantly converts the energetic salt into a relatively mild sulphuret: anodynes are useful afterwards.

Antimonium vitrifactum. See *Antimonii vitrum*.

ANTIMONY. (*Antimonium*, i. n. Αντιμονιον. The origin of this word is very obscure. The most received etymology is, from αντι, against, and μονος, a monk; because Valentine, by an injudicious administration of it, poisoned his brother monks.) Antimony, called also *Stibium*. A metal found *native*, but very rarely; it has, in that state, a metallic lustre, and is found in masses of different shapes; its colour is white, between those of tin and silver. It generally contains a small portion of arsenic. It is likewise met with in the state of an oxide, *antimonial ochre*. The most abundant ore of it is that in which it is combined with sulphur, *the grey ore of antimony*, or *sulphuret of antimony*. The colour of this ore is bluish, or steel-grey, of a metallic lustre, and often extremely beautifully variegated. Its texture is either compact, foliated, or striated. The striated is found both crystallised, massive, and disseminated: there are many varieties of this ore.

Properties. — Antimony is a metal of a greyish white, having a slight bluish shade, and very brilliant. Its texture is lamellated, and exhibits plates crossing each other in every direction. Its surface is covered with herbarisations and foliage. Its specific gravity is 6·702. It is sufficiently hard to scratch all the soft metals. It is very brittle, easily broken, and pulverisable. It fuses at 810° Fahr. It can be volatilised, and burns by a strong heat. When perfectly fused, and suffered to cool gradually, it crystallises in octohedra. It unites with sul-

phur and phosphorus. It decomposes water strongly at a red heat. It is soluble in alkaline sulphurets. Sulphuric acid, boiled upon antimony, is feebly decomposed. Nitric acid dissolves it in the cold. Muriatic acid scarcely acts upon it. The oxygenated muriatic acid gas inflames it, and the liquid acid dissolves it with facility. Arsenic acid dissolves it by heat with difficulty. It unites, by fusion, with gold, and renders it pale and brittle. Platina, silver, lead, bismuth, nickel, copper, arsenic, iron, cobalt, tin, and zinc, unite with antimony by fusion, and form with it compounds, more or less brittle. Mercury does not alloy with it easily unless very pure. We are little acquainted with the action of alkalies upon it. Nitrate of potash is decomposed by it. It fulminates by percussion with oxygenated muriate of potash. Antimony forms three, probably four, distinct combinations with oxygene :

1. The *protoxide*, a blackish grey powder obtained from a mixture of powder of antimony and water at the positive pole of a voltaic circuit.

2. The *deutoxide*, obtained by digesting the metal in powder in muriatic acid, and pouring the solution in water of potash. Wash and dry the precipitate. It is a powder of a dirty white colour which melts in a moderate red heat, and crystallises as it cools.

3. The *tritoxide*, or *antimonious acid*, which is immediately produced by the combustion of the metal, called formerly, from its fine white colour, the argentine flowers of antimony. It forms the salts called *antimonites* with the different bases.

4. The *peroxide*, or *antimonic acid*. This is formed when the metal in powder is ignited along with six times its weight of nitre in a silver crucible. The excess of potash and nitre being afterwards separated by hot water, the antimoniate of potash is then to be decomposed by muriatic acid, when the insoluble antimonic acid of a straw colour will be obtained.

Methods of obtaining antimony. — 1. To obtain antimony, heat 32 parts of filings of iron to redness, and project on them, by degrees, 100 parts of antimony; when the whole is in fusion, throw on it, by degrees, 20 parts of nitrate of potash, and after a few minutes quiet fusion, pour it into an iron melting cone, previously heated and greased.

2. It may also be obtained by melting eight parts of the ore mixed with six of nitrate of potash, and three of supertartrate of potash, gradually projected into a red-hot crucible and fused.

To obtain perfectly pure antimony, Margraaf melted some pounds of the sulphuret in a luted crucible, and thus scorified any metals it might contain. Of the antimony thus purified, which lay at the bottom, he took sixteen ounces, which he oxidised cautiously, first with a slow, and afterwards with a strong heat, until it ceased to smell of sulphur, and acquired a greyish-white colour. Of this grey powder he took four ounces, mixed them with six drachms of supertartrate of potash, and three of charcoal, and kept them in fusion in a well-covered and luted crucible, for one hour, and thus obtained a metallic button that weighed one ounce, seven drachms, and twenty grains.

The metal, thus obtained, he mixed with half its weight of desiccated subcarbonate of soda, and covered the mixture with the same quantity of the subcarbonate. He then melted it in a well-covered and luted crucible, in a very strong heat, for half an hour, and thus obtained a button which weighed one ounce, six drachms, and seven grains, much whiter and more beautiful than the former. This he again treated with one and a half ounce of subcarbonate of soda, and obtained a button, weighing one ounce, five drachms, and six grains. This button was still purer than the foregoing. Repeating these fusions with equal weights of subcarbonate of soda three times more, and an hour and a half each time, he at last obtained a button so pure as to amalgamate with mercury with ease, very hard, and in some degree malleable; the scoriæ formed in the last fusion were transparent, which indicated that they contained no sulphur, and hence it is the obstinate adherence of the sulphur that renders the purification of this metal so difficult.

Combinations. — *Chlorine gas* and *antimony* combine with combustion, and a *bichloride* results. This was formerly prepared by distilling a mixture of two parts of corrosive sublimate with one of antimony.

Three parts of corrosive sublimate, and one of metallic antimony, are the equivalent proportions for making butter of antimony.

Iodine and *antimony* combine by the aid of heat into a solid *iodide*, of a dark red colour.

The *phosphuret* of this metal is obtained by fusing it with solid phosphoric acid. It is a white semicrystalline substance.

The *sulphuret of antimony* consists, according to Berzelius, of 100 antimony + 37·25 sulphur. The proportion given by the equivalent ratio is 100 + 36·5. See *Antimonii sulphuretum*.

The only important *alloys of antimony* are those of lead and tin; the former constitutes type-metal, and contains about one-sixteenth of antimony; the latter alloy is employed for making the plates on which music is engraved.

The *salts of antimony* are of two different orders; in the first, the deutoxide acts the part of a salifiable base; in the second, the tritoxide and peroxide act the part of acids, neutralising the alkaline and other bases, to constitute the *antimonites* and *antimoniates*.

The only distinct combination of the first order entitled to our attention, is the triple

salt called *tartrate of potash and antimony*, or tartar emetic, and which, by Gay Lussac's new views, would be styled cream tartrate of antimony. This constitutes a valuable and powerful medicine, and therefore the mode of preparing it should be correctly and clearly defined. See *Antimonium tartarisatum*.

The deutoxide seems to have the property of combining with sulphur in various proportions. To this species of compound must be referred the liver of antimony, glass of antimony, and *crocus metallorum* of the ancient apothecaries.

Sulphuretted hydrogene forms, with the deutoxide of antimony, a compound which possessed at one time great celebrity in medicine. By dropping hydrosulphuret of potash, or of ammonia, into the cream tartrate, or into mild muriate of antimony, the hydrosuphuret of the metallic oxide precipitates of a beautiful deep orange colour. This is *kermes mineral*.

The preparations of antimony formerly in use were very many: those now directed to be kept are: —

1. *Oxidum antimonii.*
2. *Sulphuretum antimonii.*
3. *Sulphuretum antimonii præcipitatum.*
4. *Antimonium tartarizatum.*
5. *Vinum antimonii tartarizati.*
6. *Pulvis antimonialis.*

ANTI'MORIS. (From αντι, against, and μορος, death, or disease.) A medicine, or that which prolongs life.

ANTINEPHRI'TIC. (*Antinephriticus*; from αντι, against, and νεφριτις, a disease of the kidneys.) Against disorders of the kidneys: applied to systems of diet, medicines, &c.

ANTIODONTALGIC. (*Antiodontalgicus*; from αντι, against, and οδονταλγια, the toothach.) 1. Against the toothach.

2. An insect described by Germi, in a small work published at Florence 1794, so called from its property of allaying the toothach. It is a kind of curculio found on a species of thistle, *Carduus spinosissimus*. If twelve or fifteen of these insects in the state of larvæ, or when come to perfection, be bruised and rubbed slowly between the fore-finger and thumb until they have lost their moisture; and if the painful tooth where it is hollow, be touched with that finger, the pain ceases sometimes instantaneously. A piece of shamoy leather will answer the same purpose with the finger. If the gums are inflamed, the remedy is of no avail. Other insects possess the property of curing the toothach; such as the *Scarabeus ferrugineus* of Fabricius; the *Coccinella septempunctata*, or lady-bird; the *Chrysomela populi*, and the *Chrysomela sanguinolenta*. This property belongs to several kinds of the *Coleoptera*.

ANTIPARALY'TIC. (*Antiparalyticus*; from αντι, against, and παραλυσις, the palsy.) Against the palsy.

ANTIPATHY. (*Antipathia, æ. f.*; Αντιπαθης, from αντιπαθεω, to have a natural repugnance or dislike; from αντι, against, and παθος, an affection.) Antipathy. Internal horror at the presence of particular objects or subjects, with great restlessness or fainting. It comprises two species, viz. *Antipathia sensilis*, and *Antipathia insensilis*.

1. *Sensile antipathy.*—This species is produced through the medium of the external senses.

Very singular examples of both species are recorded by the collectors of medical curiosities; while others are of every day occurrence. Some may be accounted for from early fright, stories told in the nursery, or that incongruous association of ideas in early life. But many are of difficult solution, and others altogether inexplicable.

Under the species before us, we may mention an antipathy produced by the smell of roses, of strawberries, of mint, and some other herbs; by the sound of music, or the sight of a drawn sword, which is said to have existed in King James I.; or the rattling of a carriage over a bridge, which continued for some years after mature life in Peter the Great of Russia, who was frightened, while an infant, by a fall from a bridge into the water, and who only overcame the antipathy by resolutely accustoming himself to the object of disgust.

The sight of crabs and lobsters, and, still more frequently, of toads and vipers, has produced the same effect. And we have a few instances of its being occasioned by what we should much less expect as a cause, the appearance of bread and cheese, or even bread alone. The object itself, however, seems to be of little or no importance; the feeling in most of these cases results from an association of such object, whatever it may be, with some painful occurrence in early life, of which it continues to be as much the symbol or expression as letters are of ideas. In many instances the original occurrence is forgotten, but the impression indelibly remains, and the object recals the mind to its influence. There is reason to believe, however, that the antipathy is often a result of idiosyncrasy, or something peculiar in the frame-work of the individual constitution.

2. *Insensile antipathy.* — This is produced through an unknown medium. In the preceding species, the feeling of antipathy is excited through the medium of one of the external senses, to which the object of antipathy presents itself, or with which it is associated on recollection; for it is the sight, or taste, or smell, or touch, or hearing of such object, or the idea of such sensible impression, that alone calls the antipathy into action.

There are some persons, however, that are struck with a peculiar and indescribable kind of horror at the presence of an object which is unperceived by any of these senses,

as soon as it comes within the atmosphere of some unknown influence. The presence of a cat has been often known to produce this effect, under the circumstances now adverted to, or when the animal though present has been concealed, and not one of the senses has been alive to its presence. Instances of this kind are to be found in most of the collections of medical curiosities, as well as in various other works. The affection, in this case, depends unquestionably upon an extraordinary idiosyncrasy; but by what means such an idiosyncrasy is influenced we know not. Sauvages inquires whether the effluvium thrown from the object of aversion into the atmosphere may not, in combining with the fluids of the affected person, produce an irritating and distressing tertium quid, as corrosive sublimate is produced by a combination of mercury with oxymuriatic acid? The fact, at present, appears inexplicable: but it is not more singular than the wonderful power so well known to be possessed by the *Viverra noctula*, or common or great bat, which renders it conscious of the presence and position of objects, when all its senses are muffled, and which enables it, when flying in this state, to avoid them. This extraordinary faculty has been called a sixth sense by several naturalists.

In all these cases, whether of the preceding or of the present species, the only means in our power of destroying the anomalous or morbid impression is by introducing a counter-habit; or, in other words, by gradually inuring the sensorium to the influence of the disgustful object. By being familiarised with what at first we most shrunk from, our courage becomes hardened, and the painful impression blunted; and sights, and sounds, and smells, and the most imminent dangers that could not at one time be encountered, or even contemplated without fainting, in process of time no more affect us than the roar of cannon affects the war-horse, or the mountain-tempest the mariner.

ANTIPERISTA'LTIC. (*Antiperistalticus;* from αντι, against, and περιστελλω, to contract.) Whatsoever obstructs the peristaltic motion of the intestines.

ANTIPERI'STATIS. (From αντι, against, and περιστημι, to press.) A compression on all sides. — *Theophrastus de igne.*

ANTIPHA'RMIC. (*Antipharmicus;* from αντι, against, and φαρμακον, a poison.) The same as alexipharmic. Remedies or preservatives against poison. — *Dioscorides.*

ANTIPHLOGI'STIC. (*Antiphlogisticus;* from αντι, against, and φλεγω, to burn.) Against inflammation. A term applied to those medicines, plans of diet, and other circumstances, which tend to oppose inflammation, or which, in other words, weaken the system by diminishing the activity of the vital power.

ANTIPHTHI'SIC. (*Antiphthisicus;* from αντι, against, and φθισις, consumption.) Against a consumption.

ANTIPHTHORA. (From αντι, against and φθορα, corruption.) A species of wolfsbane which resists corruption. See *Aconitum anthora.*

ANTIPHY'SIC. (*Antiphysicus;* from αντι, against, and φυσαω, to blow.) A carminative, or remedy against wind.

ANTIPLEURI'TIC. (*Antipleuriticus;* from αντι, against, and πλευριτις, pleurisy.) Against a pleurisy.

ANTIPODA'GRIC. (*Antipodagricus;* from αντι, against, and ποδαγρα, the gout.) That which relieves or removes the gout.

ANTIPRAXIA. (From αντι, against, and πρασσω, to work.) A contrariety of functions and temperaments in divers parts. Contrariety of symptoms.

ANTIPYRE'TIC. (*Antipyreticus;* from αντι, against, and πυρετος, fever.) Against a fever.

ANTIQUARTANA'RIA. (From αντι, against, and *quartana*, a quartan fever.) Against a quartan ague.

ANTIQUA'RTICUM. The same as *Antiquartanaria.*

ANTIRRHI'NUM. (Αντιρρινον; *um, i.* n.; from αντι, against and ρις, the nose: so called because it represents the nose of a calf.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Angiospermia.*

ANTIRRHINUM ELATINE. The systematic name of the plant we call fluellen, or female speedwell. *Elatine* of the shops. The leaves of this plant have a roughish bitter taste, but no smell. It was formerly much used against scurvy and old ulcerations, but is now wholly forgotten.

ANTIRRHINUM LINARIA. The systematic name of the common toad-flax. *Linaria* of the pharmacopœias, called also *Osyris,* and *Urinaria.* *Antirrhinum—foliis lanceolatis linearibus, confertis, caule erecto, spicis terminalibus sessilibus, floribus imbricatis,* of Linnæus. A perennial indigenous plant, common in barren pastures, hedges, and the sides of roads, flowering from July to September. The leaves have a bitterish and somewhat saline taste, and when rubbed between the fingers, have a faint smell, resembling that of elder. They are said to be diuretic and cathartic, and in both characters to act powerfully, especially in the first; hence the name *urinaria.* They have been recommended in dropsies and other disorders requiring powerful evacuations. The linaria has also been used as a resolvent in jaundice, and such diseases as were supposed to arise from visceral obstructions. But the plant has been chiefly valued for its effects when externally applied, especially in hæmorrhoidal affections, for which both the leaves and flowers have been employed in various forms of ointment, fomentation, and poultice. Dr. Wolph first invented an ointment of this

plant for the piles. The Landgrave of Hesse, to whom he was physician, constantly interrogated him, to discover its composition; but Wolph obstinately refused, till the prince promised to give him a fat ox annually for the discovery: hence, to the following verse, which was made to distinguish the linaria from the escula, viz.

"*Esula lactescit, sine lacte linaria crescit;*" the hereditary Marshal of Hesse added,

"*Esula nil nobis, sed dat linaria taurum.*"

ANTISCO'LIC. (*Antiscolicus;* from αντι, against, and σκωληξ, a worm.) Against worms. See *Anthelmintic.*

ANTISCORBU'TIC. (*Antiscorbuticus;* from αντι, against, and *scorbutus*, the scurvy.) Against the scurvy.

ANTISE'PTIC. (*Antisepticus;* from αντι, against, and σηπω, to putrefy.) Whatever possesses a power of preventing animal substances from passing into a state of putrefaction, and of obviating putrefaction when already begun. This class of medicines comprehends four orders:

1. *Tonic antiseptics;* as cinchona, cusparia, anthemis, &c. which are suited for every condition of body, and are, in general, preferable to other antiseptics for those with relaxed habits.

2. *Refrigerating antiseptics;* as acids, which are principally adapted for the young, vigorous, and plethoric.

3. *Stimulating antiseptics;* as wine and alkohol, best adapted for the old and debilitated.

4. *Antispasmodic antiseptics;* as camphire and asafœtida, which are to be selected for irritable and hysterical habits.

ANTI'SPASIS. (From αντι, against, and σπαω, to draw.) A revulsion. The turning the course of the humours, whilst they are actually in motion. — *Galen.*

ANTISPASMODIC. (*Antispasmodicus;* from αντι, against, and σπασμος, a spasm.) Against spasm; possessing the power of allaying, or removing, inordinate motions in the system, particularly those involuntary contractions which take place in muscles, naturally subject to the command of the will, and which are called spasms. Spasms may arise from various causes. One of the most frequent is a strong irritation, continually applied; such as dentition, or worms. In these cases, narcotics prove useful, by diminishing irritability and sensibility. Sometimes spasm arises from mere debility; and the obvious means of removing this is by the use of tonics. Both narcotics and tonics, therefore, are occasionally useful as antispasmodics, such as opium, camphire, and æther, in the one class, and zinc, mercury, and Peruvian bark, in the other. But there are, further, several other substances, which cannot be with propriety referred to either of these classes; and to these, the title of antispasmodics is more exclusively appropriated. The principal antispasmodics, properly so called, are moschus, castoreum, oleum animale empyreumaticum, petroleum, ammonia, asafœtida, sagapenum, galbanum, valeriana, crocus, melaleuca leucadendron. The narcotics, used as antispasmodics, are æther, opium, camphire. The tonics, used as antispasmodics, are cuprum, zincum, hydrargyrum, cinchona.

ANTI'THENAR. (From αντι, against, and θεναρ, the palm of the hand or foot.) A muscle of the foot. See *Abductor pollicis pedis.*

ANTITRA'GICUS. (*Antitragus;* from αντι, against, and τραγος, the tragus.) One of the proper muscles of the ear, the use of which is to turn up the tip of the antitragus a little outwards, and to depress the extremity of the antihelix towards it.

ANTITRAGUS. (*us, i.* m.; from αντι, and τραγος, the tragus.) An eminence of the outer ear, opposite to the tragus.

ANTIVENE'REAL. (*Antivenereus;* from αντι, against, and *venereus*, venereal.) Against the venereal disease.

ANTO'NII SANCTI IGNIS. See *Anthony, Saint.*

ANTOPHY'LLON. (From αντι, against, and φυλλον, a leaf: so called because its leaves are opposite.) The male caryophyllus.

A'NTRUM. (*um, i.* n. a den or cave.)

1. A cavity which has a small opening into it.

2. The cochlea of the ear.

ANTRUM BUCCINOSUM. The cochlea of the ear.

ANTRUM GENÆ. See *Antrum of Highmore.*

ANTRUM HIGHMORIANUM. See *Antrum of Highmore.*

ANTRUM OF HIGHMORE. *Antrum highmorianum:* called also *Antrum genæ, Sinus maxillaris pituitarius,* and *Antrum maxillæ superioris.* Maxillary sinus. A large cavity in the middle of each superior maxillary bone, between the eye and the roof of the mouth, lined by the mucous membrane of the nose. See *Maxillare superius os.*

One or both antra are liable to several morbid affections. Sometimes their membranous lining inflames, and secretes pus. At other times, in consequence of inflammation or other causes, various excrescences and fungi are produced in them. Their bony parietes are occasionally affected with exostosis, or caries. Extraneous bodies may be lodged in them, and it is even asserted that insects may be generated in them, and cause, for many years, afflicting pains. Abscesses in the antrum are by far the most common. Violent blows on the cheek, inflammatory affections of the adjacent parts, and especially of the pituitary membrane lining the nostrils, exposure to cold and damp, and, above all things, bad teeth, may induce inflammation and suppuration in the antrum. The first symptom is a pain, at first imagined to be a toothach,

particularly if there should be a carious tooth at this part of the jaw. This pain, however, extends more into the nose than that usually does which arises from a decayed tooth; it also affects, more or less, the eye, the orbit, and the situation of the frontal sinuses. But even such symptoms are insufficient to characterise the disease, the nature of which is not unequivocally evinced till a much later period. The complaint is, in general, of much longer duration than one entirely dependent on a caries of the tooth, and its violence increases more and more, until at last a hard tumour becomes perceptible below the cheek-bone. The swelling by degrees extends over the whole cheek; but it afterwards rises to a point, and forms a very circumscribed hardness, which may be felt above the back-grinders. This symptom is accompanied by redness, and sometimes by inflammation and suppuration of the external parts. It is not uncommon, also, for the outward abscess to communicate with that within the antrum. The circumscribed elevation of the tumour, however, does not occur in all cases. There are instances in which the matter makes its way towards the palate, causing the bones of the part to swell, and at length rendering them carious, unless timely assistance be given. There are other cases, in which the matter escapes between the fangs and sockets of the teeth. Lastly, there are other examples, in which matter, formed in the antrum, makes its exit at the nostril of the same side, when the patient is lying with his head on the opposite one, in a low position. If this mode of evacuation should be frequently repeated, it prevents the tumour both from pointing externally, and bursting, as it would do if the purulent matter could find no other vent. This evacuation of the pus from the nostril is not very common. The method of cure consists in extracting one of the dentes molares from the affected side; and then perforating through the socket into the bony cavity. A mild injection may afterwards be employed to cleanse the sinus occasionally.

ANTRUM MAXILLÆ. See *Antrum of Highmore*.

ANTRUM MAXILLARE. See *Antrum of Highmore*.

ANTRUM PYLORI. The concavity of the stomach approaching the pylorus.

ANTY'LION. (From *Antyllus*, its inventor.) An astringent application, recommended by Paulus Ægineta.

A'NUS. (*Anus, i.* m. *quasi onus;* as carrying the burden of the bowels.)

1. The fundament; the lower extremity of the great intestine, named the rectum, is so called, and its office is to form an outlet for the fæces. The anus is furnished with muscles which are peculiar to it, viz. the *sphincter,* which forms a broad circular band of fibres, and keeps it habitually closed, and the *levatores ani,* which serve to dilate and draw it up to its natural situation, after the expulsion of the fæces. It is also surrounded, as well as the whole of the neighbouring intestine, with muscular fibres, and a very loose sort of cellular substance. The anus is subject to various diseases, especially piles, ulceration, abscesses, excrescences, prolapsus; and imperforation in new-born infants.

2. The term *anus* is also applied to a small opening of the third ventricle of the brain, which leads into the fourth.

3. In *Botany,* applied to the posterior opening of a monopetalous flower.

ANUS, ARTIFICIAL. An accidental opening in the parietes of the abdomen, to which opening some part of the intestinal canal leads, and through which the fæces are either wholly or in part discharged. When a strangulated hernia occurs, in which the intestine is simply pinched, and this event is unknown; when it has not been relieved by the usual means; or when the necessary operation has not been practised in time; the protruded part becomes gangrenous, and the fæces escape. But if the patient should be at last operated upon, his fæces are discharged through the wound, and the intestines are more easily emptied. In both cases, the excrement continues to be discharged from the artificial opening. In this way an artificial anus is formed, through which the excrement is evacuated during life.

ANXIETY. *Anxietas.* In the progress of all acute diseases, this, which is the *oppressio præcordiorum* of old writers, is always a symptom that indicates great danger. See *Pathemata animi.*

ANY'DRION. (From *α*, priv. and *ὕδωρ*, water: so called, because they who eat of it become thirsty.) A species of night-shade, according to Blanchard.

ANYPEU'THYNUS. (From *α*, neg. and *υπευθυνος*, blameable.) Hippocrates, in his Precepts, uses this word to signify an accidental event, which cannot be charged on the physician, and for which he is not accountable.

AO'RTA. (*a, æ,* f.; from *αηρ*, air, and *τηρεω*, to keep: so called because the ancients supposed that only air was contained in it.) The great artery, which arises from the left ventricle of the heart, forms a curvature in the chest, descends into the abdomen, and from which every artery of the body is given off except the pulmonary. See *Artery.*

Aorta, arch of. The bend of the great artery between the ascending and descending portions.

Aorta, ascending. That portion which goes from the heart to the bend or arch.

Aorta, descending. The whole of the artery from the termination of the arch to its bifurcation into the iliacs.

Aorta, thoracic. The whole of the aorta, from the heart to the diaphragm.

APALACHI'NE. (From απαλακω, to repel; because it is supposed to repel infection.) A preservative or repellent.

Apalachine gallis. See *Ilex cassine.*

APANTHROPY. (*Apanthropia, æ.* f.; from α, and ανθρωπος, a man.) A dislike to society.

APARI'NE. (*e, es.* f.; from ρινη, a file, because its bark is rough, and rasps like a file.) Goose-grass. See *Galium aparine.*

Aparthro'sis. (From απο, and αρθρον, a joint.) Articulation.

APATHY. (*Apathia, æ.* f.; from α, priv. and παθος, passion.) Insensibility, or a privation of all passion, all emotion or perturbation of mind.

APATITE. A phosphate of lime mineral, of a white wine, yellow, green, and red colour, found in primitive rocks in Cornwall and Devonshire.

APE'LLA. (From α, priv. and *pellis,* skin.) Without a skin or covering; applied to shortness of the prepuce. Galen gives this name to all whose prepuce, either through disease, section, or otherwise, will not cover the glans.

APE'PSIA. (*a, æ.* f. Απεψια; from α, priv. and πεπτω, to digest.) Indigestion. See *Dyspepsia.*

APE'RIENS. (From *aperio,* to open.)
1. That which gently opens the bowels.
2. A muscle, the office of which is to open a part; as the levator palpebræ superioris, which was once called *aperiens palpebræ.*

Aperiens palpebrarum rectus. See *Levator palpebræ superioris.*

Aperi'staton. See *Aperistatus.*

Aperi'status. (From α, neg. and περιστημι, to surround.) *Aperistaton.* An epithet used by Galen of an ulcer which is not dangerous, nor surrounded by inflammation.

APE'RTOR. (*or, oris.* m.; from *aperio,* to open.) That which opens a part.

Apertor oculi. See *Levator palpebræ superioris.*

APE'TALOUS. (*Apetalus;* from α, priv. and *petalum,* a petal.) Without a petal or corol.

Apeuthy'smenus. (From απο, and ευθυς, straight.) A name formerly given to the intestinum rectum, or straight gut.

A'PEX. (*ex, icis.* m.) 1. The extremity of a part; as the apex of the tongue, apex of the nose, the extremity of a leaf, &c.
2. The *anthera* of a flower of Tournefort, Rivinus, and Ray.

APHÆ'RESIS. (From αφαιρεω, to remove.) This term was formerly much used in the schools of surgery, to signify that part of the art which consists in taking off any diseased or preternatural part of the body.

Aphani'smus. (From αφανιζω, to remove from the sight.) The removal, or gradual decay, of a disorder.

APHANITE. The name given by Haüy to a rock apparently homogeneous, but really compound, in which amphibole is the predominant principle.

APHELXIA. (*a, æ.* f.; from αφελκω, *abstraho,* to separate or abstract.) Revery; absence or abstraction of mind. The following excellent account of this genus of disease is extracted from Dr. Good's 'Study of Medicine.' "The subject," he observes, "is almost, if not altogether, new to nosology, and has seldom been dipt into by pathologists. Darwin occasionally touches upon it in various parts of his Zoonomia, and Crichton, in his Enquiry into the Nature of Mental Derangement; and it is well described and illustrated by La Bruyère, in his 'Characters:' but it yet remains to be analysed and reduced to a nosological method, and examined in a pathological view.

In order to our becoming acquainted with the existence of surrounding objects, or of an external world, as it is called by psychologists, three things are necessary; sound external senses; a secretion of the nervous fluid, apparently under different modifications, whereby they are made capable of being roused or excited by the different objects addressed to them; and an exercise of the faculty of attention to the impressions which are thus produced. The will has, or ought to have, a power of calling this, as well as every other faculty of the mind, into a state of exertion, or of allowing it to be indolent; and it is chiefly upon this want of power, or the same power intensely exerted, that the phænomenon of revery depends; thus giving rise to the three following species of mental aberration:

1. *Aphelxia socors,* absence of mind.
2. ——— *intenta,* abstraction of mind.
3. ——— *otiosa,* brown study.

In the first of these, the attention is truant, and does not yield readily to the dictates of the will: in the second, it is rivetted at the instigation of the will itself to some particular theme unconnected with surrounding objects: and, in the third, it has the consent of the will to relax itself, and give play to whatever trains of ideas are uppermost or most vivacious in the sensory.

1. *Aphelxia socors,* absence of mind; truant attention; wandering fancy; vacant or vacillating countenance. This species is too common at schools and at church; over tasks and sermons; and there are few readers who have not frequently been sensible of it in some degree or other.

In reading books in which we are totally uninterested, composed in a tedious and repulsive style, we are almost continually immersed in this species of revery. The will does not exert its power; the attention is suffered to wander to something of stronger attraction; or the imagination is left to the

play of its own nugatory ideas; and, though we continue to read, we have not the smallest knowledge of the argument before us: and if the subject to which the train of our thoughts is really directed be of a strikingly ludicrous character, we may possibly burst into a laugh in the middle of a discourse of great gravity and seriousness, to the astonishment of those around us.

This is a common case, and may lead to great embarrassment. We have, nevertheless, thus far supposed that the will does not exert its power, and sufficiently rein in the attention to the subject addressed to it. It not unfrequently happens, however, that the will, for want of a proper habit, has lost its power, either wholly or in a very great degree, and cannot with its utmost energy exercise a due control over the attention; and it also happens in other cases, from a peculiarity of temperament, or morbid state of body, that the faculty of the attention itself is so feeble that it is incapable of being steadily directed for more than a few minutes to any object of importance whatever, with all the effort of the will to give it such direction.

The mind under either of these conditions is in a deplorable state for all the high purposes of reflection and knowledge, for which by its nature it is intended, since it is upon the faculty of attention that every other faculty is dependent for its vigour and expansion. Without it the perception exercises itself in vain; the memory can lay up no store of ideas; the judgment draws forth no comparisons; the imagination must become blighted and barren: and where there is no attention whatever, the case must necessarily verge upon fatuity.

In early life the attention, like every other faculty of the mind, is weak and wandering, is often caught with difficulty, and rarely fixed upon any thing. Like every other faculty, however, it is capable of being strengthened and concentrated; and may be made to dwell upon almost any object proposed. But this is a work of time, and forms one of the most important parts of education: and, in the course of this discipline, it should not be forgotten that the faculty of attention, when it first shows itself, is more readily arrested by some subjects than by others, and that it is hence of great moment to ascertain those subjects, and to select them in the first instance. The habit is what is chiefly wanted; and the quicker this is acquired, the more time we gain for transferring the same habit to other and perhaps more valuable purposes afterwards.

This is a point seldom sufficiently considered in the course of education; and for want of such consideration, far more than half the time of many boys becomes an entire blank, and is lost, and not a few are suffered to remain blockheads in the particular department to which their hours of study are directed, who might discover a considerable capacity and genius if the department were changed for one more adapted to their own taste, or, in other words, more attractive to their attention.

2. *Aphelxia intenta*, abstraction of mind; the attention wound up and rivetted to a particular subject, with sympathetic emotion of the muscles and features connected with its general drift. In this species, the faculty of attention, instead of being feeble, or contumacious to the will, is peculiarly strong, and vehemently excited, and acts in perfect co-operation with the will itself. And, in many instances, the sensorial energy maintained is so great, and demands so large a supply of sensorial power, as apparently to exhaust the entire stock, except indeed the reserve which is in almost all cases instinctively kept back for the use of the vital or involuntary organs. And hence all the external senses remain in a state of torpor, as though drawn upon for their respective contributions of sensorial power in support of the predominant meditation, so that the eyes do not see, nor the ears hear, nor the flesh feel; and the muser may be spoken to, or conversation may take place around him, or he may even be struck upon the shoulders without any knowledge of what is occurring.

Abstraction of mind may be produced by various causes, by some overwhelming passion, and by intense study. Ungovernable joy or rapture, grief and despondency, are common causes, under the influence of which the affected person is often as much lost to the world around him as if he were in a profound sleep and dreaming; and only hears, sees, and feels the vivid train of ideas that possess themselves of his mind, and rule it as a captured citadel. To these alone the attention is directed; here it exhausts all its power, and the will concurs in the exhaustion: insomuch, that the patient is said in some cases to have stared at the meridian sun without pain, and in others to have been undisturbed by the discharge of a cannon.

We meet with like proofs in many cases of intense study, and especially upon abstract subjects, as those of pure mathematics, in which all the reasoning and more serious faculties of the mind, as the perception, the memory, and the judgment, as well as the attention, are jointly called into action and kept equally upon the stretch. Of the power of this variety of revery in rendering an individual torpid and almost dead to all around him, we have a decided instance in Archimedes at the time of his arrest. When the Roman army had at length taken Syracuse by stratagem, which the tactics of this consummate engineer prevented them from taking by force, he was shut up in his closet, and so intent on a geometrical demonstration, that he was equally insensible to the shouts of the victors, and the outcries of the vanquished. He was calmly drawing the lines of a dia-

gram, when a soldier abruptly entered his room, and clapt a sword to his throat. 'Hold, friend,' said Archimedes, 'one moment, and my demonstration will be finished.' The soldier, surprised at his unconcern at a time of such extreme peril, resolved to carry him before Marcellus; but as the philosopher put under his arm a small box full of spheres, dials, and other instruments, the soldier, conceiving the box to be filled with gold, could not resist the temptation, and killed him on the spot.

3. *Aphelxia otiosa*, brown study; leisurely listlessness; voluntary surrender of the attention and the judgment to the sportive vagaries of the imagination; quiescent muscles; idle gravity of countenance. The attention is equally summoned into action, and dismissed at the command of the will. It is summoned in the last species; it is dismissed when a man voluntarily surrenders himself to ease and listlessness of mind; during which period, moreover, in consequence of this indulgence in general indolence, the external senses themselves unite in the mental quiescence, and a smaller portion of nervous fluid is probably secreted for the very reason that a smaller portion is demanded; and hence the active senses without are as vacant and unstrung as the active senses within, and as blunted to their respective stimuli. The first playful ideas that float over the fancy in this case take the lead, and the mind relaxes itself with their easy and sportive flow.

In the indolent mind such indulgence is a disease, and if not studiously watched and opposed will easily become a habit. In the studious and active mind it is a wholesome relaxation; the sensory, in the correct language of the poet, 'sleeps and is refreshed,' grows fertile beneath the salutary fallow, and prepares itself for new harvests.

This is more particularly the case where, in conjunction with an attention 'screwed up to the sticking-place,' and long continued there, a spirit of ardent emulation is at the same time stirring, and distracted between the hope and fear of gaining or losing a distinguished honour or reward. This is seen repeatedly in young men who have been striving night and day, and week after week, for the first prizes of our English universities; some of whom have, indeed, succeeded, but with a hectic exhaustion that has been recovered from with great difficulty; while others, in the full prospect of success, have been compelled to relinquish the pursuit, and to degrade.

Yet even without this conflict of feeling, where the attention alone has been too long directed to one or to a variety of recondite subjects without relaxation, the mind suffers considerably, and its powers become shaken and confused."

Aphepse'ma. (From απο, and εψω, to boil.) A decoction.

A'phesis. (From αφιημι, to remit.) The remission or termination of a disorder.

Aphiste'sis. (From αφιςημι, to draw from.) An abscess.

Aphlogistic lamp. One which burns without flame.

APHLOGISTICUS. (From α, priv. and φλογιςον, fire, flame.) Without flame.

A'phodos. (From απο, and οδος, departure.) Excrement.

APHO'NIA. (Αφωνια. *a, æ. f.*; from α, priv. and φωνη, the voice.) Without voice; dumbness; speechlessness.

Inability of speech may proceed from three different causes:

1. From *destitution of tongue.* This may be from a defect coeval with the birth, or a defect produced by accident, punishment, or disease. The glottis is the chief organ employed in dividing the voice into distinct or simple tones or notes; as the tongue chiefly divides it, either singly or by a co-operation with other organs into distinct articulations, so as to form proper language. It is obvious, therefore, that, in all common cases, the man who is deprived of his tongue, whether by congenital defect, by mechanical force, or by disease, must at the same time be deprived of the power of speech, and become dumb.

In all *common* cases, it must be recollected; for a privation of the tongue is not always accompanied with dumbness. It is not necessarily so in all cases of congenital destitution, and still less in all cases of privation that occur after speech has been acquired. The glottis alone, in some instances, either from a greater pliancy and volubility of the muscles proper to it, or from the possession of some superadded muscle or membrane, seems to have a power of forming distinct articulations without the assistance of the tongue: hence we account for that singular talent denominated ventriloquism. But there is a more singular talent still, that sometimes occurs in the history of the human voice, and which is probably resolvable into the same cause; for we have examples, supported by indisputable authentication, of persons, who, having lost the entire organ of the tongue, and a few of them of the uvula also, have still retained a power of speaking, and even of expressing themselves with a clear and accurate enunciation. Such examples, indeed, are not very common; but they seem to have occurred in all ages, and especially when it was the barbarous custom among the Turks, Goths, and other half-civilised nations, to cut out the tongues of the unhappy wretches whom the chance of war had thrown into their hands as prisoners.

There are some persons who profess to disbelieve all the stories of this kind that have descended to us, for the mere reason that they have never witnessed any thing of the same kind in their own age or country. But such persons would have also joined the king of Siam in disbelieving the Dutch ambassador's assertion that the rivers in his own country became so hard and solid during the

winter, that men and women could walk and skate upon them. The accounts are too numerous, and, in many instances, too well supported, to be treated with scepticism; and all that is left to our judgment and ingenuity is, not to deny the evidence, but to account, as we shall presently proceed to do, for the fact.

Hundreds of cases might be quoted upon this subject; but the following may be sufficient, taken from recent times, and from authorities that may indeed be disbelieved, but cannot be disputed.

In the third volume of the Ephemerides Germanicæ, we have the history of a boy, who, at eight years of age, lost the whole organ of the tongue, in consequence of a sphacelus proceeding from the small-pox, and who was able to talk after its separation. The boy was exhibited publicly, but a trick was generally suspected: in consequence of which the boy and his friends were summoned to appear in court before the members of the celebrated university of Saumur. In the presence of this learned body he underwent a strict examination as to the loss he had sustained, and the lingual powers he still possessed. The report was found correct; and the university, in consequence, gave their official attestation to the fact, in order, as it expressly asserts in its record, that its reality might not be called in question in succeeding times.

In the *Mémoires de l'Académie des Sciences* for the year 1718, is an account of a girl who was born without a tongue, but had nevertheless learned to speak, and talked as easily and distinctly as if she had enjoyed the full benefit of that organ. The case is given by a physician of character, who had accurately and repeatedly examined the girl's organs of speech, and was desirous that others should examine them also.

About seventy years ago our own country furnished us with another equally striking example of the same power, and which forms the subject of various papers in the Philosophical Transactions, drawn up chiefly by Dr. Parsons at the time, and printed in the volumes that were published between the years 1742 and 1747. It is the history of a young woman of the name of Margaret Cutting, of Wickham-market, near Ipswich, in Suffolk; who, when only four years old, lost the whole of her tongue, together with the uvula, from what is said to have been a cancerous affection; but still retained the powers of speech, taste, and deglutition, without any imperfection whatever: articulating, indeed, as fluently and with as much correctness as other persons; and articulating, too, those peculiar syllables which ordinarily require the express aid of the tip of the tongue for exact enunciation. She also sung to admiration, and still articulated her words while singing; and could form no conception of the use of a tongue in other people. Neither were her teeth in any respectable to supply the place of the deficient organs; for these also were but few, and rose scarcely higher than the surface of the gums, in consequence of the injury to the sockets from the disease that had destroyed the tongue. The case, thus introduced before the Royal Society, was attested by the minister of the parish, a medical practitioner of repute, and another respectable person. From its singularity, however, the Society evinced a commendable tardiness of belief. They requested another report upon the subject, and from another set of witnesses, whom they themselves named for the purpose, and for whose guidance they drew up a line of categorical examination. This second report soon reached the Society, and minutely coincided with the first: and, to set the question completely at rest, the young woman was shortly afterwards brought to London, and satisfied the Royal Society in her own person.

To explain this unexpected power, we should not only turn our attention to what is actually and in our own day accomplished by ventriloquists; but should recollect that the tongue is only a single organ employed in the articulation of sounds, and that the fauces, nostrils, lips, and teeth, bear, at least, an equal part, while the glottis, which forms all the vocal or vowel sounds, is the chief organ of the whole. In reality, out of the twenty-four articulate sounds which fill up our common alphabet, the only two in which the tongue takes a distinct lead are the *l* and *r*, though it is auxiliary to several others; but the guttural, or palatine, as *g*, *h*, *k*, *q*; the nasal, as *m* and *n*; the labial, as *b*, *p*, *f*, *v*, *w*; most of the dental, as *c*, *d*, *z*, together with all the vowels, which hold so large a space in our vocabularies, are but little indebted to its assistance.

It is singular, that so delicately sensible an organ as the tongue should receive the severest injuries, and submit to very violent operations, with less serious mischief than almost any other organ of the same size in the body. And it is on this account that the cruel and barbarous manner in which the tongue was extirpated by the ferocious tribes, that overran Europe from the east formerly, was rarely productive of fatal consequences. Sir Everard Home published, many years ago, a paper upon this subject, containing various cases of sections of the tongue to a less or greater depth, in consequence of diseased action. The operation was, in every instance, performed by the ligature. He does not state what effect was in any instance produced on the speech, and we are hence led to conjecture that nothing in this respect occurred of material importance; but he draws the following conclusions: — The internal structure of the tongue is less irritable than almost any other organised part of the body. Its nerves appear to be more easily compressed and deprived of their power of communicating sensation than nerves in general; and any injury done to them is

not productive of diseased action in the trunk of the injured nerve. The tongue appears to have a power of throwing off its sloughs in a shorter time than any other part.

2. From *atony of the vocal organs.* This atony is chiefly if not altogether confined to the nerves of the vocal organs, which may be injured by violence, or exhausted by mental or other commotion, independently of the occurrence of the disease occasionally as a symptom of paralysis, quinsy, or catarrh; thus furnishing us with two distinct varieties: — From lesion of the nerves of the tongue or glottis. From sudden or overwhelming commotion, or shock of any kind.

The instances of speechlessness produced by an injury to the lingual nerves are not common. But a division of the recurrent nerves which are offsets from the par vagum, and distributed over the larynx and glottis, produce a speechlessness that is rarely, if ever, recovered from: for here the muscles belonging to the arytenoid cartilages being rendered atonic or paralytic, can never be brought into a due degree of constriction, the glottis remains permanently open, and the diameter of the larynx suffers no variety of contraction or dilatation.

Where the speechlessness has followed upon an injury to some branches of the lingual nerves, we have numerous examples of recovery. In one instance, the dumbness ceased suddenly, after the patient had been speechless for not less than ten years.

In other instances dumbness is produced suddenly, from a total exhaustion of nervous power in the vocal organs, without any organic lesion whatever. A sudden and overwhelming emotion of the mind from terror, anger, or any other passion, has frequently had this effect in irritable habits. So has a violent fit of hysterics; or any other vehement shock which instantaneously exhausts the nerves of their sensorial power, and the muscular fibres of their irritability; as a stroke of lightning, or a severe and unexpected blow on the stomach, will sometimes exhaust the entire system of its vital energy, and make life immediately cease. A sudden chill, as from drinking cold water during a violent heat, or the shock of a sudden fall, has frequently produced it, of which numerous instances are recorded in the Ephemerides of Natural Curiosities. Speechlessness of this kind has sometimes arisen from deleterious exhalations; from eating mushrooms; and, in one instance, recorded in Hufeland's Annals, by repeatedly rubbing the wound made by a poisonous insect with saliva, and as often putting the finger to the mouth to obtain a supply of fresh fluid. In like manner, Bonet informs us that the same effect has followed from putting into the mouth and swallowing a piece of money cankered with the rust of verdigris.

Where medical aid is required, our dependance must be on tonics, local or general, and topical stimulants. Blisters and masticatories have chiefly been made use of, and frequently with good effect; as has the vellication of a hair-brush contrived for the purpose. The dumbness has sometimes yielded to emetics, at others to electricity; and, in a few cases, to a severe cough; and occasionally the same, or a like violence which occasioned the disease, has removed it, and the cause has become the cure; as is reported of Athys, the son of Crœsus. In like manner, we have examples of its having yielded abruptly to a fit of anger, or terror, in one instance to a fit of laughter, in another to a blow on the head.

3. From *deafness congenital, or produced during infancy.* The ears are as necessary to speech, or articulate sounds, as the tongue, or even the glottis; for if such sounds be not heard, and distinctly discriminated, they can never be imitated. Persons who become deaf after the acquisition of speech, do not become dumb, for the very reason that articulation has already formed a habit, and can easily be preserved by practice. But if deafness be congenital, or take place antecedently to such habit, articulation can never be acquired afterwards, unless by some rare good fortune the ears should acquire hearing; and the unfortunate individual can only receive and interchange ideas by the eye; through which medium, however, he may be taught written, though not oral language; and thus still, happily for himself, have his mind almost as richly stored, though not his ideas as readily communicated, as through the outlet of speech. This is an interesting subject, and not unconnected with pathological science, since it opens to us the only remedy that can be resorted to where the defect before us, or that of deafness prior to articulation, is the subject of discussion.

APHORIA. (*a, æ.* f.; from *α*, neg. and *φερω*, *fero*, *paris.*) Barrenness. See *Sterility.*

A'PHORISM. (*Aphorismus, i.* m.; from *αφοριζω*, to distinguish.) A maxim, or principle, comprehended in a short sentence.

APHRITE. A carbonate of lime usually found in calcareous veins at Gera in Misnia and Thuringia.

APHRODI'SIA. (*a, æ.* f.; from *Αφροδιτη*, Venus.) An immoderate desire of venery.

APHRODISIAC. (*Aphrodisiacus*; from *αφροδισια*, venery.) That which excites a desire for venery.

Aphrodi'siacus morbus. (From *Αφροδιτη*, Venus.) The venereal disease.

Aphrodisia'sticon. (From *αφρος*, froth.) A troch: so called by Galen, because it was given in dysenteries, where the stools were frothy.

APHTHA. (*Αφθαι*, *a, æ.* f.; from *απτω*, to inflame.) The thrush, frog, or sore mouth; called also, *Aphtha lactucimen*,

Ulcera serpentia oris, *Pustula oris*, *Alcola*, *Vesiculæ gingivarum*, and *Acacos*. Small white ulcers upon the tongue, gums, and around the mouth and palate, resembling small particles of curdled milk. This disease is ranked by Cullen in the class *Pyrexiæ*, order *Exanthemata*. Children are very subject to it. When the disease is mild, it is confined to these parts; but when it is violent and of long standing, it is apt to extend through the whole course of the alimentary canal, from the mouth down to the anus; and so to excite severe purgings, flatulencies, and other disagreeable symptoms. The disease, when recent and confined to the mouth, may in general be easily removed; but when of long standing, and extending down to the stomach and intestines, it very frequently proves fatal.

The thrush sometimes occurs as a chronic disease, both in warm climates and in those northern countries where the cold is combined with a considerable degree of moisture, or where the soil is of a very marshy nature. It may, in some cases, be considered as an idiopathic affection; but it is more usually symptomatic. It shows itself, at first, by an uneasy sensation, or burning heat in the stomach, which comes on by slow degrees, and increases gradually in violence. After some time, small pimples, of about the size of a pin's head, show themselves on the tip and edges of the tongue; and these, at length, spread over the whole inside of the mouth, and occasion such a tenderness and rawness, that the patient cannot take any food of a solid nature, neither can he receive any vinous or spirituous liquor into his mouth, without great pungency and pain being excited. Little febrile heat attends, but there is a dry skin, pale countenance, small pulse, and cold extremities. These symptoms will probably continue for some weeks, the general health being sometimes better and sometimes worse, and then the patient will be attacked with acid eructations, or severe purgings, which greatly exhaust his strength, and produce considerable emaciation of the whole body. After a little time, these symptoms cease, and he again enjoys better health; but, sooner or later, the acrid matter shows itself once more in the mouth, with greater virulence than before, and makes frequent translations to the stomach and intestines, and so from these to the mouth again, until, at last, the patient is reduced to a perfect skeleton. Elderly people, and persons with a shattered constitution, are most liable to its attacks. The treatment of the thrush in children is generally to be begun by the exhibition of a gentle emetic: the bowels are then to be cleared by rhubarb and magnesia, castor oil, or other mild aperients; or sometimes, in gross torpid habits, by a dose of calomel. In general, the prevalence of acid in the primæ viæ appears to lead to the complaint; whence antacid remedies prove beneficial in its progress: when the patient is costive, giving the preference to magnesia; when relaxed, to chalk, which may be sometimes joined with aromatics, the mild vegetable astringents, or even a little opium, if the diarrhœa be urgent. Where the child is very weak, and the aphthæ of a dark colour, the decoction of bark or other tonics must be had recourse to. The separation of the sloughs and healing of the ulcers may be promoted by washing the mouth occasionally with the honey of borax, diluted with two or three parts of rose water; or where they are of a dark colour, by the decoction of bark, acidulated with sulphuric acid. The diet should be light and nutritious, especially where there is much debility. As the complaint is subsiding, particular attention is required to obviate the bowels becoming confined. In the chronic aphthæ affecting grown persons, pretty much the same plan of treatment is to be pursued: besides which, the compound powder of ipecacuanha and other diaphoretics, assisted by the occasional use of the warm bath, wearing flannel next the skin, particularly in a damp cold climate, &c. appear to be beneficial.

APHYLLUS. (From α, priv. and φυλλον, a leaf.) Aphyllous: leafless. Applied to parts of plants which are so conditioned when similar parts of other plants have leaves. Thus a stem is said to be aphyllous when it is altogether void of leaves. Linnæus uses the term *nudus*. Examples are found in *Cuscuta europæa*, dodder; *Asphodelus fistulosus*, &c.

Aphyllæ plantæ. Aphyllous plants, or plants without leaves. Some plants being entirely devoid of leaves, are naturally arranged under one head, to which this name is given.

A'PIS. (*is, is.* f.: perhaps from *apio*, i. e. *necto*, *quod pedibus connexæ ad limina; pendent*, Virg.) The name of a genus of insects, in the Order *Hymenoptera*, in the Linnæan system. The bee.

Apis mellifica. The systematic name of the honey-bee. It was formerly dried and powdered, and thus given internally as a diuretic. It is to the industry of this little animal that we are indebted for honey and wax. See *Mel*, and *Cera*. The venom of the bee, according to Fontana, bears a close resemblance to that of the viper. It is contained in a small vesicle, and has a hot acrid taste like that of the scorpion.

Apis violacea. The immediate ill effects of the sting of this species, and that of all this kind of insect, are best removed by dilute compound spirit of ammonia, or *eau-de-luce* well diluted.

A'PIUM. (*um, i.* n.; from ηπιος, *Doricè*, απιος, mild: or from *apes*, bees, because they are fond of it.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

2. The pharmacopœial name of the herb smallage. See *Apium graveolens.*

APIUM GRAVEOLENS. The systematic name for the *Apium* of the pharmacopœias. Smallage. *Apium—foliolis caulinis, cuneiformibus, umbellis, sessilibus,* of Linnæus. The root, seeds, and fresh plant, are aperient and carminative.

APIUM HORTENSE. See *Apium petroselinum.*

APIUM PETROSELINUM. The systematic name for the *petroselinum* of the pharmacopœias, or common parsley; called also *Petroselinum vulgare,* and *Apium hortense. Apium—foliis caulinis linearibus, involucellis minutis,* of Linnæus. Both the roots and seeds of this plant were formerly directed by the London College for medicinal use, and the root is still retained in the Edinburgh pharmacopœia: the former have a sweetish taste, accompanied with a slight warmth or flavour, somewhat resembling that of carrot; the latter are in taste warmer and more aromatic than any other part of the plant, and manifest considerable bitterness. The roots are said to be aperient and diuretic, and have been employed in nephritic pains and obstructions of urine. The seeds possess aromatic and carminative powers, but are seldom prescribed.

APLONÆ. A deep orange brown mineral, mostly considered to be a variety of the garnet.

APNEU'STIA. (*a, æ.* f.; from *α,* and *πνεω,* to breathe.) A defect or difficulty of respiration, such as happens in a cold, &c. *Foësius.*

APNŒA'. The same. — *Galen.*

APOCAPNI'SMUS. (From *απο,* and *καπνος,* smoke.) A fumigation.

APOCARPASON. *Apocarpathon. Apocalpason.* See *Carpasus.*

APOCATHA'RSIS. (From *απο,* and *καθαιρω,* to purge.) An evacuation of humours. A discharge downwards, and sometimes applied, with little discrimination, to vomiting.

APOCAULIZE'SIS. (From *αποκαυλιζω,* to break transversely.) A transverse fracture. — *Hippocrates.*

APOCENO'SIS. (*is, is.* f.; from *απο,* and *κενοω,* to evacuate.) 1. A flow or evacuation of any humour.

2. An order in the class *Locales* of Cullen is called *Apocenoses,* which embraces diseases characterised by a superabundant flux of blood, or other fluid, without pyrexia.

APOCHYLISMA. (*Apochulisma;* from *απο,* and *χυλιζω,* to extract juice from.) An inspissated juice or rob.

APOCHYSIS. A Greek name for the cataract.

APO'COPE. (From *απο,* and *κοπτω,* to cut from.) Abscission, or the removal of a part by cutting it off.

APO'CRISIS. (From *απο,* and *κρινω,* to secrete from.) A secretion of superabundant humours. — *Hippocrates.*

APOCRU'STICON. See *Apocrustinus.*

APOCRU'STINUS. (From *αποκρουω,* to repel.) That which is astringent or repellent. — *Galen.*

APOCYE'SIS. (From *απο,* and *κυω,* to bring forth.) Parturition, or the bringing forth of a child. — *Galen.*

APODACRY'TICUS. (From *απο,* and *δακρυ,* a tear.) Having the power of exciting and again suppressing the tears, and thus removing superfluous humours from the eyes, as the onion, &c. — *Pliny.*

APOGEU'SIS. See *Ageustia.*

APOGEU'STIA. (From *απο,* and *γευομαι,* to taste.) See *Ageustia.*

APOGINOME'SIS. (From *απογινομαι,* to be absent.) The remission or absence of a disease. — *Hippocrates.*

APOGLAUCO'SIS. (From *απο,* and *γλαυκος,* sky-coloured: so called because of its bluish appearance.) See *Glaucoma.*

APO'GONUM. (From *απο,* and *γινομαι,* to beget.) A living fœtus in the womb. — *Hippocrates.*

APOLE'PSIS. (From *απο,* and *λαμβανω,* to take from.) An interception, suppression, or retention of urine, or any other natural evacuation. — *Hippocrates.*

APOLINO'SIS. (From *απο,* and *λινον,* flax.) The method of curing a fistula, according to Ægineta, by the application of raw flax.

APO'LYSIS. (From *απο,* and *λυω,* to release.) The solution or termination of a disease. The removal of a bandage. — *Erotianus.*

APOMA'GMA. (*a, atis.* n.; from *απο,* and *ματτω,* to cleanse from.) Any thing used to cleanse and wipe away filth from sores, as sponge, &c. — *Hippocrates.*

APOMATHE'MA. (From *απο,* neg. and *μανθανω,* to learn.) Hippocrates expresses, by this term, a forgetfulness of all that has been learnt.

APO'MELI. (From *απο,* from, and *μελι,* honey.) An oxymel, or decoction, made with honey.

APONEURO'SIS. (*is, is.* f.; from *απο,* and *νευρον,* a nerve, from an erroneous supposition of the ancients, that it was formed by the expansion of a nerve.) A tendinous expansion. See *Muscle.*

APO'NIA. (*a, æ.* f.; from *α,* priv. and *πονος,* pain.) Freedom from pain.

APONITRO'SIS. (From *απο,* and *νιτρον,* nitre.) The sprinkling an ulcer over with nitre.

APOPALLE'SIS. (From *αποπαλλω,* to throw off hastily.) *Apopalsis.* An abortion, or premature expulsion of a fœtus. — *Hippocrates.*

APOPALSIS. See *Apopallesis.*

APOPEDA'SIS. (From *απο,* and *πηδαω,* to jump from.) A luxation.

APOPHLEGMA'SIA. (*a, æ.* f.; from *απο,* and *φλεγμα,* phelgm.) A discharge of phlegm, or mucus.

APOPHLEGMA'TIC. (*Apophlegmaticus;* from *απο,* and *φλεγμα,* phlegm.) That which excites the secretion of mucus from the mouth and nose.

Apophlegmatizans. See *Apophlegmatic.*

Apophlegmatizons. See *Apophlegmatic.*

Apophra'xis. (From απο, and φρασσω, to interrupt.) A suppression of the menstrual discharge.

Apophtha'rma. (From απο, and φθειρω, to corrupt.) A medicine to procure abortion.

Apophthe'gma. (From αποφθεγγομαι, to speak eloquently.) A short maxim, axiom, or rule.

Apo'phthora. (From αποφθειρω, to be abortive.) An abortion.

Apophy'ades. The ramifications of the veins and arteries. — *Hippocrates.*

Apo'phyas. (From αποφυω, to proceed from.) Any thing which grows or adheres to another, as a wart to the finger.

APOPHYLLITE. *Ichthyophthalmite.* Fish-eye stone. A mineral composed of silex, potash, and water, found in the iron mine of Utoe, in Sweden.

APO'PHYSIS. (*is, is.* f.; from αποφυω, to proceed from.) A process.

1. In *Anatomy*, it is also called *Appendix, Probole, Ecphysis, Processus, Productio, Projectura,* and *Protuberantia,* and means a process, projection, or protuberance, of a bone beyond a plain surface; as the nasal apophysis of the frontal bone, &c.

2. In *Botany*, applied to a fleshy tubercle under the basis of the capsule or dry fruit adhering to the frondose mosses.

Apoplecta vena. A name formerly applied to the internal jugular vein: so called because in apoplexies it appears full and turgid. — *Bartholin.*

APOPLE'CTIC. (*Apoplecticus*; from αποπληξια, an apoplexy.) Belonging to an apoplexy.

APOPLE'XY. (*Apoplexia, æ.* f.; from απο, and πλησσω, to strike or knock down; because persons, when seized with this disease, fall down suddenly.) A sudden abolition, in some degree, of the powers of sense and motion, the person lying in a sleep-like state; the action of the heart remaining, as well as the respiration, often with a stertorous noise. Cullen's species are,

1. When it takes place from a congestion of blood, it is termed *Apoplexia sanguinea.*

2. When there is an abundance of serum, as in persons of a cold phlegmatic temperament, *Apoplexia serosa.*

3. If it arise from water in the ventricles of the brain, it is called *Apoplexia hydrocephalica.* See *Hydrocephalus.*

4. If from a wound, *Apoplexia traumatica.*

5. If from poisons, *Apoplexia venenata.*

6. If from the action of suffocating exhalations, *Apoplexia suffocata.*

7. If from passions of the mind, *Apoplexia mentalis.*

8. And when it is joined with catalepsy, *Apoplexia cataleptica.* See *Catalepsis.*

Apoplexy is strictly a disease dependent upon a suspension of the sensorial power in almost all its modifications, sentient, percipient, and motory, with the exception of a certain portion which still continues to be supplied to the involuntary organs, the faculties of the mind participating in the torpitude of the body. In these respects it bears a very near approach to lethargy; it chiefly differs in its being generally connected with an oppressed state of the vessels of the brain from over-distention or effusion; so generally, indeed, that apoplexy is, by almost all the writers on the subject, regarded rather as a disease of the sanguineous than of the nervous system; the morbid action of the latter being supposed to be entirely dependent on that of the former, and, consequently, only a secondary affection.

This view of the subject, however, is by far too limited; for although in most cases the more prominent symptoms concur with the appearances on dissection in leading us to compression of the brain as the primary cause of the disease, yet we shall find presently that it has sometimes taken place where no such compression seems to have existed, whilst a variety of affections of the head, attended with forcible and severe compression, as inflammation and dropsy of the brain, have run their entire course without any mark of apoplexy whatever: to which should be added, that, while in most other diseases or lesions accompanied with compression of the brain, and a suspension of sentient and motory power as a consequence hereof, such suspension ceases almost the moment the compression is removed, when the nerves of feeling and motion, together with the faculties of the mind, resume their wonted activity, and evince no tendency to a relapse. In apoplexy, on the contrary, the result is always doubtful; for a palsy of some part or other is a frequent and permanent effect, or the mind suffers in some of its faculties, and a relapse is generally to be apprehended. So that though compression of the brain, and particularly from a morbid state of the sanguineous and respiratory functions, may be justly regarded as the ordinary efficient cause, there seems to be at the same time some peculiar debility, or other diseased condition of the sensorial system, to which apoplexy is primarily to be referred, and without which it might not take place, and which has not been sufficiently adverted to by practitioners; though there can be no difficulty in our affirming, that wherever such a morbid condition exists, compression, from whatever cause, will be sure to produce the disease.

We may hence see why advancing age should prove a predisposing cause; and account for the statement of Morgagni, who tells that, of thirty cases of apoplectic patients that fell within the reach of his observation, seventeen were above the age of sixty, and only five below that of forty. Hippocrates, on a more general estimate, calculated that apoplexies are chiefly pro-

duced between the fortieth and sixtieth year. This, indeed, is somewhat earlier than we should expect on the ground of advancing age; but when we take into consideration that it is the precise period in which the mind is most agitated and exhausted with the violent and contending passions of interest, and ambition, and worldly honours, and that the blood is most frequently determined to the head by this impulse of sudden and irresistible emotions, we shall perhaps readily accede to the Hippocratic aphorism as a general rule.

How far apoplexy is occasionally the result of an hereditary influence on the frame, it is not easy to ascertain. Forestus, Portal, and Wepffer refer to decided instances of such facts within their own knowledge; the first, indeed, relates the history of a father and his three sons, all of whom died in succession of this disease; but as the chronology drops with the second generation, it does not descend quite far enough for the purpose. There is great reason, however, for believing that an hereditary tendency does sometimes show itself; and, as this exists without external or manifest signs, it is probably seated in the sensorial system, and constitutes another of the morbid conditions of this system, to which we have referred above, as often giving effect to subordinate causes.

There is no difficulty in conceiving how heat may become a predisponent cause, since nothing tends more effectually to quicken the action of the heart, drive the blood forcibly into the ascending trunk of the aorta, and, consequently, overload the vessels of the brain. But cold is said to be a predisponent cause as well, and one that operates quite as extensively, while the reason of this has not been at all times very clearly explained. Now, as a hot temperature acts chiefly upon the sanguiferous system, extreme cold acts chiefly upon the sensorial, benumbs the feeling, weakens the muscular fibres, diminishes the sensorial secretion, and consequently induces an unconquerable propensity to sleep. And hence again, in apoplexies produced by severe cold, the primary or predisponent cause is to be sought for in a debilitated state of the nervous system. The Greek physicians are perpetually alluding to this cause as one of great frequency, and the explanation now given does not essentially vary from that offered by Galen. If, indeed, the cold be exquisitely intense, *Asphyxia*, or suspended animation, is more likely to be produced than apoplexy; for we have already observed, under the preceding species, that the very same cause which, operating in a vehement degree, excites the former, operating less powerfully has often a tendency to excite the latter.

The other predisponent causes, so far as they have been traced out, are more obvious to the senses, and, for the most part, more directly referrible to the state of the sanguineous function; as plethora, corpulency, and grossness of habit, a short thick neck, and an inordinate indulgence in wines and heavy fermented liquors. Dr. Cheyne, indeed, believes the last to be so common a cause, as even to produce the disease when employed without any inordinate indulgence whatever. "The daily use," says he, "of wine or spirits will lead a man of a certain age and constitution to apoplexy, as certainly as habitual intoxication." This may be true as here limited, but then the limitation must be attended to; in which case we are only told in other words, that wherever such a kind of sensorial debility exists as that which we have already adverted to, the result of age, or habit, or constitution, one man will be as readily led to apoplexy under a moderate use of wine, as another man destitute of such predisposition will be under a state of habitual intoxication. Under this explanation, however, a moderate use of wine becomes only an accessory, and not a primary cause.

How far there may be any other efficient or exciting causes of apoplexy than compression of some kind or other, it is difficult to determine, though various cases on record should induce us to suppose there are. Hydatids, humours of almost every consistency, gelatinous, steatomatous, and bony pus, and polypous caruncles and indurations of the membranes, have, in various cases, been discovered on dissection, and are generally supposed to operate by compression, in the same manner as an accumulation of blood or serum. But in many instances these appearances seem to have been too minute for any such effect; and, if causes of any kind, can only fairly be regarded as concomitants or allied powers — as local irritants, stimulating and exhausting the sensorium, and preparing it for attacks of apoplexy against the accession of some superinduced and occasional cause; though, where there exists already a strong predisposition to the disease from hereditary or any other affection, it is not improbable that such local irritants may alone be sufficient to perfect the complaint. And we may hence account for that form of apoplexy which is said to proceed from intestinal worms, or some other acrimony of the stomach, or from teething; and which, consequently, occurs at an early instead of at a late period of life, and has been specially denominated *Apoplexia infantum*. Other organs, however, besides the teeth and the stomach, seem not unfrequently to have given occasion to apoplectic attacks, from irritation, distention, or organic lesion. Thus, according to Portal, superinducing tumours and congestions have been found in the neck, in the breast, or in the abdomen; ossifications in the thoracic and ventral aorta, as well as in the arteries of the upper and lower extremities, in the superior vena cava, and in the right ventricle

and valves of the heart, which has also indicated various other changes.

Most of these morbid actions and appearances, however, are as common to various other affections of the sensorial system as to apoplexy. We have already noticed them in lethargy, convulsion, epilepsy, various species of cephalæa, and some forms of insanity: and hence, wherever they become causes at all, it is most probable that the disease they immediately produce is regulated by the predisposition of the individual to one rather than to any other of the above sensorial affections, resulting from family taint, idiosyncrasy, habit, or period of life; and, consequently, that the same exciting or occasional cause which, in one person, would produce apoplexy, in a second, would form epilepsy, in a third, convulsion, and in a fourth, madness.

It is highly singular that this view of the subject should scarcely ever have been attended to by physicians; and that, whilst all the writers have pretended to regard apoplexy as a disorder of the nervous system, none of them have suffered such ideas to enter fairly into their pathology, or in any way whatever into their practice: the nervous organ being supposed by all of them to be in a state of soundness at the time of the attack; and whatever mischief it suffers, to be merely secondary and consequent upon a morbid state of the blood-vessels, or of some other cause that as suddenly and effectually interrupts the secretion or flow of the sensorial power, as retrocedent gout, mephitic vapours, or narcotic poisons.

Now all these accidental or effective causes of apoplexy are well known to be causes, also, of the other nervous affections we have just referred to. But if this be the case, how comes it that they should thus vary in their result, and that what in one person, and at one period of life, should produce apoplexy, should in another person, and in another period of life, produce lethargy, palsy, convulsions, or epilepsy? or that some of them should exist without producing any of these diseases, or any other disease whatever? It is not, perhaps, possible for us to develop the precise condition of the sensorium that leads to any one of these effects, rather than to any other; but that there is such a condition, forming a predisponent or remote cause of the specific disease that shows itself, must, it is presumed, be allowed by every one who seriously considers the subject.

Nor is there, in effect, any other means of reconciling the discrepant and opposite opinions that have been held concerning the proximate cause of the disease. This we have stated to be, for the most part, compression, and especially sanguineous compression. Mr. John Hunter was so strenuously attached to this cause, that he would allow of no other; and if a man died of apoplexy from atonic gout, and without effusion, he distinguished it as *a disease similar to apoplexy.* He regarded apoplexy and palsy as one and the same disease, merely differing in degree: and he gives us his sentiments very forcibly, in the following words: "For many years," says he, "I have been particularly attentive to those who have been attacked with a paralytic stroke forming a hemiplegia. I have watched them while alive, that I might have an opportunity to open them when dead: and in all I found an injury done to the brain in consequence of the *extravasation of blood.* I must own I never saw one of them which had not an extravasation of blood in the brain, except in one who died of a gouty affection in the brain, with symptoms *similar to apoplexy.*"

In direct hostility to this hypothesis, many other writers of great eminence and experience have contended that compression is no cause whatever, and that an accumulation of blood in the head, as a prominent symptom in apoplexy, is a doctrine rather than a fact. Of this sentiment is Dr. Abercombie, who, after examining the question with much ingenuity, brings himself to the following conclusion: "Upon all these grounds," says he, "I think we must admit that the doctrine of determination to the head is not supported by the principles of pathology, and does not accord with the phænomena of apoplexy." Dr. Serres, however, a physician of considerable distinction in France, and who followed up this subject for many years by a careful examination of the bodies of persons who died of apoplexy and paralysis, both at the Hôtel Dieu, and the Hôpital de la Pitié, has carried his inroad upon the popular doctrine of the day still farther; for he has not only, in his own opinion, completely subverted is, but has endeavoured to establish another doctrine, of a very different character, upon its ruins. To determine the question, he has gone through a long series of experiments upon the brains of dogs, pigeons, rabbits, and other animals, whose crania were trepanned, their lateral or longitudinal sinuses laid open, and their brains lacerated and excavated in various ways, so as to be gorged with effused blood, yet in none of them did somnolency or any other apoplectic symptom take place. And he hence triumphantly concludes that extravasation of blood does not produce apoplexy, whether lodged between the cranium and the dura mater, or between the dura mater and the brain; whether the blood occupy the great interlobular scissure, and thus lies upon the corpus callosum; whether cavities be made in the fore, the back, or the middle part of the hemispheres, or run from the one into the other; or, lastly, whether piercing through the corpus callosum we reach and fill up the ventricles of the brain. "On whatever animal," says he, "we try these experiments, whether on birds, rabbits, or

dogs, the result is the same, and hence apoplexy in man ought not to be ascribed to such effusions."

How are these discrepancies to be reconciled? By what means are we to account for it, that pressure may be a cause, and may not be a cause; and that apoplexy is sometimes found with it, and sometimes without it? It is the peculiar state of the sensorium or nervous system at the time, that makes all the difference; it is the morbid predisposition or debility, or whatever other deviation from perfect health it may labour under at the moment of the application of the exciting cause, that gives an effect which would not otherwise take place; and something of which, in many cases, often discovers itself by precursive signs for a considerable period before the apoplectic incursion. The facts stated by Mr. John Hunter no one can call in question; and we have as little right to question the experiments of M. Serres. The error consists in taking an unsound and a sound state of brain for like premises, and reasoning from the effects produced on the one, to those that are found to follow on the other. This, in truth, is an error too often committed; and hecatombs of quadrupeds and other animals, in a condition of perfect health, are tortured in a thousand ways for the purpose of determining what they never could determine, though the trials were to be repeated to the end of time; I mean the effects of certain causes on a diseased state of body in man, from their influence on a sound state of body in brutes.

Dr. Serres's actual examinations of apoplectic patients after death, however, though conducted also upon a large scale, do not seem to afford much countenance to his hypothesis, nor, in effect, to offer any thing out of the common way. In a considerable number of subjects there was serous effusion, sanguineous effusion, or both; sometimes in the circumvolutions of the brain, sometimes in the ventricles, sometimes in all these; and not unfrequently the vessels of the meninges appeared distended with blood, and the membranes themselves thickened. Such appearances seem to furnish something of a stumbling-block to M. Serres's new doctrine, yet he readily gets over the difficulty by satisfying himself that, in all these cases, the effusion did not produce the apoplexy, but the apoplexy the effusion. In other dissections he found some material alterations in the structure of the brain, but without effusion; and, as the last class of individuals had evinced palsy rather than apoplexy, he is inclined to think that apoplexy, or that state of the disease in which the stupor is greater and more general, is occasioned by a morbid irritation of the *membranes* of the brain; and palsy, or that state in which the stupor is less by a morbid change in its *substance*; in consequence of which he proposes to call the first *meningic*, and the second *cerebral* apoplexy. In this conclusion, however, there seems to be a striking mistake, and the very reverse is what we should have expected; for if there be one pathological principle more established than another, it is that stupor and dulness of pain appertain to the parenchymatous irritation or inflammation of an organ, and rousing, restless, and acute pain to its membranous irritation; and whence, indeed, the lancinating pain of pleuritis compared with pneumonitis, and of meningic or brain-fever compared with acute dropsy of the head?

We hold then, after all, that the grand exciting cause of apoplexy is compression; and this shows itself in various ways, which are well enumerated by Dr. Cheyne in the following passage: "I mention first," says he, "the remains of an excited state of the minute arteries of the brain and its membranes, this probably being the most important, as it is the most unvarying appearance: then the extravasation of blood, probably the consequence of the excited state of the vessels; the turgescence of the venous system; the enlargement of the ventricles, partial or general; and, lastly, the serous effusion which is generally found in various parts of the brain, and which would seem to imply previous absorption of the brain."

It is singular that the congestive fluid, instead of proving a material elaborated by the animal frame itself, should sometimes consist of a foreign material recently received into the stomach. Dr. Cooke has given a case strikingly in proof of this. "I am informed (he observes) by Mr. Carlisle, that, a few years ago, a man was brought dead into the Westminster Hospital, who had just drank a quart of gin for a wager. The evidences of death being quite conclusive, he was immediately examined; and within the lateral ventricles of the brain was found a considerable quantity of a limpid fluid distinctly impregnated with gin, both to the sense of smell and taste, and even to the test of inflammability. 'The liquid,' says Mr. Carlisle, 'appeared to the senses of the examining students as strong as one third gin to two thirds water.'" It is curious, and seems to baffle all explanation, to see how readily substances foreign to the blood, when they once enter into its current, are often carried from one organ to another, undiluted and undissolved, and deposited in an entire, or nearly an entire state, in a remote quarter. Absorbed pus affords us frequent examples of this, and morbid poisons, as they are called, still more frequent. It is hence that various medicines are enabled to act by a specific power; that mercury travels chiefly to the salivary glands, and perhaps several of the demulcents to the lungs.

On examining the different sources of a compressed brain, as we have just enumerated them, it will be obvious that they bespeak a very different, and, indeed, opposite state of

vascular action in different cases; and that while some of them necessarily imply a vehement and tonic power, others as necessarily imply an infirm and atonic condition. The external symptoms, from the first, speak to the same effect; and hence, from an early period of time, apoplexy has been contemplated under two distinct forms or varieties, which have commonly been denominated sanguineous, and pituitous or serous; as though the former proceeded from an overflow of blood highly elaborated by a vigorous and robust constitution, and rushing forward with great impetuosity; and the latter from thin dilute blood, or a leucophlegmatic habit, from the relaxed mouths of whose vessels a serous effusion is perpetually flowing forth. Morgagni has endeavoured to show, but without success, that this distinction was in existence among the Greek writers. It is a distinction, however, that runs not only through his own works, but through those of Boerhaave, Sennert, Mead, Sauvages, and Cullen, and is acknowledged by most practitioners of the present day.

The term pituitous or serous, however, has been objected to as not always expressing the actual state of the brain in atonic apoplexy, since no serum has been found at times in cases where the symptoms of debility have peculiarly led those pathologists to expect it who have employed the distinctive term; while the cavities and interstitial parts of the brain have, on the contrary, been sometimes found as much loaded with blood, as in what they denominate sanguineous apoplexy. And hence Forestus, and a few other writers, have been disposed to exchange the terms sanguineous and serous, for strong or perfect, and weak or imperfect apoplexy. How far a modification of this disease, strictly serous, may be said to exist, we shall examine presently; but apoplexy is continually showing itself under the two forms, sanguineous and serous:

1. With a hard full pulse, flushed countenance, and stertorous breathing.

2. With a feeble pulse, and pale countenance.

1. In the first, the fit is, for the most part, sudden and without warning; though a dull pain in the head occasionally precedes the attack, accompanied with a sense of weight or heaviness, somnolency and vertigo. The inspirations are deeper than natural; the face and eyes are red and turgid, and blood bursts from the nostrils. On the incursion of the paroxysm, the patient falls to the ground, and lies as in a heavy sleep, from which he cannot be roused. The breathing is strikingly oppressive: though at first, perhaps, slow and regular, increasing in frequency, weakness, and irregularity with the progress of the fit, till at length it becomes, in many cases, intermitting and convulsive.

It is in this form of the disease that we chiefly meet, and are almost always sure to meet, with a snoring or stertorous breathing; nor is this difficult to be accounted for, since the vessels of the trachea, and particularly those of the larynx and fauces, labouring under the same augmented action as those of the head, a larger portion of mucus is secreted by their excretories than is carried off by the corresponding absorbents; in consequence of which it accumulates, and impedes the free flux and reflux of the air in respiration. And hence stertor, though not a symptom to apoplexy, as a species, may be ranked as a pathognomic character of the particular form before us. And to the same effect Dr. Cooke, and the most celebrated pathologists who have preceded him. "Boerhaave," says he, "measures the strength of the disease by the degree of stertor; and Portal agrees with him in opinion on this subject; observing that respiration in apoplexy is greatly impeded, and the motions of the breast are very apparent. We hear a noise of snoring or stertor," he says, "which is great in proportion as the apoplexy is strong. In all the cases of strong apoplexy which I have seen, the respiration in the beginning of the paroxysm was laborious, slow, and stertorous; and in those which proved fatal, this symptom, as far as I can recollect, remained, even when the breathing had become weak and irregular."

The reason of this is, that, although in consequence of the debility which has now, perhaps, succeeded to morbid strength of action, there is less mucus secreted in the larynx and fauces than on the commencement of the disease, the absorbents of these organs, participating in the growing weakness, are only capable of carrying off the finer and more attenuate part of the fluid, and thus leave the more viscid in a state of accumulation. And it is for the same reason that from first to last there is often, also, an accumulation of frothy saliva or foam, which, as it becomes troublesome by its increase, is occasionally blown away from the lips with considerable force.

The skin is about the ordinary temperature, and covered with a copious perspiration, or a clammy sweat: the pulse is full and hard, the face flushed, the eyes blood-shot and prominent, and generally closed. The cornea is dull and glassy, and the pupil for the most part dilated. In a few cases, however, there is a tendency to either spastic or convulsive action, spreading sometimes over the limbs, but more generally confined to the muscles of the face: insomuch that, under the first, the teeth are firmly closed, and deglutition is impeded. And where this state exists, the pupil is contracted, sometimes, indeed, almost to a point. This last feature has been rarely dwelt upon by pathologists, whether of ancient or modern times: but it has not escaped the observant eye of the accurate and learned Dr. Cooke: — "In some instances," says he, "I have seen

the pupil contracted almost to a point, and a physician of eminence of my acquaintance has likewise observed this appearance of the eyes in apoplexy; yet although all writers on the subject mention the dilated pupils, I do not find any one, Aretæus among the ancients, and Dr. Cheyne among the moderns, excepted, who has noticed the contracted pupil in these cases."

The paroxysm varies in its duration, from eight to eight and forty hours, and sometimes exceeds this period. Dr. Cooke quotes from Forestus the case of a woman, who, being seized with an apoplexy, which he calls *fortissima*, lay in the fit for three days, and afterwards recovered. It has been already observed, that where it does not prove fatal, it predisposes to a relapse, and often terminates in a lesion of some of the mental faculties, or in a paralysis more or less general; commonly, indeed, in a hemiplegia, which usually takes place on the opposite side of the body from that of the brain in which the congestion or effusion is found, on examination, to have taken place. "This," says Dr. Baillie, "would seem to show that the right side of the body derives its nervous influence from the left side of the brain, and the left side of the body its nervous influence from the right side of the brain. It is rarely indeed, if ever, that some of the turgid vessels of the brain are not ruptured in this form of the disease, and consequently produce an effusion of blood into some part of the organ of the brain." And, according to the same distinguished writer, the part where the rupture most commonly takes place is its medullary substance near the lateral ventricles, some portion of the extravasated fluid often escaping into these cavities.

2. In the other form, where the pulse is feeble, and the countenance pale, the constitution infirm by nature, or enfeebled by age, intemperance, or over-exertion of body or mind, it has more of a purely nervous character than the preceding variety, and is more a result of vascular debility than of vascular surcharge; and consequently where effusion of blood is found, as it often is, in the present form, the vessels have been ruptured, not from habitual distention or vigorous plethora, but from accidental, often, indeed, slight causes, that have produced a sudden excitement and determination to the head beyond what the vascular walls are capable of sustaining. Hence, a sudden fit of coughing or vomiting, a sudden fright or fit of joy, an immoderate fit of laughter, the jar occasioned by a stumble in walking, or a severe jolt in riding, have brought on the present form of apoplexy, and with so much the more danger, as the system possesses less of a remedial or rallying power in itself.

In most of the cases, the effusion detected after death has therefore been as truly sanguineous as in the other form of apoplexy. "It is," says Portal, "an error to believe that the apoplexy to which old men are so much subject is not sanguineous." Daubenton and Le Roy, Members of the Institute, died of this precise kind of the disease at an advanced age; and Zulianus describes a case marked by a pale countenance, and a pulse so weak as scarcely to be felt, which, on examination after death, was found to be an *apoplexia verè sanguinea;* and another in which, after all the symptoms of what is ordinarily called serous apoplexy had shown themselves, extravasated blood was discovered in the brain without any effusion of serum, or the smallest moisture in the ventricles.

It is nevertheless true that this species of apoplexy is often found with an effusion of serum instead of an effusion of blood, and apparently produced by such serous effusion; and hence, notwithstanding the objections of Dr. Abercrombie, and, in the latter years of his practice, of Portal, to serous effusion as a cause at all, the experience and reasoning of Boerhaave, and Hoffman, and Mead, and Sauvages, and Cullen, must not be abruptly relinquished, without far graver proofs than have hitherto been offered: for if it be a question, as Stoll has made it, whether effused serum, when discovered in the brain of those who have died of apoplexy, be a cause of the disease or an effect, we may apply the same question to effusion of blood. It is possible, indeed, for effused serum to become occasionally a cause of that which, from its symptoms, is ordinarily denominated sanguineous apoplexy; for it is possible for the exhalents of the brain to participate so largely in the high vascular excitement by which this form of the disease is characterised, as to secrete an undue proportion of effused fluid into any of its cavities, and thus become as direct a cause of apoplexy as extravasated blood.

This, however, is not what is generally understood by the term serous apoplexy, as distinguished from sanguineous, and, indeed, ought only to be regarded as an effect of sanguineous distention. Serous apoplexy, properly so called, is strictly the result of a debilitated constitution, and especially of debility existing in the excernent vessels of the brain, whether exhalants or absorbents; for although lymphatics have not yet been discovered in this organ, there must be vessels of some kind or other to answer their purpose, and the extremities of the veins have been supposed thus to act; a supposition which has derived countenance from various experiments of Magendie, and which may at least stand as an hypothesis till the proper system of vessels is detected.

A serous effusion, under these circumstances, may take place from three causes. The mouths of the exhalants may be relaxed, and consequently let loose a larger portion of fluid than they are accustomed to do in a state of health, and a larger portion than can

be carried off by the absorbents. Or the extremities of the absorbents may be torpid and inactive, and not imbibe the fluid that is thus thrown forth, and the balance may be disturbed in this as well as in the preceding way. Or the blood itself may be of too watery a crasis, and too large an effusion take place from this cause; whence, indeed, we frequently meet with apoplexy as the result of general dropsy.

Hence, this form of apoplexy rarely makes its attack altogether so incontinently as the other; and is commonly preceded by a few warning symptoms. These are often, however, nothing more than the ordinary precursors of other nervous affections, as vertigo, cephalæa, imaginary sounds, a faltering in the speech, a failure in the memory, or some other mental faculty, and at length a sense of drowsiness, and a tendency to clonic spasms. On the attack of the paroxysm, the patient is as completely prostrated as in the atonic variety, but the symptoms are less violent, though not on this account less alarming, in consequence of the greater debility of the system. The countenance is here pale or sallow, instead of being flushed, but at the same time full and bloated; the pulse is weak and yielding, sometimes, indeed, not easy to be felt; and the breathing, though always heavy and laborious, not always, as we have already observed, noisy or stertorous. If spasms occur, they are uniformly of the convulsive or clonic kind. The duration of the fit varies as in the preceding variety, and if the patient recover, he is more liable to a relapse, and more in danger of hemiplegia, or some other form of paralysis, than in the stronger modification of the disease.

From these remarks on the two forms of apoplexy, we may readily see why this complaint, and its ordinary associate or sequel, palsy, should be about equally common to the poor and to the rich: for frequent exposure to cold and wet, severe and long protracted exercise, and a diet below what is called for, will often be found to produce the same debilitating effects as ease, indolence, luxury, and indulgence at too sumptuous a table. And hence, contrary to what many would expect, Sir Gilbert Blane has observed from accurate tables kept with minute attention, and derived from a practice of ten years in St. Thomas's Hospital, and his private consultations, that "there is a considerably greater proportion of apoplexies and palsies" among the former, than among the latter: or, in other words, that these disorders bear a larger proportion to other diseases among the lower classes than among those in high life. "Some cases of hemiplegia," says he, "occur in full habits; some in spare and exhausted habits. The former being most incident to the luxurious and indolent, most frequently occur in private practice, and among the upper ranks of life. The latter occur more among the laborious classes, and among such of the rich as are addicted to exhausting pleasures."

In forming our prognostic, a special regard must be had to the peculiar character of the disease. Generally speaking, atonic apoplexy is more dangerous than tonic, for we have here a more barren field to work upon, and nature herself, or the instinctive power of the living frame, has less ability to assist us. As to the rest, in either modification the degree of danger will be generally measured by the violence of the symptoms. Where, under the first variety, the breathing is not much disturbed, the pupil is relaxed, and there is no appearance of spastic action; where the perspiration is easy, the skin warm rather than hot, the bowels are readily kept in a due state of evacuation, and more especially where there is any spontaneous hæmorrhage, as from the nose or hæmorrhoidal vessels, and of sufficient abundance, we may fairly venture to augur favourably. But where the symptoms are directly opposed to these; where the stertor is deep and very loud, and particularly where it is accompanied with much foaming at the mouth; where the teeth are firmly clenched, or a spasm has fixed rigidly on the muscles of deglutition, and the pupil, instead of being dilated, is contracted to a point, we have little reason to expect a favourable termination.

The great hazard resulting from this tendency to spastic action, and particularly as evidenced in a strongly contracted pupil, is thus forcibly pointed out by Dr. Cooke. "Among the dangerous signs in apoplexy, many authors mention a dilated state of the pupil of the eye; but the contracted pupil, which I consider to be a still more dangerous appearance, has been scarcely noticed. I am of opinion that this ought to be reckoned among the very worst symptoms of the disease. I never knew a person recover from apoplexy when the pupil was greatly contracted. My opinion on this subject is confirmed by that of Sir Gilbert Blane and Dr. Temple."

Dr. Cheyne, in like manner, regards convulsions as a source of great danger: while Portal, on the contrary, thinks they sometimes announce a diminution of the morbid cause. The latter reasons from the fact that when, in living animals, a slight pressure has been made on the exposed brain, convulsions have taken place; while, if the pressure be increased in power, general stupor, with stertor and difficult respiration, have followed instead of convulsions: an ingenious conclusion, but not exactly applicable, since in the one case the brain is in a morbid, and in the other in a sound state, whence the premises on which the reasoning is founded are not parallel.

In the treatment of apoplexy, if we be timely consulted during the existence of the precursive signs which have been noticed as occasionally taking place, we shall often find

it in our power completely to ward off a paroxysm by bleeding, purgatives, perfect quiet, and, in the tonic variety, a reducent regimen. Where, however, the pulse and other symptoms give proof of weak vascular action and nervous debility, the depleting plan should be pursued with caution, and it will be better to employ cupping-glasses than venesection, and, in some instances, to limit ourselves to purgatives alone. Yet, whatever be the degree of general debility, if the proofs of compression or distention be clear, as those of drowsiness, vertigo, and a dull pain in the head, it will be necessary to have recourse to bleeding either locally or generally, for such symptoms will assuredly lead to a fit unless timely counteracted and subdued.

"In the actual paroxysm of apoplexy," says Dr. Cooke, "the patient should, if possible, be immediately carried into a spacious apartment, into which cool air may be freely admitted. He should be placed in a posture which the least favours determination of blood to the head. All ligatures, especially those about the neck, should be speedily removed, and the legs and feet should be placed in warm water, or rubbed with stimulating applications. These means may be employed in all cases of apoplexy;" and are consequently equally applicable to both the forms under which we have contemplated the disease. The collateral means to be had recourse to require discrimination, and it will be most convenient to consider them in relation to the actual form under which the apoplexy presents itself.

When the pulse is strong and hard, and the countenance flushed, copious and repeated bleeding seems, *primâ facie*, to offer the most rapid and effectual remedy we can have recourse to: yet the opinions of the best practitioners, as well in ancient as in modern times, have been strangely at variance upon this subject. Hippocrates, who regarded apoplexy as chiefly dependent upon a weak and pituitous habit, discountenanced the use of the lancet, as adding to the general debility: and even where it is accompanied with symptoms of strong vascular action, he discountenanced it equally, from an idea that the case was utterly hopeless when it assumed this form, and that to have recourse to bleeding would only bring a reproach upon the art of medicine. The authority of Hippocrates has had too much influence with physicians in all ages, and has extended its baneful effects to recent times, and in some instances even to our own day. Hence Forestus tells us, that in strong apoplexy no courageous plan ought to be attempted, no venesection, no pills. We may, indeed, to please the bystanders, have recourse to the *remedia leviora* of frictions, and injections, and ligatures round the arms and thighs; "and where," says he, "we have not found these succeed, *in rationem sacerdotibus commiserimus.*"

In our own country, the same timid feeling has been particularly manifested by Dr. Heberden and Dr. Fothergill, but on grounds somewhat different. Those excellent pathologists have chiefly regarded apoplexy as a disease of nervous rather than of general debility, and have been fearful of adding to this debility by abstracting blood, and hereby of almost ensuring hemiplegia or some other form of paralysis. Hence Dr. Heberden speaks with great hesitation concerning the practice, rather than with an absolute and general condemnation of it: he observes, which is true enough, that many persons have been injured by large and repeated bleedings, and then lays down his rule, not to bleed either in an attack of apoplexy or palsy if there would have been just objections to taking away blood before the incursion of either.

Dr. Fothergill, however, expresses himself still more decidedly against bleeding than Dr. Heberden. He suspects that the weakness it occasions checks the natural effort to produce absorption; and that even the hard and full and irregular pulse, which seems imperatively to call for a very free use of the lancet, "is often an insufficient guide;" since "it may be that struggle which arises from an exertion of the *vires vitæ* to restore health." And hence, he adds in another place, "I am of opinion that bleeding in apoplexy is, for the most part, injurious, and that we should probably render the most effectual aid by endeavouring, in all cases, to procure a plentiful discharge from the bowels: as, by these revulsions, the head is, perhaps, much more effectually relieved from plenitude, and that without weakening or interrupting any other effort of nature to relieve herself than by venesection."

It is singular that in drawing such conclusions from the instinctive efforts or remedial power of nature, where a cure has been effected spontaneously, these distinguished writers have not felt more deeply impressed by the salutary efforts of spontaneous and copious hæmorrhages, as from the nose, the lungs, and the hæmorrhoidal vessels, which have never perhaps poured forth blood freely without operating a cure; and that they have not endeavoured to follow these footsteps, as far as they might have done, by substituting an artificial discharge of blood where a natural discharge has not taken place.

Other physicians, however, both in ancient and modern times, have not been equally insensible to this important fact. Galen, though he always hesitated in departing from the practice of Hippocrates, ventured to deviate from him upon the point before us. Aretæus, Paulus of Ægina, and Cælius Aurelianus, carried the remedy of bleeding to a still further extent, and Celsus regarded it as the only means of effecting a cure.

"The Arabians adopted the practice of the ancients, as far as relates to the employment

of blood-letting in the strong apoplexy, and by far the greater number of modern physicians have, in this respect, followed their example. In support of this practice, we might adduce the opinions of all who have written on the disease: we might quote from the works of Sydenham, Wepffer, Boerhaave, Van Swieten, Morgagni, Baglivi, Sauvages, Tissot, Mead, Friend, Pitcairn, Hoffman, Cullen, Portal, Cheyne, and many other eminent modern writers." As this paragraph is quoted from Dr. Cooke, it is almost superfluous to add his own name to the list of those who strenuously recommend blood-letting.

A question has been made as to the side from which it may be most advantageous to take blood. Aretæus drew it from the sound side, wherever this could be distinguished. Valsalva and Morgagni recommend the same; as does also Cullen, observing that "dissections show that congestions producing apoplexy are always on the side not affected." Baglivi recommends bleeding from the diseased side, except where blood is abstracted locally. The question appears to be of no great importance: the grand object in general bleeding is to diminish the quantity and momentum of the circulating fluid, to enable the ruptured vessels to contract with greater facility, and to afford time for an absorption of whatever may have been effused.

In sanguineous or strong apoplexy, general and local bleeding should go hand in hand; and the quantity drawn should in every instance depend upon the urgency of the symptoms. Dr. Cheyne advises us to begin with abstracting two pounds, and tells us that it will often require a loss of six or eight pounds before the disease will give way.

Dr. Cullen and many other writers, as Morgagni, Valsalva, and Portal, have recommended that the opening should be made in the temporal artery or the jugular veins. "In all cases of a full habit," says Dr. Cullen, "and where the disease has been preceded by marks of a plethoric state, blood-letting is to be immediately employed, and very largely. In my opinion it will be most effectual when the blood is taken from the jugular vein; but if that cannot be done, it may be taken from the arm. The opening of the temporal artery, when a large branch can be opened so as suddenly to pour out a considerable quantity of blood, may also be an effectual remedy; but, in execution, it is more uncertain and may be inconvenient. It may in some measure be supplied by cupping and scarifying on the temples or hind-head. This, indeed, should seldom be omitted, and these scarifications are always preferable to the application of leeches."

In bleeding from the temporal artery, we may safely let the stream flow as long as it will, for in common it will cease before we have obtained enough, and all tight ligatures about the head, or indeed any other part of the body, should be avoided as much as possible. For the same reason, Heister advises that, on opening the jugular vein, no ligature should be made use of, as the smallest pressure on the part may do harm, by interrupting the circulation of the blood on the external veins of the neck.

Dejean, of Caen, proposed, not long ago, to the Academy of Sciences, to open the superior longitudinal sinus after raising the bone which covers it, and asserted that he had employed this mode with great success on strangled dogs. Portal, and Tenon, however, who were appointed commissioners to report on Dejean's memoir, agreed that bleeding from the jugular vein is preferable to that from the sinus, as producing the same effect more speedily, and with more facility of restraint when a sufficiency of blood has been taken away.

"General opinion, then," says Dr. Cooke, "as well as reasoning, appears to be very much in favour of free and repeated evacuations of blood, both general and topical, in the strong apoplexy; and I am persuaded that greater advantage may be reasonably expected from this than from any other practice; yet I am very much inclined to think that it may be, and actually sometimes has been, carried too far. I have seen several cases, and heard of many others, in which very large quantities of blood have been drawn without the smallest perceptible advantage, and with an evident and considerable diminution of the strength of the patient."

The next important means to be pursued is that of exciting the bowels by active purgatives, and then endeavouring to lessen the pressure on the brain by revulsion. The particular purgative is of no importance: whatever will operate most speedily and most effectively is what should be preferred in the first instance: and hence a combination of calomel and extract of jalap will be found among the best: though a free action may afterwards be more conveniently maintained by colocynth or sulphate of magnesia. Dolæus employed calomel so as to excite salivation, from an opinion that all evacuations are useful; and he gives an account of several cures he was hereby enabled to effect, and particularly relates the case of a woman who was in this manner considerably relieved, and died on the cessation of the ptyalism.

The collateral remedies are of less importance, though some of them may add to the general effect. Emetics are of a very doubtful character in the form of the disease before us, though often highly useful in atonic apoplexy. They have been given upon the principle of their producing a sudden prostration of strength, and faintness; but this is a result of nausea rather than of vomiting, and the languor hereby occasioned is not exactly of the kind we stand in need of, regard being had to the disease as a nervous affection, and the danger of inducing hemi-

plegia. Full vomiting may, indeed, determine from the head to the surface of the body; but we cannot answer that the straining will not renew the extravasation, or even rupture a vessel where no rupture has existed. The only instance in which it may be prudent to prescribe an emetic, is where the disease has evidently proceeded from a surcharged stomach.

Blisters and sinapisms promise but little in this form of the disease; they tease and irritate to no purpose when applied to the extremities, and are still more injurious when they are made to cover the scalp, for they effectually prevent the use of epithems of cold water, or vinegar, or pounded ice, which afford a rational chance of producing benefit.

Cordials were in high reputation among the Greek practitioners, from a belief that apoplexy is in almost every case the result of a debilitated and pituitous habit; and the custom has too generally descended to the present day, even where the ground on which it was founded has been relinquished. Stimulants and cordials of all kinds should be sedulously abstained from; and the neutral salts, with small doses of the antimonial powder, or any other cutaneous relaxant, be employed in their stead. Cooling dilute drinks should be freely recommended; and if we should hereby be enabled to excite a gentle moisture on the skin, it may prove of incalculable advantage.

The curative process under the second form of the disease must vary in many points from the preceding. It is here, if at any time, we should pause, before we employ bleeding. Yet as dissections show us that even here also compression, and that too from an efflux of blood, is very general, and, either from blood or serum, almost constant,—whatever be the degree of constitutional debility, it can hardly be conceived any case in which we should be justified in withholding the lancet or the use of cupping-glasses. The argument stands precisely upon the ground of the expediency of bleeding in typhus accompanied with congestion: it is in itself an evil; but it is only employed as a less evil to fight against a greater. With it we may succeed; without it, in either instance, the case is hopeless.

Generally speaking, however, local bleeding will here be preferable to that of the lancet; but cupping should always be preferred to leeches, whose operation is far too slow for the urgency of the occasion. The last, however, are recommended by Burserius, and Forestus quotes an instance in which they succeeded by a formidable application over the entire body. Aretæus, after abstracting blood by cupping-glasses, recommends also the use of dry-cupping between the shoulders, and the recommendation is highly ingenious, and worth attending to.

Purgatives, though less violent than in sanguineous apoplexy, should in like manner be had recourse to; and as we have less danger to apprehend from the use of emetics, they may be given more freely. They are strongly recommended by Sauvages, and were regarded by Grubelius almost as a specific. They have the triple advantage of freeing the stomach from morbid acrimony, rousing the system generally, and determining from the head to the surface of the body.

Here also we may use both external and internal stimulants in many cases with considerable success. Of the former, volatile alkali, rubefacients, and blisters, may be made choice of in succession, and applied alternately to different parts of the body. Of the latter, we should chiefly confine ourselves to the warmer verticillate plants, as lavender, marjoram, and peppermint, or the warmer siliquose, as horse-radish and mustard, or the different forms of ammonia; and even of these we are debarred by Dr. Cullen, at least in that particular modification of atonic apoplexy, which we have described under the name of serous, though he does not enter into a consideration of any other.

In that peculiar kind of apoplexy which is sometimes produced by taking immoderate doses of spirits or some narcotic, and especially opium, in which we meet with an almost instantaneous exhaustion of the nervous power, or an instantaneous stop put to its secretion or flow, making a near approach to asphyxy, though with a heavy drowsiness and stertorous breathing, the patient should first have his stomach thoroughly emptied by an emetic of sulphate of zinc; he should be generally stimulated by blisters, and kept in a state of perpetual motion by walking or other exercise, so as to prevent sleep till the narcotic effect is over. An interesting case of this kind will be found related by Dr. Marcet, in the Medico-Chirurgical Transactions.

After all, it should not be forgotten that apoplexy is in most, perhaps in all cases, not secondarily alone, but primarily a nervous affection, and dependent upon a predisposition to this disorder in the sensorium itself, if not upon a morbid condition of it: and that hence the patient, though we should recover him from the actual fit, will be subject to a recurrence of it. In this view, the interval becomes a period of great importance, and should be as much submitted to a course of remedial treatment as the paroxysm itself.

After sanguineous apoplexy, the patient should habitually accustom himself to a plain diet, regular exercise, early hours of meals and retirement, and uniform tranquillity of mind: and the state of the bowels should particularly claim his attention. After the atonic variety, the same general plan may be followed with a like good effect, but the diet may be upon a more liberal allowance; and a course of tonic medicines should form a part of the remedial system. If it were true, as suspected by Dr. Cullen, that all bitters

contain in the bitter principle itself a narcotic and mischievous power, these ought to be carefully abstained from; but we have already observed that this does not seem to be the fact. And hence much of the treatment of dyspepsia may be pursued, together with a use of the waters of Bath, Buxton, and Leamington.

APOPNI'XIS. (*is, is.* f.; from αποπνιγω, to suffocate.) A suffocation.

APOPSOPHE'SIS. (From απο, and ψοφεω, to emit wind.) The emission of wind by the anus.

APOPSY'CHIA. (*a, æ.* f.; from απο, from, and ψυχη, the mind.) The greatest degree of fainting, according to Galen.

APO'PTOSIS. (*is, is.* f.; from αποπιπτω, to fall down.) A prolapsus, or falling down of any part from relaxation of the sphincter. — *Erotian.*

Apore'xis. (From απο, and ορεγω, to stretch out.) A play with balls, in the gymnastic exercises.

Apo'ria. (From α, priv. and πορος, a duct.) Restlessness, uneasiness, occasioned by the interruption of perspiration, or any stoppage of the natural secretions.

Aporrhi'psis. (From αποῤῥιπτω, to cast off.) Hippocrates used this word to signify that kind of insanity where the patient tears off his clothes and casts them from him.

Aposceparni'smus. (From απο, from, and σκεπαρνιζω, to strike with a hatchet.) A species of fracture, when part of a bone is chipped off. — *Gorræus.*

Aposcha'sis. (From απο, and σχαζω, to scarify.) *Aposchasmus.* A scarification. Venesection. — *Hippocrates.*

Aposi'tia. (From απο, from, and σιτος, food.) *Apositios.* A loathing of food.

APOSPA'SMA. (From αποσπαω, to tear off.) A tear or rent, or violent irregular fracture of a tendon, ligament, &c.—*Galen.*

Aposphaceli'sis. (From απο, and σφακελος, a mortification.) Hippocrates uses this word to denote a mortification of the flesh in wounds, or fractures, caused by too tight a bandage.

APO'STASIS. (*is, eos.* f.; from απο, and ιϛημι, to recede from.) 1. An abscess, or collection of matter. See *Abscess.*

2. The coming away of a fragment of bone, by fracture.

3. When a distemper passes away by some outlet, Hippocrates calls it an *apostasis by excretion.*

4. When the morbific matter, by its own weight, falls and settles on any part, an *apostasis by settlement.*

5. When one disease turns to another, an *apostasis by metastasis.*

APOSTA'XIS. (From αποϛαζω, to distil from.) Hippocrates uses this word to express the defluxion or distillation of any humour or fluid, as blood from the nose.

APOSTEL. *Apostolus.* An ointment and other things were formerly so designated from some famous inventor; as *unguentum apostolorum,* because it has twelve ingredients in it.

APOSTE'MA. (*a, atis.* n.; from ἀφίστημι, *discedo, abscedo*; whence the Latins employed *abscessus* to express the same general idea. Yet they did not, strictly speaking, apply either abscessus or apostema to every suppurative inflammation, but only to those that were deep-seated, and of considerable extent; chiefly, indeed, to collections of pus consequent upon fevers, or some previous disorder of particular parts, especially abdominal diseases. This limitation is accurately drawn by Celsus, immediately after his description of struma, furunculus, and phyma: — "Sed cum omnes hi nihil nisi *minuti abscessus* sint, generale nomen trahit *latius vitium ad suppurationem spectans.* Idque fere fit aut post febres, aut post dolores partis alicujus, maximeque eos qui ventrem infestarunt." The term *abscess,* however, which was colloquially used in a loose sense in the time of Celsus, is used so much more loosely in our own day, that it is impossible to recall it to its precise and original meaning.) See *Abscess.*

Aposteri'gma. (From αποϛηριγω, *fulcio.*) Galen uses this word to denote a rest of a diseased part, a cushion.

Apo'strophe. (From απο, and ϛρεφω, to turn from.) Thus Paulus Ægineta expresses an aversion for food.

APOSYRINGE'SIS. (From απο, and συριγξ, a fistula.) The degeneracy of a sore into a fistula. — *Hippocrates.*

APOSY'RMA. (*a, atis.* n.; from απο, and συρω, to rub off.) An abrasion or disquamation of the bones or skin. — *Hippocrates.*

APOTANEU'SIS. (From απο, and τεινω, to extend.) An extension, or elongation, of any member or substance.

Apotelme'sis. (From από, and τελμα, a bog.) An expurgation of filth, or fæces.

APOTHE'CA. (Αποθηκη; from αποτιθημι, to reposite.) A shop, or vessel, where medicines are sold, or deposited.

APOTHECA'RY. (*Apothecarius, i.* m.; from απο, and τιθημι, *pono,* to put: or from αποθηκη, a shop.) An apothecary. A term formerly applied to a wine or other merchant, who had articles to place in a warehouse, but now exclusively to an apothecary, or one whose employ is to prepare, and keep in readiness, the various articles in the *Materia Medica,* and to compound them. In every European country, except Great Britain, the *apothecary* is the same as we name in England the *druggist* and *chemist.*

APOTHERAPEI'A. (From απο, and θεραπευω, to cure.) A perfect cure, according to Hippocrates.

Apotherapeu'tic. (From αποθεραπευω, to heal.) That which teaches the art of curing disorders.

Apothe'rmum. (From απο, and θερμη,

heat.) An acrimonious pickle, with mustard, vinegar, and oil. — *Galen.*

Apo'thesis. (*is, is.* f.; from απο, and τιθημι, to replace.) The reduction of a dislocated bone, according to Hippocrates.

Apothli'mma. (From απο, and θλιβω, to press from.) The dregs or expressed juice of a plant.

Apothrau'sis. (From απο, and θραυω, to break.) The taking away the splinters of a broken bone.

APO'TOCUS. (Αποτοκος; from απο, and τικτω, to bring forth.) Abortive; premature. — *Hippocrates.*

Apotre'psis. (From απο, and τρεπω, to turn from.) A resolution or reversion of a suppurating tumour.

Apotropæ'a. (From αποτρεπω, to avert.) An amulet, or charm, to avert diseases. *Foësius.*

A'POZEM. (*Apozema, atis.* m.; from απο, and ζεω, to boil.) A decoction.

Apozeu'xis. (From απο, and ζευγνυμι, to separate.) The separation or removal of morbid parts. — *Hippocrates.*

Apo'zymos. (From απο, and ζυμη, ferment.) Fermented.

APPARA'TUS. (*us, ûs.* m.; from *appareo,* to appear, or be ready at hand.) This term is applied to the instruments and the preparation and arrangement of every thing necessary in the performance of any operation, medical, surgical, or chemical.

Apparatus altus. See *Lithotomy.*

Apparatus, chemical. The principal instruments that are required for chemical investigations. These are furnaces, crucibles, evaporating vessels; the still and vessels for distillation, as alembics, retorts, receivers, adopters; the Argand lamp; Woolfe's apparatus; glass and other vessels for precipitation, solutions; glass or other rods, and hollow tubes; acute beams and scales, with weights; the blow-pipe, and the apparatus for experiments on gases, which are various, and calculated to receive the materials offered them, and also the gases that are disengaged.

Apparatus major. See *Lithotomy.*

Apparatus minor. See *Lithotomy.*

Apparatus, pneumatic. The discovery of aëriform fluids has, in modern chemistry, occasioned the necessity of some peculiar instruments, by means of which those substances may, in distillations, solutions, or other operations, be caught, collected, and properly managed. The proper instruments for this are styled the pneumatic apparatus. Any kind of air is specifically lighter than any liquid; and therefore, if not decomposed by it, rises through it in bubbles. On this principle rests the essential part of the apparatus, adapted to such operations. Its principal part is the pneumatic trough, which is a kind of reservoir for the liquid, through which the gas is conveyed and caused to rise, and is filled either with water or with quicksilver. Some inches below its brim an horizontal shelf is fastened, in dimension about half or the third part of the trough; and in the water-trough this is provided on its foremost edge with a row of holes, into which, from underneath, short-necked funnels are fixed. The trough is filled with water sufficient to cover the shelf, to support the receivers, which, being previously filled with water, are placed invertedly, their open end turned down upon the above-mentioned holes, through which afterwards the gases, conveyed there and directed by means of the funnels, rise in the form of air-bubbles.

In some cases the trough must be filled with quicksilver, because water absorbs or decomposes some kinds of air. The price and specific gravity of that metal make it necessary to give to the quicksilver trough smaller dimensions. It is either cut in marble, or made of wood well joined. The late Karston has contrived an apparatus, which, to the advantage of saving room, adds that of great conveniency.

To disengage gases, retorts of glass, either common or tubulated, are employed, and placed in a sand-bath, or heated by a lamp. Earthen, or coated glass retorts, are put in the naked fire. If necessary, they are joined with a metallic or glass conveying pipe. When, besides the aëriform, other fluids are to be collected, the middle or intermediate bottle finds its use; and to prevent, after cooling, the rising of the water from the trough into the disengaging vessels, the tube of safety is employed. For the extrication of gases taking place in solutions, for which no external heat is required, the bottle called disengaging bottle, or proof, may be used. For receivers, to collect the disengaged airs, various cylinders of glass are used, whether graduated or not, either closed at one end, or open at both; and, in this last case, they are made air-tight by a stopper fitted by grinding. Besides these, glass bells and common bottles are employed.

To combine with water, in a commodious way, some gases that are only gradually and slowly absorbed by it, the glass apparatus of Parker is serviceable.

APPENDI'CULA. (*a, æ.* f. diminutive of *appendix.*) A little appendage.

Appendicula cæci vermiformis. A vermicular process, about four inches in length, and the size of a goose-quill, which hangs to the intestinum cæcum of the human body.

Appendiculæ epiploicæ. *Appendices coli adiposæ.* The small appendices of the colon and rectum, which are filled with adipose substance. See *Omentum.*

APPENDICULATE. *Appendiculatus.* Applied to leaves, leaf-stalks, &c. that are furnished with an additional organ for some particular purpose not essential to it; as the *Dionæa muscipula,* the leaves of which terminate each in a pair of toothed irritable lobes, that close over and imprison

insects; as also the leaf of the *Nepentha distillatorea*, which bears a covered pitcher full of water; the leaves of our *Utriculum*, which have numerous bladders attached to them, which seem to secrete air and float them; and the petiolus of *Dipsacus pilosus*, which has little leaves at its base.

APPENDIX. (*ix, icis.* f.) 1. An appendage; that which belongeth to any thing.

2. See *Apophysis*.

APPETITE. A natural periodical call or desire to eat or drink, occasionally attended with an uneasy painful sensation.

Appetite, canine. See *Bulimia*.

Appetite, depraved. See *Pica*.

Appetite, insatiable. See *Bulimia*.

Appetite, morbid. The sensation of hunger is seated in the stomach, and, like that of thirst, is a natural desire. It may, however, become diseased and lose its natural character, and this in various ways, and accompanied by various sorts of symptoms. See *Bulimia, Pica, Dyspepsia.*

APPLE. See *Pyrus*.

Apple, acid of. See *Malic acid*.

Apple, pine. See *Bromelia ananas*.

Apple, thorn. See *Datura stramonium*.

APPREHENSIO. (From *ad*, and *prehensio*, to take hold of.) Catalepsy is so called in some writings.

Appropriate affinity. See *Affinity intermediate.*

APPROXIMATE. *Approximatus*; near to, or near together. See *Adpressus*.

APRICOT. See *Prunus armeniaca*.

Apye'tus. (Ἀπύητος, without pus.) That which does not suppurate: applied anciently to external tumours.

APYRE'XIA. (*a, æ.* f.; from α, priv. and πυρεξια, a fever.) Apyrexy: without fever. The intermission of feverish heat.

APYRI'NUS. (From α, priv. and πυρην, *nucleus*, a kernel.) Apyrine: without a kernel. Applied to plants without kernels.

APYROUS. (*Apyrus*; from α, neg. and πυρ, fire.) Bodies which sustain the action of a strong heat for a considerable time, without change of figure or other properties, have been called apyrous; but the word is now very seldom used.

A'QUA. (*a, æ.* f.; of uncertain derivation, most probably from *æquus*, level.) See *Water*.

Aqua aëris fixi. Water impregnated with fixed air. See *Carbonic acid*.

Aqua aluminis composita. Compound solution of alum, formerly called *aqua aluminosa Bateana*. See *Liquor aluminis compositus*.

Aqua ammoniæ acetatæ. See *Ammoniæ acetatis liquor*.

Aqua ammoniæ puræ. See *Ammonia*.

Aqua anethi. See *Anethum graveolens*.

Aqua calcis. See *Calcis liquor*.

Aqua carui. See *Carum carui*.

Aqua cinnamomi. See *Laurus cinnamomum*.

Aqua cœlestis. A preparation of copper.

Aqua cupri ammoniati. See *Cupri ammoniati liquor*.

Aqua cupri vitriolati composita. A preparation of the Edinburgh Pharmacopœia, used externally to stop hæmorrhages of the nose, and other parts. It is made thus: ℞. *Cupri vitriolati, Aluminis, sing.* ℥ss. *Aquæ puræ*, ℥iv. *Acidi vitriolici*, ʒij. Boil the salts in water until they are dissolved; then filter the liquor, and add the acid.

Aqua distillata. Distilled water. This is obtained by distilling water in clean vessels, until about two-thirds have come over. In nature, no water is found perfectly pure. Spring or river water always contains a portion of saline matter, principally sulphate of lime; and, from this impregnation, is unfit for a number of pharmaceutic preparations. By distillation, a perfectly pure water is obtained. The London College directs ten gallons of common water; of which, first distil four pints, which are to be thrown away; then distil four gallons. This distilled water is to be kept in glass vessels. See *Water*.

Aqua fœniculi. See *Anethum fœniculum*.

Aqua fortis. A weak and impure nitric acid, commonly used in the arts. It is distinguished by the terms *double* and *single*, the single being only half the strength of the other. The artists who use these acids call the more concentrated acid, which is much stronger even than the double aquafortis, *spirit of nitre*. This distinction appears to be of some utility, and is therefore not improperly retained by chemical writers. See *Nitric acid*.

Aqua kali præparati. See *Potassæ subcarbonatis liquor*.

Aqua kali puri. See *Potassæ liquor*.

Aqua lithargyri acetati. See *Plumbi acetatis liquor*.

Aqua lithargyri acetati composita. See *Plumbi acetatis liquor dilutus*.

Aqua-marine. See *Beryl*.

Aqua menthæ piperitæ. See *Mentha piperita*.

Aqua menthæ sativæ. See *Mentha viridis*.

Aqua menthæ viridis. See *Mentha viridis*.

Aqua de napoli. See *Aquetta*.

Aqua obscura. The Arabians so called the cataract.

Aqua pimentæ. See *Myrtus pimenta*.

Aqua pulegii. See *Mentha pulegium*.

Aqua regia. *Aqua regalis.* A mixture of the nitric and muriatic acids was formerly called *aqua regalis*, because it was, at that time, the only acid that was known to be able to dissolve gold. See *Chlorine*.

Aqua rosæ. See *Rosa centifolia.*

Aqua serena. The name of amaurosis in the writings of the Arabians.

Aqua styptica. A name formerly given to a combination of powerful astringents, viz. sulphate of copper, sulphate of alum, and sulphuric acid. It has been applied topically to check hæmorrhage, and, largely diluted with water, as a wash in purulent ophthalmia. See *Aqua cupri vitriolati composita.*

Aqua toffania. See *Aquetta.*

Aqua vitæ. Ardent spirit of the first distillation has been distinguished in commerce by this name.

Aqua zinci vitriolati cum camphora. *Aqua vitriolica camphorata.* This is made by dissolving half an ounce of sulphate of zinc in a quart of boiling water, adding half an ounce of camphorated spirit, and filtering. This, when properly diluted, is an useful collyrium for inflammations of the eyes, in which there is a weakness of the parts. Externally, it is applied by surgeons to scorbutic and phagedenic ulcerations.

Aquæ distillatæ. Distilled waters. These are made by introducing vegetables, as mint, penny-royal, &c. into a still with water; and drawing off as much as is found to possess the properties of the plants. The London College orders the waters to be distilled from dried herbs, because fresh are not ready at all times of the year. Whenever the fresh are used, the weights are to be increased. But whether the fresh or dried herbs are employed, the operator may vary the weight according to the season in which they have been produced and collected. Herbs and seeds, kept beyond the space of a year, are improper for the distillation of waters. To every gallon of these waters, five ounces, by measure, of proof spirit are to be added.

Aquæ minerales. See *Mineral water.*

Aquæ stillatitiæ simplices. Simple distilled waters.

Aquæ stillatitiæ spirituosæ. Spirituous distilled waters, now called only spiritus; as *spiritus pulegii*, &c.

AQUÆDUCT. (*Aquæductus, ûs.* m.; from *aqua*, water, and *ductus*, a canal or passage: so named because it was supposed to carry a watery fluid.) A canal for water.

Aquæduct of Fallopius. A canal in the petrous portion of the temporal bone, first accurately described by Fallopius.

Aquatic nut. See *Trapa natans.*

Aquaticæ plantæ. Aquatic plants, or such as grow in or near water. A natural order of plants.

AQUATICUS. (From *aqua*, water.) Aquatic: applied in natural history very universally to distinguish things which belong to the water, as aquatic plants, insects, birds, &c.

Aqueous humour. *Humor aquosus.* The very limpid watery fluid, which fills both chambers of the eye. See *Eye.*

AQUETTA. The name of a liquid poison, made use of by the Roman women, under the Pontificate of Alexander VII. It was prepared, and sold in drops, by Tophania, or Toffania, an infamous woman who resided at Palermo, and afterwards at Naples. From her, these drops obtained the name of *Aqua Toffania: Aqua della Toffana;* and also *Aqua di Napoli.* This poison is said by some to be a composition of arsenic, and by others of opium and cantharides.

AQUIFO'LIUM. (*um, i.* n.; from *acus*, a needle, and *folium*, a leaf: so called on account of its prickly leaf.) See *Ilex aquifolium.*

A'QUILA. (*a, æ.* f.; from *aquilus*, a dun colour.) 1. The eagle. A species of the extensive genus *Falco* of ornithologists.

2. Aquila, among the ancients, had many other epithets joined with it; as *rubra, salutifera, volans*, &c.

3. A chemical name formerly used for *sal-ammoniac, mercurius, præcipitatus, arsenic, sulphur*, and the *philosopher's stone.*

Aquila alba. One of the names given to calomel by the ancients. See *Hydrargyri submurias.*

Aquila alba philosophorum. *Aqua alba ganymedis.* Sublimed sal-ammoniac.

Aquila cœlestis. A panacea, or cure for all diseases; a preparation of mercury.

Aquila veneris. A preparation of the ancients, made with verdigris and sublimed sal-ammoniac.

Aquilæ lignum. Eagle-wood. It is generally sold for the agallochum. See *Lignum aloës.*

Aquilæ venæ. Branches of the jugular veins, which are particularly prominent in the eagle.

AQUILE'GIA. (*a, æ.* f.; from *aqua*, water, and *lego*, to gather: so called from the shape of its leaves, which retain water.) The herb columbine.

1. The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Pentagynia.*

2. The name in the Pharmacopœias, for the columbine. See *Aquilegia vulgaris.*

Aquilegia vulgaris. The systematic name of the columbine. The seeds, flowers, and the whole plant, have been used medicinally; the first in exanthematous diseases, the latter chiefly as an antiscorbutic. Though retained in several foreign pharmacopœias, their utility seems to be not allowed in this country.

AQUILI'NUS. (From *aquila*, an eagle; so called from the resemblance of its leaves to eagle's wings.) Aquiline: applied as a trivial name to some species of birds, plants, &c. See *Pteris.*

AQUOSUS. Aqueous, watery; of the nature of, or resembling water.

AQUU'LA. (*a, æ.* f.; diminutive of *aqua.*) 1. A small quantity of very fine and limpid water. This term is applied to the pellucid water, which distends the capsule of the crystalline lens, and the lens itself.

2. A tumour consisting of a fatty substance under the skin of the eyelid.—*Paulus Ægineta.*

Arabic gum. See *Acacia vera.*

A'RACA MIRI. (Indian.) A shrub growing in the Brazils, the roots of which are diuretic and antidysenteric.

A'RACALAN. An amulet.

ARA'CHNE. (*e, es.* f.; from *arag*, Hebrew, to weave; or from *αραχνη*, a spider.) The spider. See *Aranea.*

ARACHNOID. (*Arachnoides* and *Arachnoideus;* from *αραχνη*, a spider, and *ειδος*, likeness: so named from its resemblance to a spider's web.) Cobweb-like.

ARACHNOID MEMBRANE. *Membrana arachnoides.* 1. A thin membrane of the brain, without vessels and nerves, situated between the dura and pia mater, and surrounding the cerebrum, cerebellum, medulla oblongata, and medulla spinalis.

2. The tunic of the crystalline lens and vitreous humour of the eye.

ARACK. (Indian.) Arac. An Indian spirituous liquor, prepared in many ways, often from rice; sometimes from sugar, fermented with the juice of cocoa-nuts; frequently from toddy, the juice which flows from the cocoa-nut tree by incision, and from other substances. Its properties are similar to those of brandy and other spirits; but it is thought to be more heady, and not to agree so well with the stomach.

A'RADOS. (From *αραδεω*, to be turbulent.) Hippocrates uses this term to signify a commotion in the stomach, occasioned by the fermentation of its contents.

ARÆO'TICUS. (From *αραιοω*, to rarefy.) That which rarefies the fluids of the body.

ARA'LIA. (*a, æ.* f.; from *ara*, a bank in the sea: so called because it grows upon banks near the sea.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Pentagynia.* The berry-bearing angelica.

ARALIA NUDICAULIS. The naked stalked aralia. The roots of this species are brought over from North America, where it grows, and sold here for sarsaparilla.

ARA'NEA. (*a, æ.* f.; from *αραω*, to knit together.) 1. The name of a genus of operose insects.

2. The spider.

3. A spider's web.

ARA'NTIUS, JU'LIUS CÆSAR, born at Bologna, about the year 1530, and died in 1589. In his first work, "On the Human Fœtus," he described the foramen ovale, and ductus arteriosus, and corrected several errors in the anatomy of the gravid uterus, which had been generally derived from the examination of brutes. He afterwards showed that the blood, after birth, could only pass from the right to the left side of the heart through the vessels of the lungs, thus preparing for the discovery of the circulation by Harvey. A Treatise on Tumours, and a Commentary on part of Hippocrates, were also written by him.

ARA'TRUM. The plough: applied to a plant as its trivial name, because its roots are found to hinder the plough: hence *remora aratri.* See *Ononis spinosa.*

ARBOR. (*or, oris.* f.) A tree.

1. In *Botany*, a plant, consisting of one trunk, which rises to a great height, is very durable, woody, and divided at its top into branches which do not perish in the winter; as the oak, elm, ash, &c.

2. In *Anatomy*, applied to parts which ramify like a tree; as the *Arbor vitæ* of the cerebellum.

3. In *Chemistry*, applied to crystallisations which ramify like branches.

ARBOR DIANÆ. See *Argentum.*

ARBOR VITÆ. The tree of life.

1. The cortical substance of the cerebellum is so disposed, that, when cut transversely, it appears ramified like a tree, from which circumstance it is termed *Arbor vitæ.*

2. The name of a tree formerly in high estimation in medicine. See *Thuya occidentalis.*

ARBORES. (The plural of *arbor.*) One of the natural divisions or families of plants. Trees consist of a single and durable woody trunk, bearing branches, which do not perish in the winter; as *Tilia, Fraxinus, Pyrus*, &c.

ARBORES'CENS. Arborescent: gradually becoming firm and woody.

ARBO'REUS. Tree-like: having a permanent woody stem.

ARBUSTIVA. (From *arbustum*, a copse of shrubs or trees.) The name of an order of plants in Linnæus's natural method.

ARBUTHNOT, JOHN, born in Scotland soon after the Restoration, celebrated for his wit and learning. His chief medical publications were "On the Choice of Aliments," and "On the Effects of Air upon Human Bodies." He died in 1735.

A'RBUTUS. (*us, i.* f.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

Arbutus, trailing. See *Arbutus uva ursi.*

ARBUTUS UNEDO. The systematic name of a plant; called also *Amatzquitl* and *Unedo papyracea.* A decoction of the bark of the root is commended in fevers.

ARBUTUS UVA URSI. The systematic name for the officinal trailing Arbutus; called also Bear's berry, Bear's whortle-berry, Bear's whorts, Bear's bilberries, and *Vaccaria. Arbutus — caulibus procumbentibus, foliis integerrimis*, of Linnæus. This plant, though employed by the ancients in several diseases requiring astringent medicines, had almost

entirely fallen into disuse until the middle of the present century, when it first drew the attention of physicians, as a useful remedy in calculous and nephritic complaints, which diseases it appears to relieve by its astringent qualities.

A'RCA ARCANORUM. The mercury of the philosophers.

ARCA CORDIS. The pericardium.

ARCA'NUM. (*um, i.* n.) A secret. A medicine, the preparation or efficacy of which is kept from the world, to enhance its value. With the chemists, it is a thing secret and incorporeal; it can only be known by experience, for it is the virtue of every thing, which operates a thousand times more than the thing itself.

ARCANUM CATHOLICUM. An obsolete medicine, composed of bezoar, plantain, and colchicum.

ARCANUM COLALLINUM. An old name for a pure peroxide of mercury, made by washing and triturating the nitric-oxide of that metal with a dilute solution of potash, edulcorated with distilled water, and carefully dried. — *Brande's Manuel.*

ARCANUM DUPLEX. A name formerly given to sulphate of potash.

ARCANUM DUPLICATUM. An obsolete name of the sulphate of potash.

ARCANUM LUDEMANNI. An obsolete name of the oxide of zinc.

ARCANUM TARTARI. The acetate of potash.

ARCE'RTHOS. Juniper.

ARCHÆ'US. (*us, i.* m.; from αρχη, principle.) 1. A word of very obscure meaning, used chiefly amongst the ancient chemists to express some occult principle of life and motion, the cause of all the effects which we observe in nature. As the chemists differed in their ideas of a vital cause, the term *archæus* is applied to very different things, though most of them considered it as of the nature of fire.

Some use *archæus* to denote the fire lodged in the centre of the earth, to which they ascribe the generation of metals and minerals, and which they believe to be the principle of life in vegetables. Others, by the word *archæus*, mean a certain universal spirit diffused throughout the whole creation, the active cause of all the phenomena in nature. Others, instead of *archæus*, choose to call this *anima mundi;* and others, the *Vulcan* or *heat* of the earth. They add, that all bodies have their share of this *archæus;* and that when this is corrupted, it produces diseases which they called *archæal diseases.* They likewise attributed ideas to it, which, for this reason, they called *archæal ideas.* Helmont was the great assertor of the dogma of an *archæus.*

It was likewise used to signify that peculiar fluid among the vegetable classes which determines every particular plant to its odour, taste, and other qualities.

2. Good health.

A'RCHE. (From αρχη, the beginning.) The earliest stage of a disease.

ARCHE'NDA. (Arabian.) A powder made of the leaves of the ligustrum, to check the fœtid odour of the feet.

ARCHEO'STIS. See *Bryonia alba.*

ARCHIA'TER. (*er, i.* m.; from Αρχη, principal, chief, and ιατρος, a physician.) The principal, or chief physician.

Archil. See *Lichen rocella.*

ARCHILLA. See *Lichen rocella.*

ARCHIMA'GIA. (From αρχη, the chief, and *maga,* the Arabian for meditation.) Chemistry, as being the chief of sciences.

ARCHI'THOLUS. (From αρχη, the chief, and θολος, a chamber.) The sudatorium, or principal room of the ancient baths. See *Achicolum.*

ARCHOPTO'MA. (From αρχος, the anus, and πιπτω, to fall down.) A bearing down of the rectum, or prolapsus ani.

A'RCHOS. (From αρχος, an arch.) The anus; so called from its shape.

ARCTA'TIO. (*o, onis.* f.; from *arcto,* to make narrow.) *Arctitudo.* Narrowness.

1. A constipation of the intestines.

2. A preternatural straitness of the pudendum muliebre.

A'RCTIUM. (*um, i.* n.; from αρκτος, a bear: so called from its roughness.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.* The burdock.

ARCTIUM LAPPA. The systematic name for the herb clot-bur, burdock; called also, *Bardana, Arctium, Britannica,* and *Ilaphis.* The plant so called in the pharmacopœias, is the *Arctium — foliis cordatis, inermibus, petiolatis,* of Linnæus. It grows wild in uncultivated grounds. The seeds have a bitterish subacrid taste: they are recommended as very efficacious diuretics, given either in the form of emulsion, or in powder, to the quantity of a drachm. The roots taste sweetish, with a slight austerity and bitterness: they are esteemed aperient, diuretic, and sudorific; and are said to act without irritation, so as to be safely ventured upon in acute disorders. Decoctions of them have been used, in rheumatic, gouty, venereal, and other disorders; and are preferred by some to those of sarsaparilla. Two ounces of the roots are to be boiled in three pints of water to a quart; to this, two drachms of sulphate of potash have been usually added. Of this decoction, a pint should be taken every day in scorbutic and rheumatic cases, and when intended as a diuretic, in a shorter period.

ARCTIZITE. The foliated species of scapolite. See *Scapolite.*

ARCTU'RA. (*a, æ.* f.; from *arcto* to straiten.) An inflammation of the finger, or toe, from a curvature of the nail. — *Linnæus.*

ARCUA'LIS. (From *arcus*, a bow.) The sutura coronalis is so named, from its bow-like-shape; and, for the same reason, the bones of the sinciput are called *arcualia ossa*. — *Bartholin*.

ARCUA'TIO. (From *arcus*, a bow.) A gibbosity of the fore-parts, with a curvation of the sternum, of the tibia, or dorsal vertebræ. — *Avicenna*.

ARCUA'TUS. Bowed: bent like a bow.

A'RCULA. (A diminutive of *arca*, a chest.) The orbits or sockets of the eyes have been called *arculæ*.

A'RDAS. (From αρδυω, to defile.) Filth, excrement, or refuse. — *Hippocrates*.

ARDENS. (From *ardeo*, to burn.) Ardent; burning hot: applied to fevers and alkohol; as *febris ardens*, ardent spirit, &c.

ARDOR. (*or, oris*. m.; from *ardeo*, to burn.) Heat, warmth. A considerable increase of the temperature of an animal body, or of a part, usually denominated a burning heat. An easy and pleasurable warmth depends, in a state of health, upon a moderate temperature of the atmosphere, which cannot be very accurately laid down, because from habit or constitution, or some other circumstance, different persons enjoy very different temperatures. It is a well known property of heat and cold to disturb the temperature, whatever it may be, that affords ease and comfort to the nerves of feeling, and to produce disquiet as they either raise or depress it: and this both of them do in two distinct ways. Heat is a strong irritant, and even if it made no change in the bulk of a living organ, or the juxtaposition of its particles, like all other irritants it would still excite a troublesome feeling, amounting at length to acute pain, if raised to a considerable range beyond the ordinary scale. But it does, in every instance, excite a change in the bulk of living organs, and the juxta-position of their particles: for it enlarges the former in every direction, and only does this by separating the particles from each other; in which forcible and sudden divellication we have a second source of the troublesome and acute sensation which so constantly accompanies a temperature when carried very considerably above the point of health. Heat, as an idiopathic affection, occurs chiefly in plethoric and irritable habits. In the former, it is relieved by blood-letting and evacuants of neutral salts: in the latter by mild diaphoretics, and afterwards by cold bathing and other tonics. As a symptom, it is found in the second stage of fever and inflammation.

ARDOR FEBRILIS. Feverish heat.

ARDOR URINÆ. Scalding of the urine, or a sense of heat in the urethra when making water.

ARDOR VENTRICULI. Heartburn.

A'REA. (*a, æ*. f.) 1. An empty space.

2. That kind of baldness where the crown of the head is left naked, like the tonsure of a monk.

ARE'CA. (*a, æ*. f.) The name of a genus of plants, of the Class *Palmæ*.

ARECA INDICA. An inferior kind of nutmeg.

ARECA OLERACEA. The cabbage-tree palm, which affords an excellent food to man. It is also considered as a good vermifuge. Its medulla, or pith, forms an excellent sago, and its green tops are cut and eaten as cabbage. For a knowledge of its virtues as a vermifuge, we are indebted to Dr. Rush, who principally tried it in the form of syrup, which is of a pleasant taste, and which he asserts to be an infallible antidote. It is used, he tells us, very generally by physicians in the West Indies: and he himself has employed above thirty pounds of it, without knowing it to fail in a single instance. It is especially available against the long worms. It was antecedently to this tried in Edinburgh, in the form of powder, but relinquished as too rough and violent a medicine. In form of syrup it is sufficiently mild, and neither purges nor vomits but in an over-dose.

ARE'GON. (From αρηγω, to help: so called from its valuable qualities.) A resolvent ointment.

AREMA'ROS. Cinnabar.

ARE'NA. (*a, æ*. f.) Sand, or gravel.

ARENA'MEL. (From *arena*, sand: so called because it was said to be procured from sandy places.) *Arenamen*. Bole-armenic. See *Bole, Armenian*.

ARENA'TIO. (*o, onis*. f.; from *arena*, sand.) The sprinkling of hot sand upon the bodies of patients. — *Baccius de Thermis*.

ARENDATE. See *Epidote*.

ARE'NTES. (From *areo*, to dry up.) A sort of ancient cupping-glasses, used without scarifying.

ARE'OLA. (*a, æ*. f.; a diminutive of *area*, a void space, or circle.) 1. A small space: applied in anatomy and physiology to the small interstices of minute cellular or other tissues, through which the minutest vessels and nerves pass.

2. A small red or brownish circle, also called *halo*, which surrounds the nipples of females. During and after pregnancy, it becomes considerably larger, and of a nut-brown colour.

3. A ring or red margin around pustules, &c.

AREOMETER. See *Hydrometer*.

ARETÆNOI'DES. See *Arytænoides*.

ARETÆ'US, of Cappadocia; a physician, who practised at Rome, but at what period is uncertain, though the most probable opinion places him between the reigns of Vespasian and Adrian. Eight books of his remain "On the Causes, Signs, and Method of treating acute and chronic Diseases," written in the Greek language, and

admired for their pure style, and luminous descriptions, as well as the judicious practice generally recommended. He was partial to the use of hellebore and other drastic medicines; and appears to have been among the first to recommend cantharides for blistering the skin.

A'RETE. (Αρετη, virtue.) Virtue: and applied by Hippocrates to corporeal or mental vigour.

ARE'US. A pessary, invented by Ægineta.

A'RFAR. *Arsag.* Arsenic. — *Ruland, &c.*

A'RGAL. Argol. Crude tartar, in the state in which it is taken from the inside of wine-vessels, is known in the shops by this name.

ARGASY'LLIS. (From αργος, a serpent; which it is said to resemble.) The plant which was supposed to produce gum-ammoniac. See *Heracleum gummiferum.*

ARGEL. The name, in Upper Egypt, of the leaves of the *Cynanchum oleafolium,* which are mixed with those of senna.

A'RGEMA. (From αργος, white.) *Argemon.* A small white ulcer of the eye, on the circle of the iris. — *Galen, &c.*

ARGEMO'NE. (Αργεμωνη. e, is. f.) See *Agrimonia.*

Argentate of ammonia. Fulminating silver.

ARGENTEUS. Argentine: silvery.

ARGENTI NITRAS. Nitrate of silver; called also *Argentum nitratum, Causticum lunare.* Take of silver an ounce; nitric acid, a fluid ounce; distilled water, two fluid ounces. Mix the nitric acid and water, and dissolve the silver therein on a sand-bath; then increase the heat gradually, that the nitrate of silver may be dried. Melt the salt in a crucible over a slow fire, until the water being evaporated, it shall cease to boil; then pour it quickly into moulds of convenient shape. Its virtues are corrosive and astringent. Internally it is exhibited, in very small quantities, in epilepsy, chorea, and other nervous affections, and externally it is employed to destroy fungous excrescences, callous ulcers, fistulas, &c. In the latter disease it is used as an injection; from two grains to three being dissolved in an ounce of distilled water.

Argentine flowers of antimony. An oxide of antimony, obtained by exposing antimony to the action of heat. A dense yellow smoke arises, which is the oxide, formerly called the argentine flowers.

ARGE'NTUM. (*um, i.* m.; from αργος, white, because it is of a white colour.) Silver. See *Silver.*

ARGENTUM FUSUM. Crude mercury.

ARGENTUM MOBILE. Crude mercury.

ARGENTUM NITRATUM. See *Argenti nitras.*

ARGENTUM VIVUM. See *Mercury.*

A'RGES. (From αργος, white.) A serpent, with a whitish skin, deemed by Hippocrates exceedingly venomous.

ARGI'LLA. (*a, æ.* f.; from αργος, white.) Argil. See *Alumina.*

ARGILLA VITRIOLATA. Alum.

ARGILLACEOUS. *Argillaceus.* Of or belonging to argil, or aluminous earth. See *Clay.*

Argillaceous earth. See *Clay.*

Argillaceous schistus. See *Clay.*

ARGILLITE. See *Clay-slate.*

ARGYRI'TIS. (From αργυρος, silver.)

1. A kind of earth was formerly so named, which is taken from silver mines, and is bespangled with many particles of silver.

2. Litharge, or spume of silver.

ARGYRO'COME. (*e, es.* f.; from αργυρος, silver, and κομη, hair: so named from its white silvery flowers.) A species of *gnaphalium,* or cudweed.

ARGYROLI'BANOS. The white olibanum.

ARGYRO'PHORA. An antidote, in the composition of which there is silver.

ARGYROTROPHE'MA. (From αργος, white, and τροφημα, food.) A white cooling food, made with milk, or milk diet. — *Galen.*

ARHEUMATI'STOS. (From α, neg. and ρευματιζω, to be afflicted with rheums.) Not being afflicted with gouty rheums.

ARICY'MON. (*on, onis.* f.; from αρι, and κυω, to be quickly impregnated.) A woman who conceives quickly and often.

ARIES. (*es, etis.* m.) See *Ovis aries.*

ARIL'LUS. (*us, i.* m.; from *arere,* to be dry or parched.) The seed-coat or tunic of the permanent husk that invests a seed, which drying falls off spontaneously. It is a peculiar membrane, thick, and loosely surrounds the seed.

The varieties are,

1. The *succulent,* pulpy; like a berry in *Euonymus europæus,* and *Lætia.*
2. *Cartilaginous;* as in *Coffea arabica.*
3. *Dimidiate,* half round; as in *Taxus baccata.*
4. *Lacerate,* cut-like; as in the mace of the *Myristica moschata.*
5. *Reticulate,* net-like, surrounding the seed like a net; as in the *Orchis* tribe.
6. *Tricuspid;* as in *Malva coromandiliana.*
7. *Hirsute,* hairy; as in *Geranium incanum.*
8. *Villous;* as in *Geranium dissectum.*

ARISTA. (*a, æ.* f.; from *areo,* to dry.) The awn. A sharp beard, or point, or bristle-like filament, which proceeds from the husk or glume of grasses. Its distinctions are into,

1. *Naked,* without villi; as in *Stipa arguens* and *juncea.*
2. *Plumose,* having white villi; as in *Stipa pennata.*
3. *Straight;* as in *Bromus secalinus.*
4. *Geniculate,* having a knee-like bend; as in *Avena sativa.*
5. *Recurved,* bent back; as in *Holcus lanatus,* and *Agrostis canina.*
6. *Tortile,* twisted like a rope; as in *Agrostis rubra,* and *Aira montana.*

7. *Terminal*, fixed to the apex of the husk: it is so in *Agrostis miliacea*.

8. *Dorsal*, fixed to the back or outward part of the husk; as in *Agrostis canina*, *Bromus*, *Alopecuris*.

9. *Uncinate*, hooked; as in *Panicum hirtellum*.

ARISTALTHÆ'A. (*a*, *æ*. f.; from αριστος, best, and αλθαια, the althæa.) The common marsh-mallow. See *Althæa officinalis*.

ARISTATUS. (From *arista*, the awn.) Awned: applied to leaves, leaf-stalks, &c. terminated by a long rigid spine, which in a leaf does not appear as a contraction. In *Galium aristatum*, the leaf-stalk is awned.

ARISTOLO'CHIA. (*a*, *æ*. f.; from αριστος, good, and λοχια or λοχεια, parturition: so called because it was supposed to be of sovereign use in disorders incident to child-birth.) 1. The name of a genus of plants in the Linnæan system. Class, *Gynandria*; Order, *Hexandria*.

2. The pharmacopœial name of the long-rooted birthwort. See *Aristolochia longa*.

Aristolochia anguicida. Snake-killing birthwort. *Aristolochia —foliis cordatis, acuminatis; caule volubili, fructicoso; pedunculis solitariis; stipulis cordatis*, of Linnæus. The juice of the root of this plant has the property of so stupifying serpents, that they may be handled with impunity. One or two drops are sufficient; and if more be dropt into the mouth, they become convulsed. So ungrateful is the smell of the root to those reptiles, that it is said they immediately turn from it. The juice is also esteemed as a preventive against the effects usually produced by the bite of venomous serpents.

Aristolochia clematitis. The systematic name of the *Aristolochia vulgaris* of some pharmacopœias; called also *Aristolochia tenuis*. An extract is ordered by the Wirtemberg Pharmacopœia, and the plant is retained in that of Edinburgh. It is esteemed as possessing antipodagric virtues.

Aristolochia fabacea. See *Fumaria bulbosa*.

Aristolochia longa. The systematic name for the aristolochia of our pharmacopœias. *Aristolochia—foliis cordatis, petiolatis, integerrimis, obtusiusculis; caule infirmo, floribus solitariis*, of Linnæus. The root of this plant only is in use; it possesses a somewhat aromatic smell, and a warm bitterish taste, accompanied with a slight degree of pungency. The virtues ascribed to this root by the ancients were very considerable; and it was frequently employed in various diseases, but particularly in promoting the discharge of the *lochia*; hence its name. It is now very rarely used, except in gouty affections, as an aromatic stimulant.

Aristolochia rotunda. The root of this species of birthwort. *Aristolochia —foliis cordatis, subsessilibus, obtusis; caule infirmo; floribus solitariis*, of Linnæus; is used indiscriminately with that of the *Aristolochia longa*. See *Aristolochia longa*.

Aristolochia serpentaria. The systematic name for the *Serpentaria virginiana*. Virginian snake-root of the pharmacopœias; called also *Aristolochia*, *Colubrina virginiana*, *Viperina*, *Viperina virginiana*, *Pestilochia*, and *Contrayerva virginiana*. The plant which affords this root is the *Aristolochia — foliis cordato oblongis planis; caulibus infirmis, flexuosis terretibus; floribus solitariis. — Caulis geniculata valde nodosa. — Flores ad radicum*, of Linnæus. Snake-root has an aromatic smell, approaching to that of valerian, but more agreeable; and a warm, bitterish, pungent taste. It was first recommended as a medicine of extraordinary power in counteracting the poisonous effects of the bites of serpents; this, however, is now wholly disregarded: but as it possesses tonic and antiseptic virtues, and is generally admitted as a powerful stimulant and diaphoretic, it is employed, in the present day, in some fevers where these effects are required. A tincture is directed both by the London and Edinburgh Pharmacopœias.

Aristolochia tenuis. See *Aristolochia clematitis*.

Aristolochia trilobata. Three-lobed birthwort. The root, and every part of this plant, *Aristolochia—foliis trilobis, caule volubili, floribus maximis*, of Linnæus, is diuretic, and is employed in America against the bite of serpents.

Aristolochia vulgaris. See *Aristolochia clematitis*.

Aristophanei'on. (From *Aristophanes*, its inventor.) The name of an ancient emollient plaster, composed of wax, or pitch. — *Gorræus*.

Aristrios. See *Astragalus*.

ARM. *Brachium*. 1. That part of the upper extremity which extends from the shoulder to the wrist. It is divided into the brachium, properly so called, which extends from the shoulder to the bend of the arm; and the anti brachium, or fore-arm, which is between the bend of the arm and the wrist.

2. A measure: about twenty-four inches, or two feet, from the arm-pit to the basis of the middle finger.

ARMA. (*a*, *orum*. *pl*. n. Arms.) In *botany*, applied, 1. To a species of armature or offensive weapons. They are one of the seven kinds of *fulcra*, or props of plants, enumerated by Linnæus in his *Delineatio plantæ*. They are pungent points in some part of a plant.

2. In the present day, arma is used as a generic term, embracing the *aculeus*, *furca*, *spina*, and *stimulus*.

ARMATU'RA. 1. See *Arma*.

2. The amnios or internal membrane which surrounds the fœtus.

ARMATURE. See *Arma*.

A'RME. (From $\alpha\rho\omega$, to adapt.) 1. A junction of the lips of wounds.

2. The joining of the sutures of the head.

ARMI'LLA. (Diminutive of *armus*, the arm.) The round ligament which confines the tendons of the carpus.

ARMORA'CIA. (*a, æ.* f.; from *Armorica*, the country whence it was brought.) See *Cochlearia armoracia.*

ARMSTRONG, JOHN, a Scotch physician, born in 1709, who distinguished himself less in his profession than as a poet, particularly by his "Essay on the Art of preserving Health," in blank verse. He attained the age of seventy. His professional publications are not of much note; the principal one is entitled "Medical Essays." He is supposed, however, to have contributed materially to a useful Treatise on the Diseases of Children, published by his brother George, who, after practising many years as an apothecary, obtained a diploma in medicine.

A'RNICA. (*a, æ.* f. $A\rho\nu\iota\kappa\eta$; from $\alpha\rho\varsigma$, a lamb, because of the likeness of the leaf of this plant to the coat of the lamb.) Arnica.

1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.*

2. The pharmacopœial name of the mountain arnica. See *Arnica montana.*

ARNICA MONTANA. The systematic name for the *arnica* of the pharmacopœias; called also *Doronicum germanicum*, and *Acyrus. Arnica—foliis ovatis integris; caulinis geminis oppositis*, of Linnæus. The flowers of this plant are very generally employed on the Continent. Of the advantages derived from their use, in paralytic and other affections, depending upon a want of nervous energy, there are several proofs; and their extraordinary virtues, as a febrifuge and antiseptic, have been highly extolled by Dr. Collin, of Vienna. Much caution is necessary in regulating the dose, as it is a medicine very apt to produce vomiting and much uneasiness of the stomach.

ARNICA SUEDENSIS. See *Inula dysenterica.*

ARNO'TTO. A Spanish name for a shrub. See *Bixa orleana.*

ARO'MA. (*a, atis.* neut.; from $\alpha\rho\iota$, intensely, and $o\zeta\omega$, to smell.) The odorous principle of plants and other substances. It was formerly called *Spiritus rector.* Water charged with aroma, is called the distilled water of the substance made use of: thus lavender and peppermint waters are water impregnated with the aroma of the lavender and peppermint.

AROMATA. ($A\rho\omega\mu\alpha\tau\alpha$, the plural of *aroma*, sweet spices, herbs, &c.) Aromatics.

AROMA'TIC. (*Aromaticus;* from $\alpha\rho\omega\mu\alpha$, an odour.) Applied to a grateful spicy scent, and an agreeable pungent taste, as cinnamon bark, cardamoms, &c.

Aromatic vinegar. See *Acetum aromaticum.*

AROMATICÆ PLANTÆ. Odoriferous or strong and agreeable smelling plants. The name of a class of plants in some natural arrangements.

AROMA'TICUS CORTEX. A name for canella alba. See *Wintera aromatica.*

AROMATOPO'LA. (*a, æ.* f.; from $\alpha\rho\omega\mu\alpha$, an odour, and $\varpi\omega\lambda\epsilon\omega$, to sell.) A vender of drugs and spices.

ARQUEBUSA'DE. (A French word, implying *good for a gun-shot wound.*) The name of a spirituous water, distilled from a farrago of aromatic plants; called also *Aqua sclopetaria, Aqua vulneraria,* and *Aqua catapultanum.*

ARRA'CK. Arac. A spirituous liquor distilled from rice, and drunk, in the rice countries, as brandy is in this island. Its effects on the animal economy are the same.

ARRAGONITE. A mineral of a greenish and pearly grey colour, found at Arragon in Spain, England, and Scotland.

A'RRAPHUS. (From α, priv. and $\rho\alpha\phi\eta$, a suture.) Without suture: applied to the cranium when naturally without sutures.

ARRHÆ'A. (*a, æ.* f.; from α, neg. and $\rho\epsilon\omega$, to flow.) The suppression of any natural flux, as the menses, &c.

ARRHIZUS. (From α, priv. and $\rho\iota\zeta\alpha$, a root.) Arrhize, or without root: applied to parasitical plants, which have no roots, but adhere and imbibe their nourishment by anastomosing of the vessels; as *Viscum album*, and *Loranthus europæus.*

ARROWHEAD. See *Sagittaria.*

Arrow-root. See *Maranta.*

Arrow-shaped. See *Sagittatus.*

ARSE'NIATE. (*Arsenias, atis.* f.; from *arsenicum*, arsenic.) A salt formed by a combination of arsenic acid with salifiable bases; as arseniate of ammonia, which is produced by the union of ammonia with arsenic acid. The only one used in medicine is the superarseniate of potash, which is in solution in the liquor arsenicalis. See *Arsenicalis liquor.*

The arseniates are all decomposable by charcoal, which separates arsenic from them by means of heat; all with the exception of those of potash, soda, and ammonia, are insoluble in water; and except arseniate of bismuth, and one or two more, they are very soluble in an excess of arsenic acid.

A'RSENIC. (*Arsenicum, i.* n.; from the Arabic term *Arsanek:* or from $\alpha\rho\sigma\eta\nu$, for $\alpha\rho\rho\eta\nu$, *masculus;* from its strong and deadly powers.) A metal, scattered in great abundance over the mineral kingdom. It is found in black heavy masses of little brilliancy, called *native arsenic*, or testaceous arsenic. This exists in different parts of Germany. Mineralised by sulphur, it forms *sulphurised arsenic.* This mineral is met with in Italy, about Mount Vesuvius. There are two varieties of this ore, which differ from each other in colour, occasioned by the different

proportions of their component parts. The one is called yellow *sulphurised arsenic*, or *orpiment;* the other, *red sulphurised arsenic*, or *realgar*, or *ruby arsenic;* both are met with in Hungary and different parts of Germany. The colour of the first ore is a lemon-yellow, inclining sometimes to a green; the colour of the latter is a ruby-red; it is more transparent than the former, and found in compact solid masses, sometimes crystallised in bright needles. Arsenic united to oxygene, constitutes the ore called *native oxide of arsenic*. This ore is scarce; it is generally found of an earthy appearance, or as an efflorescence, coating native or metallic arsenic; its colour is a whitish grey; it is rarely met with crystallised. Arsenic exists likewise alloyed with cobalt, antimony, tin, copper, lead, and various other metals.

Method of obtaining Arsenic. In order to obtain metallic arsenic, mix two parts of the white oxide of arsenic of commerce, with one of black flux (obtained by detonating one part of nitrate of potash with two of supertartrate of potash), and put the mixture into a crucible, or melting-pot. Invert over this another crucible, lute the two together with a little clay and sand, and apply gradually a red heat to the lower one. The oxide of arsenic will be reduced, and be found lining the upper crucible in small crystals of a metallic brilliancy.

The charcoal of the black flux takes in this process the oxygene from the white oxide, and forms carbonic acid gas; which flies off during the process, and the oxide becomes reduced to the metallic state. This reduction of the oxide is greatly facilitated by the alkali of the flux.

Remark. — In order to obtain arsenic in a state of absolute purity, the metal thus obtained must be reduced to a powder, dissolved by heat in nitro-muriatic acid, and then precipitated by immersing into the solution a plate of zinc. The arsenic is thus precipitated in a fine powder, and may be reduced to a mass, by exposing it in a covered crucible to a moderate heat.

It is among the most combustible of the metals, burns with a blue flame and garlic smell, and sublimes in the state of arsenious acid.

Arsenic and oxygene. — Arsenic, by exposure to the air, is tarnished, and becomes converted into a bulky blackish powder. In three months, Berzelius found that 100 parts acquired an increase of 8·475; and he is disposed to consider the product as an oxidule, or sub-oxide; but it is probably nothing more than a mixture of arsenic and arsenious acid, into which, indeed, it is resolvable by heat. Only two combinations of arsenic and oxygene have hitherto been clearly ascertained; and both are possessed of acid properties.

1. *Arsenious acid.* This is the white oxide of arsenic (arsenic of the shops), and has the following properties:

It is semi-transparent and brittle. Its specific gravity is 3·7. At a temperature of 380° Fahr. it is volatilised; or, if suddenly heated, it runs into a glass. It is highly poisonous, not only when taken into the stomach, but when applied to a wound, or when its vapour is inspired. Its vapour is quite inodorous.

Its taste had generally been represented as acrid and disagreeable; but Dr. Christison has shown that this is a mistake, and that, of several persons, the majority could perceive no taste, while a few thought it faintly sweetish. The solution also appeared, to most of those who tasted it, to be faintly sweetish. (Jameson's Edin. Journ. No. 5. p. 183.)

It is sparingly soluble in water. A thousand grains of cold water, left in contact with the arsenious acid during twenty-four hours, and frequently agitated, dissolved only $2\frac{1}{2}$ grains. But 1000 grains of boiling water took up $77\frac{3}{4}$ grains; and, after being left three days to cool, and to deposit the crystals which separated, still retained in solution 30 grains.

The arsenious acid combines with pure alkalies to saturation, and fulfils, therefore, one of the principal functions of an acid. Its compounds, called *arsenites*, may be formed by simply boiling the arsenious acid with the respective bases and a sufficient quantity of water. They have not been much examined. Those of potash, soda, and ammonia, are soluble and incapable of crystallising: those of lime, baryta, strontia, and magnesia, are difficultly soluble.

2. *Arsenic acid.*—By repeated distillation with nitric acid, 100 parts of arsenious acid are changed into 115 or 116 of *arsenic acid.* The process, however, recommended by Bucholz, is to mix 2 parts by weight of muriatic acid of the specific gravity 1·200 (?) 24 parts of nitric acid of the specific gravity 1·25, and 8 parts of white oxide of arsenic. The whole may be evaporated to dryness, and gently ignited in a crucible.

Arsenic acid has a sour, and at the same time a metallic taste. It reddens vegetable blues; attracts humidity from the atmosphere, forming a liquid of sp. gr. 1·65 nearly; and effervesces strongly with solutions of alkaline carbonates. When evaporated, it assumes the consistence of jelly, and does not crystallise. It is a most active poison.

Arsenic acid unites with bases, and constitutes a class of salts called *arsenates*, or *arseniates*. See *Arseniate*.

Arsenic and chlorine. — The compound of arsenic with chlorine, formed by distilling six parts of corrosive sublimate with one of arsenic, is a colourless fuming liquid.

Arsenic and iodine unite and form a deep

red compound, which decomposes water, and affords arsenic and hydriodic acids.

Arsenic and hydrogene. — When tin is dissolved in liquid arsenic acid, an inflammable gas is disengaged, as was observed by Scheele, consisting of hydrogene gas, holding arsenic in solution.

To this gas, the name of *arsenurated hydrogene* is best adapted.

Arsenic and sulphur. — The *sulphurets of arsenic* have been examined by Klaproth. There are two sulphurets of this metal, both of which are found native, a red compound, called *Realgar*, and a bright yellow one, named *Orpiment*. They may also be formed artificially, the red by heating white arsenic with sulphur; the yellow by dissolving white arsenic in muriatic acid, and precipitating by hydro-sulphuret of ammonia.

Alloys. — Arsenic combines with most of the metals, which it generally renders brittle. With iron, zinc, and tin, it affords white brittle compounds. It unites with copper into a white alloy, as may be shown by confining a few grains of metallic arsenic, or of white arsenic mixed with black flux, between two copper plates, and heating them. The copper will acquire a white stain.

Use of arsenic, and its compounds, in medicine. Many attempts have been made to introduce it into medicine; but as it is known to be one of the most violent poisons, it is probable that the fear of its bad effects may deprive society of the advantages it might afford in this way. An arseniate of potash was extensively used by the late Dr. Fowler of York, who published a treatise on it, in intermittent and remittent fevers. He likewise found it extremely efficacious in periodical headach, and as a tonic in nervous and other disorders; and that he never saw the least ill effect from its use, due precaution being employed in preparing and administering it. Externally it has been employed as a caustic to extirpate cancer, combined with sulphur, with bole, with antimony, and with the leaves of crow-foot; but it always gives great pain, and is not unattended with danger. Febvre's remedy was water one pint, extract of hemlock ℥j. Goulard's extract ℥iij. tincture of opium ʒj. arsenious acid gr. x. With this the cancer was wetted morning and evening; and at the same time a small quantity of a weak solution was administered internally. A still milder application of this kind has been made from a solution of one grain in a quart of water, formed into a poultice with crumb of bread.

It has been more lately used as an alterative with advantage in chronic rheumatism. The symptoms which show the system to be *arsenified* are thickness, redness, and stiffness of the *palpebræ*, soreness of the gums, ptyalism, itching over the surface of the body, restlessness, cough, pain at stomach, and headach. When the latter symptoms supervene, the administration of the medicine ought to be immediately suspended. It has also been recommended against chincough; and has been used in considerable doses with success, to counteract the poison of venomous serpents.

Since it acts on the animal economy as a deadly poison in quantities so minute as to be insensible to the taste when diffused in water or other vehicles, it has been often given with criminal intentions and fatal effects. It becomes therefore a matter of the utmost importance to present a systematic view of the phænomena characteristic of the poison, its operation, and consequences.

It is a dense substance, subsiding speedily after agitation in water. Cold water dissolves, however, only $\frac{3}{1000}$ or $\frac{1}{10}$ of the preceding quantity. This water makes the syrup of violets green, and reddens litmus paper. Lime water gives a fine white precipitate with it of arsenite of lime, soluble in an excess of the arsenious solution; sulphuretted hydrogene gas, and hydrosulphuretted water, precipitate a golden yellow sulphuret of arsenic. By this means $\frac{1}{100000}$ of arsenious acid may be detected in water. This sulphuret dried on a filter, and heated in a glass tube with a bit of caustic potash, is decomposed in a few minutes, and converted into sulphuret of potash, which remains at the bottom, and metallic arsenic of a bright steel lustre, which sublimes, coating the sides of the tube. The hydrosulphurets of alkalies do not affect the arsenious solution, unless a drop or two of nitric or muriatic acid be poured in, when the characteristic golden yellow precipitate falls. Nitrate of silver is decomposed by the arsenious acid, and a very peculiar yellow arsenite of silver precipitates; which, however, is apt to be redissolved by nitric acid, and therefore a very minute addition of ammonia is requisite. Even this, however, also, if in much excess, redissolves the silver precipitate.

As the nitrate of silver is justly regarded as one of the best precipitant tests of arsenic, the mode of using it has been a subject of much discussion. This excellent test was first proposed by Mr. Hume of Long Acre, in May 1809. *Phil. Mag.* xxxiii. 401. — The presence of muriate of soda, indeed, in the arsenical solution, obstructs, to a certain degree, the operation of this reagent. But that salt is almost always present in the *primæ viæ*, and is a usual ingredient in soups, and other vehicles of the poison. If, after the water of ammonia has been added, (by plunging the end of a glass rod dipped in it into the supposed poisonous liquid,) we dip another rod into a solution of pure nitrate of silver, and transfer it into the arsenious solution, either a fine yellow cloud will be formed, or at first merely a white curdy precipitate. But at the second or third immersion of the nitrate rod, a central spot of yellow will be perceived surrounded with

the white muriate of silver. At the next immersion, this yellow cloud on the surface will become very conspicuous. Sulphate of soda does not interfere in the least with the silver test.

The ammoniaco-sulphate, or rather ammoniaco-acetate of copper, added in a somewhat dilute state to an arsenious solution, gives a fine grass-green and very characteristic precipitate. This green arseniate of copper, well washed, being acted on by an excess of sulphuretted hydrogene water, changes its colour, and becomes of a brownish-red. Ferro prussiate of potash changes it into a blood-red. Nitrate of silver converts it into the yellow arsenite of silver.

Lastly, if the precipitate be dried on a filter, and placed on a bit of burning coal, it will diffuse a garlic odour. The cupreous test will detect $\frac{1}{110000}$ of the weight of the arsenic in water.

The voltaic battery, made to act by two wires on a little arsenious solution placed on a bit of window-glass, developes metallic arsenic at the negative pole; and if this wire be copper, it will be whitened like tombac.

We may here remark, however, that the most elegant mode of using all these precipitation reagents is upon a plane of glass; a mode practised by Dr. Wollaston, in general chemical research, to an extent, and with a success, which would be incredible in other hands than his. Concentrate by heat in a capsule the suspected poisonous solution, having previously filtered it if necessary. Indeed, if it be very much disguised with animal or vegetable matters, it is better first of all to evaporate to dryness, and by a few drops of nitric acid to dissipate the organic products. The clear liquid being now placed in the middle of the bit of glass, lines are to be drawn out from it in different directions. To one of these a particle of weak ammoniacal water being applied, the weak nitrate of silver may then be brushed over it with a hair pencil. By placing the glass in different lights, either over white paper or obliquely before the eye, the slightest change of tint will be perceived. The ammoniaco-acetate should be applied to another filament of the drop, deut-acetate of iron to a third, weak ammoniaco-acetate of cobalt to a fourth, sulphuretted water to a fifth, lime water to a sixth, a drop of violet syrup to a seventh, and the two galvanic wires at the opposite edges of the whole. Thus, with one single drop of solution, many exact experiments may be made.

But the chief, the decisive trial or *experimentum crucis* remains, which is to take a little of the dry matter, mix it with a small pinch of dry black flux, put it into a narrow glass tube sealed at one end, and after cleansing its sides with a feather, urge its bottom with a blow-pipe till it be distinctly red-hot for a minute. Then garlic fumes will be smelt, and the steel-lustred coating of metallic arsenic will be seen in the tube about one-fourth of an inch above its bottom. Cut the tube across at that point by means of a fine file, detach the scale of arsenic with the point of a penknife; put a fragment of it into the bottom of a small wine-glass along with a few drops of ammoniaco-acetate of copper, and triturate them well together for a few minutes with a round-headed glass rod. The mazarine blue colour will soon be transmuted into a lively grass-green, while the metallic scale will vanish. Thus we distinguish perfectly between a particle of metallic arsenic and one of animalised charcoal. Another particle of the scale may be placed between two smooth and bright surfaces of copper, with a touch of fine oil; and whilst they are firmly pressed together, exposed to a red-heat. The tombac alloy will appear as a white stain. A third particle may be placed on a bit of heated metal, and held a little under the nostrils, when the garlic odour will be recognised. No danger can be apprehended, as the fragment need not exceed the tenth of a grain.

It is to be observed, that one or two of the precipitation tests may be equivocal from admixtures of various substances. Thus tincture of ginger gives with the cupreous reagent a green precipitate; — and Dr. Ure was at first led to suspect from that appearance, that an empirical tincture, put into his hands for examination, did contain arsenic, but a careful analysis satisfied him of its genuineness. Tea covers arsenic from the cupreous test. Such poisoned tea becomes, by its addition, of an obscure olive or violet red, but yields scarcely any precipitate. Sulphuretted hydrogene, however, throws down a fine yellow sulphuret of arsenic.

A good way of obviating all these sources of fallacy, is to evaporate carefully to dryness, and expose the residue to heat in a glass tube. The arsenic sublimes, and may be afterwards operated on without ambiguity. Orfila has gone into ample details on the modifications produced by wine, coffee, tea, broth, &c. on arsenical tests, of which a good tabular abstract is given in Mr. Thomson's London Dispensatory. But it is evident that the differences in these menstrua, as also in beers, are so great as to render precipitations and changes of colour by reagents very unsatisfactory witnesses, in a case of life and death. Hence the method of evaporation above described should never be neglected. Should the arsenic be combined with oil, the mixture ought to be boiled with water, and the oil then separated by the capillary action of wick-threads. If with resinous substances, these may be removed by oil of turpentine, not by alkohol (as directed by Dr. Black), which is a good solvent of arsenious acid. It may moreover be observed, that both tea and coffee should be freed from their tannin by gelatine, which does not act on the arsenic previous to the use of

reagents for the poison. When one part of arsenious acid in watery solution is added to ten parts of milk, the sulphuretted hydrogene, present in the latter, occasions the white colour to pass into a canary yellow; the cupreous test gives it a slight green tint; and the nitrate of silver produces no visible change, though even more arsenic be added; but the hydrosulphurets throw down a golden yellow, with the aid of a few drops of an acid. The liquid contained in the stomach of a rabbit poisoned with a solution of three grains of arsenious acid, afforded a white precipitate with nitrate of silver, greyish-white with lime water, green with the ammoniaco-sulphate, and deep yellow with sulphuretted hydrogene water.

Mr. Brande's directions are very simple and good. He remarks that arsenic, even in a very minute quantity, is not difficult of discovery. The suspected substance should be boiled in as small a portion of distilled water as convenient, the solution filtered, and a portion of it put into three test tubes, marked *a*, *b*, and *c*. To *a* add a drop or two of solution of potash, and then a similar quantity of solution of sulphate of copper; an *apple-green* precipitate indicates arsenic; if the precipitate be sky-blue, no arsenic is present. To the liquid *b* add a drop or two of solution of ammonia, and then the same quantity of nitrate of silver; if white arsenic be present, a yellow precipitate is formed: if not, there is no change, or only a white cloudiness. To *c* add a drop or two of liquid potash; evaporate to dryness, and having added a morsel of wax, heat the residue to redness; metallic arsenic will sublime, and the garlic smell will be perceptible upon opening the lower end of the tube, and holding it inclined, so that a current of air may pass through it.

The precipitates from *a* and *b*, heated with a little wax, should give similar indications of metallic arsenic.

The preceding copious description of the habitudes of arsenious acid in different circumstances, is equally applicable to the soluble arsenites. Their poisonous operation, as well as that of the arsenic acid, has been satisfactorily referred by Mr. Brodie to the suspension of the functions of the heart and brain, occasioned by the absorption of these substances into the circulation, and their consequent determination to the nervous system and the alimentary canal. This proposition was established by numerous experiments on rabbits and dogs. Wounds were inflicted, and arsenic being applied to them, it was found that in a short time death supervened, with the same symptoms of inflammation of the stomach and bowels as if the poison had been swallowed.

He divides the morbid affections into three classes: 1*st*, Those depending on the nervous system, as palsy at first of the posterior extremities, and then of the rest of the body, convulsions, dilatation of the pupils, and general insensibility: 2*d*, Those which indicate disturbance in the organs of circulation; for example, the feeble, slow, and intermitting pulse, weak contractions of the heart immediately after death, and the impossibility of prolonging them, as may be done in sudden deaths from other causes, by artificial respiration: 3*d*, Lastly, those which depend on lesion of the alimentary canal, as the pains of the abdomen, nauseas and vomitings, in those animals which were suffered to vomit. At one time it is the nervous system that is most remarkably affected, and at another the organs of circulation. Hence inflammation of the stomach and intestines ought not to be considered as the immediate cause of death, by the greater number of cases of poisoning by arsenic. However, should an animal not sink under the first violence of the poison, if the inflammation has had time to be developed, there is no doubt that it may destroy life. Mr. Earle states that a woman who had taken arsenic resisted the alarming symptoms which at first appeared, but died on the fourth day. On opening her body, the mucous membrane of the stomach and intestines was ulcerated to a great extent. Authentic cases of poison are recorded, where no trace of inflammation was perceptible in the *primæ viæ*.

The effects of arsenic have been graphically represented by Dr. Black: "The symptoms produced by a dangerous dose of arsenic begin to appear in a quarter of an hour, or not much longer, after it is taken. First, sickness, and great distress of stomach, soon followed by thirst, and burning heat in the bowels. Then come on violent vomiting and severe colic pains, and excessive and painful purging. This brings on faintings, with cold sweats, and other signs of great debility. To this succeed painful cramps, and contractions of the legs and thighs, and extreme weakness, and death." Similar results have followed the incautious sprinkling of scirrhous ulcers with powdered arsenic, or the application of arsenical pastes. The following more minute specification of symptoms is given by Orfila: "An austere taste in the mouth; frequent ptyalism; continual spitting; constriction of the *pharynx* and *œsophagus*; teeth set on edge; hiccoughs; nausea; vomiting of brown or bloody matter; anxiety; frequent fainting fits; burning heat at the *præcordia*; inflammation of the lips, tongue, palate, throat, stomach; acute pain of stomach, rendering the mildest drinks intolerable; black stools of an indescribable fœtor; pulse frequent, oppressed, and irregular, sometimes slow and unequal; palpitation of the heart; *syncope*; unextinguishable thirst; burning sensation over the whole body, resembling a consuming fire; at times an icy coldness; difficult respiration; cold sweats; scanty urine, of a red or bloody appearance; altered expression of countenance;

a lived circle round the eyelids; swelling and itching of the whole body, which becomes covered with livid spots, or with a miliary eruption; prostration of strength; loss of feeling, especially in the feet and hands; delirium; convulsions, sometimes accompanied with an insupportable priapism; loss of the hair; separation of the epidermis; horrible convulsions; and death."

It is uncommon to observe all these frightful symptoms combined in one individual; sometimes they are altogether wanting, as is shown by the following case, related by M. Chaussier: — A robust man of middle age swallowed arsenious acid in large fragments, and died without experiencing other symptoms than slight *syncopes*. On opening his stomach, it was found to contain the arsenious acid in the very same state in which he had swallowed it. There was no appearance whatever of erosion or inflammation in the intestinal canal. Etmuller mentions a young girl's being poisoned by arsenic, and whose stomach and bowels were sound to all appearance, though the arsenic was found in them. In general, however, inflammation does extend along the whole canal, from the mouth to the *rectum*. The stomach and *duodenum* present frequently gangrenous points, eschars, perforations of all their coats; the villous coat in particular, by this and all other corrosive poisons, is commonly detached, as if it were scraped off or reduced into a paste of a reddish-brown colour. From these considerations we may conclude, that from the existence or non-existence of intestinal lesions, from the extent or seat of the symptoms alone, the physician should not venture to pronounce definitively on the fact of poisoning.

The result of Mr. Brodie's experiments on brutes, teaches that the inflammations of the intestines and stomach are more severe when the poison has been applied to an external wound, than when it has been thrown into the stomach itself.

The best remedies against this poison in the stomach, are the emptying the stomach as soon as possible by the stomach-pump, which should be in the possession of every medical man, or by other means, and then giving copious draughts of bland liquids, of a mucilaginous consistence, to inviscate the powder that may be left, and again drawing it off by the use of the pump. Sulphuretted hydrogene condensed in water, is the only direct antidote to its virulence; Orfila having found, that when dogs were made to swallow that liquid, after getting a poisonous dose of arsenic, they recovered, though their œsophagus was tied to prevent vomiting; but when the same dose of poison was administered in the same circumstances, without the sulphuretted water, that it proved fatal.

When the *viscera* and their contents are to be subjected to chemical investigation, a ligature ought to be thrown round the œsophagus and the beginning of the colon, and the intermediate stomach and intestines removed. Their liquid contents should be emptied into a basin; and thereafter a portion of hot water introduced into the stomach, and worked thoroughly up and down this *viscus*, as well as the intestines.

After filtration, a portion of the liquid should be concentrated by evaporation in a porcelain capsule, and then submitted to the proper reagents above described. We may also endeavour to extract from the stomach by digestion, in boiling water, with a little ammonia, the arsenical impregnation, which has been sometimes known to adhere in minute particles with wonderful obstinacy. This precaution ought, therefore, to be attended to. The heat will dissipate the excess of ammonia in the above operation; whereas, by adding potash or soda, as prescribed by the German chemists, we introduce animal matter in alkaline solution, which complicates the investigation.

The matters rejected from the patient's bowels before death should not be neglected. These, generally speaking, are best treated by cautious evaporations to dryness; but we must beware of heating the residuum to 400°, since at that temperature, and perhaps a little under it, the arsenious acid itself sublimes.

Vinegar, hydroguretted alkaline sulphurets, and oils, are of no use as counterpoisons. Indeed, when the arsenic exists in substance in the stomach, even sulphuretted hydrogene water is of no avail, however effectually it may neutralise an arsenious solution. Syrups, linseed tea, decoction of mallows, or tragacanth, and warm milk, should be administered as copiously as possible, and vomiting provoked by tickling the fauces with a feather. Clysters of a similar nature may be also employed. Many persons have escaped death by having taken the poison mixed with rich soups; and it is well known, that when it is prescribed as a medicine, it acts most beneficially when given soon after a meal. These facts have led to the prescription of butter and oils; the use of which is, however, not advisable, as they screen the arsenical particles from more proper menstrua, and even appear to aggravate its virulence. Morgagni, in his great work on the seats and causes of disease, states, that at an Italian feast the desert was purposely sprinkled over with arsenic instead of flour. Those of the guests who had previously eaten and drank little, speedily perished; those who had their stomachs well filled, were saved by vomiting. He also mentions the case of three children who ate a vegetable soup poisoned with arsenic. One of them, who took only two spoonfuls, had no vomiting, and died; the other two, who had eaten the rest, vomited and got well.

The following tests of arsenic and corrosive sublimate have been lately proposed by

Brugnatelli: Take the starch of wheat boiled in water until it is of a proper consistence, and recently prepared; to this add a sufficient quantity of iodine to make it of a blue colour; it is afterwards to be diluted with pure water until it becomes of a beautiful azure. If to this some drops of a watery solution of arsenic be added, the colour changes to a reddish hue, and finally vanishes. The solution of corrosive sublimate poured into iodine and starch, produces almost the same change as arsenic; but if to the fluid acted on by the arsenic we add some drops of sulphuric acid, the original blue colour is restored with more than its original brilliancy, while it does not restore the colour to the corrosive sublimate mixture.

Arsenic acid. See *Arsenic.*

Arsenic, oxide of. See *Arsenic.*

Arsenic, sublimed white. See *Arsenicum album sublimatum.*

Arsenic, white. See *Arsenic.*

Arsenic, white, oxide of. See *Arsenic.*

Arsenical acid. See *Arsenic.*

Arsenical caustic. A species of caustic said to possess useful properties, independent of those of destroying morbid parts to which it is applied. It is composed of two parts of levigated antimony to one of white arsenic. This is the caustic so extensively employed under the name of arsenical caustic, by the late Mr. Justamond, in his treatment of cancers.

Arsenical solution. See *Arsenicalis liquor.*

Arsenica'lis liquor. Arsenical solution. Take of sublimed oxide of arsenic, in very fine powder, subcarbonate of potash from tartar, of each 64 grains; distilled water a pint. Boil them together in a glass vessel, until the arsenic be entirely dissolved. When the solution is cold, add compound spirit of lavender, four fluid-drachms. Then add as much distilled water as may exactly fill a pint measure. This preparation accords with the formula of Dr. Fowler, of Stafford, who first introduced it in imitation of a celebrated popular remedy for intermittents, sold under the name of the tasteless ague-drop. The compound spirit of lavender is only intended to give some colour and taste, without which it would be more liable to mistakes. Where the dose is small, and the effects so powerful, the most minute attention to its proportion and preparation become necessary. Each ounce contains four grains of the oxide, and each drachm half a grain; but it will rarely be proper to go beyond one-sixteenth of a grain as a dose.

Arsenici oxydum præparatum. See *Arsenicum album sublimatum.*

Arsenicum album sublimatum. Reduce white arsenic into powder, then put it into a crucible and expose it to the fire, so as to sublime it into another crucible inverted over the former. This is intended to render the arsenic more pure, and in this state it is called *Arsenici oxidum sublimatum,* and *Arsenici oxidum præparatum.*

Arsenicum crystallinum. See *Arsenious acid.*

ARSE'NIOUS ACID. White arsenic. Oxide of arsenic. Rat's bane. Called also, *Arsenicum crystallinum, Risigalum, Arfar, Zarnick, Arsag,* and *Artaneck.* See *Arsenic.*

ARTEMI'SIA. (*a, æ.* f.; from a queen of that name, who first used it: or from Αρτεμις, Diana, because it was formerly used in the diseases of women, over whom she presided.) The name of a genus of plants in the Linnæan system. Class *Syngenesia;* Order, *Polygamia superflua.*

Artemisia abrotanum. Common southernwood. The systematic name for the *Abrotanum* of the pharmacopœias. Called also, *Abrotanum mas, Adonion, Adonium,* and *Abrathan. Artemisia—foliis setaceis ramosissimis,* of Linnæus. A plant possessed of a strong, and, to most people, an agreeable smell; a pungent, bitter, and somewhat nauseous taste. It is supposed to stimulate the whole system, but more particularly the uterus. It is very rarely used unless by way of fomentation, with which intention the leaves are directed.

Artemisia absinthium. Common wormwood. The systematic name for the *Absinthium vulgare* of the pharmacopœias; falsely called, in our markets, *Absinthium romanum,* or Roman wormwood. *Absinthium ponticum* of Dioscorides and Pliny, according to *Murray. Artemisia—foliis compositis multifidis floribus subglobosis pendulis; receptaculo villoso,* of Linnæus. This plant is a native of Britain, and grows about rubbish, rocks, and sides of roads. The leaves of wormwood have a strong disagreeable smell: their taste is nauseous, and so intensely bitter as to be proverbial. The flowers are more aromatic and less bitter than the leaves, and the roots discover an aromatic warmth, without bitterness. This species of wormwood may be considered the principal of the herbaceous bitters. Its *virtus,* in the words of Bergius, is antiputredinosa, antacida, anthelmintica, resolvens, tonica, spasmodica. And although it is now chiefly employed with a view to the two last-mentioned qualities, yet we are told of its good effects in a great variety of diseases, as intermittent fevers, hypochondriasis, obstructions of the liver and spleen, gout, calculi, scurvy, dropsy, worms, &c. Notwithstanding which, it is so seldom used in the present day that it is difficult to find it in the shops. Cullen thinks it is possessed of a narcotic power, and that there is in every bitter, when largely employed, a power of destroying the sensibility and irritability of the nervous system.

Externally, wormwood is used in discutient and antiseptic fomentations. This plant may be taken in powder, but it is more commonly preferred in infusion. The

Edinburgh Pharmacopœia directs a tincture of the flowers, which is, in the opinion of Dr. Cullen, a light and agreeable bitter, and, at the same time, a strong impregnation of the wormwood.

The bitterness of this plant is derived from what is usually called extractive matter, and is retained by the decoction long after boiling; but its aroma depends upon an essential oil which may be obtained by distillation, one hundred weight of the fresh herb yielding upon an average four ounces of oil.

Artemisia chinensis. Mugwort of China; called also *Moxa japonica*, and *Musia pattræ*. A soft lanuginous substance, called *Moxa*, is prepared in Japan, from the young leaves of this species of mugwort, by beating them when thoroughly dried, and rubbing them betwixt the hands, till only the fine fibres are left. Moxa is celebrated in the eastern countries for preventing and curing many disorders, by being burnt on the skin; a little cone of it laid upon the part, previously moistened, and set on fire on the top, burns down with a temperate and glowing heat, and produces a dark-coloured spot, the ulceration of which is promoted by applying a little garlic, and the ulcer is either healed up when the eschar separates, or kept running for a length of time, as different circumstances may require.

Artemisia glacialis. Mountain wormwood. This is found on Alpine situations, and has similar virtues to common wormwood.

Artemisia judaica. The systematic name for the *Santonicum* of the pharmacopœias, according to some botanists. See *Artemisia santonica*.

Artemisia maritima. The sea wormwood, falsely called in our markets, Roman wormwood. The systematic name for the *Absinthium maritimum* of the pharmacopœias. *Artemisia —foliis multipartitis, tomentosis; racemis cernuis; flosculis fœmineis ternis*, of Linnæus. This plant grows plentifully about the sea-shore, and in salt marshes. The specific differences between it and the common wormwood, *Artemisia absinthium*, are very evident. Its taste and smell are considerably less unpleasant than those of the common wormwood, and even the essential oil, which contains the whole of its flavour, concentrated, is somewhat less ungrateful, and the watery extract somewhat less bitter than those of the common wormwood. Hence it is preferred in those cases where the *Artemisia absinthium* is supposed to be too unpleasant for the stomach. A conserve of the tops of this plant was directed by the London Pharmacopœia.

Artemisia pontica. The systematic name for the *Absinthium ponticum*, or Roman wormwood, not now used medicinally.

Artemisia rupestris. The systematic name for the *Genipi album* of the pharmacopœias. *Artemisia —foliis pinnatis; caulibus adscendentibus; floribus globosis, cernuis; receptaculo papposo.* It has a grateful smell, and is used in some countries in the cure of intermittents and obstructed catamenia.

Artemisia santonica. The Tartarian southernwood or wormseed. The systematic name of the plant which affords the *Semen santonici* of the shops; called also, *Absinthium santonicum Alexandrinum, Sementina, Absinthium seriphium Ægyptium, Scheba Arabum, Zedoariæ semen, Xantolina, Lumbricorum semina, Cina, Semen contra, Semen sanctum*, and *Artemisia Judaica. Artemisia — foliis caulinis linearibus, pinnatomultifidis; ramis indivisis; spicis secundis reflexis; floribus quinquefloris*, of Linnæus. The seeds are small, light, and oval, composed of a number of thin membraneous coats of a yellowish-green colour, with a cast of brown, easily friable, upon being rubbed between the fingers, into a fine chaffy kind of substance. They are brought from the Levant; have a moderately strong and not agreeable smell, somewhat of the wormwood kind, and a very bitter subacrid taste. Their virtues are extracted both by watery and spirituous menstrua. They are esteemed to be stomachic, emmenagogue, and anthelmintic; but it is especially for the last-mentioned powers that they are now administered, and from their efficacy in this way they have obtained the name of wormseed. To adults, the dose in substance is from one to two drachms, twice a-day. Lewis thinks that the spirituous extract is the most eligible preparation of the sanctonicum, for the purposes of an anthelmintic.

Artemisia vulgaris. Mugwort. This plant, *Artemisia —foliis pinnatifidis, planis, incisis, subtus tomentosis; racemis simplicibus, recurvatis; floribus radio quinquefloro*, of Linnæus, is slightly bitter, and, although in high esteem in former days, is now almost wholly forgotten.

Artemo'nium. (From *Artemon*, its inventor.) The name of a wash for the eyes.

Arteri'acus. (From αρτηρια, an artery.) Used against disorders of the aspera arteria, or trachea.

Arteriæ venæ. The four pulmonary veins were so called by the ancients.

Arterio'sus ductus. See *Ductus arteriosus*.

ARTERIO'TOMY. (*Arteriotomia, æ.* f.; from αρτηρια, an artery, and τεμνω, to cut.) The opening of an artery. This operation is frequently performed on the temporal artery, which is the only artery ever opened for the purpose of depriving the system of blood in the cure of diseases.

ARTERIUM. (*um, i.* n.) An artery. See *Artery*.

A'RTERY. (*Arteria, æ.* f.; from αηρ, air, and τηρεω, to keep: so called because the ancients believed they contained air

only.) A membraneous pulsating canal, that arises from the heart, and gradually becomes less as it proceeds from it. Arteries are composed of three membranes; a common, or external; a muscular; and an internal one, which is very smooth. They are only two in number, the pulmonary artery, and the aorta, and these originate from the heart; the pulmonary artery from the right ventricle, and the aorta from the left: the other arteries are all branches of the aorta. Their termination is either in the veins, or in capillary exhaling vessels, or they anastomose with one another. It is by their means that the blood is carried from the heart to every part of the body, for nutrition, preservation of life, generation of heat, and the secretion of the different fluids. The action of the arteries, called the pulse, corresponds with that of the heart, and is effected by the contraction of their muscular, and great elasticity of their outermost coat.

A Table of the Arteries.

All the arteries originate from the pulmonary artery and the aorta.

The *pulmonary artery* emerges from the right ventricle of the heart, soon divides into a right and left branch, which are distributed by innumerable ramifications through the lungs.

The *aorta* arises from the left ventricle of the heart, and supplies every part of the body with blood, in the following order: —

a. It first forms an *arch*,
b. It then descends along the spine; and,
c. It divides into the two *iliacs*.

a. The ARCH OF THE AORTA gives off three branches.

1. The *arteria innominata*, which divides into the *right carotid* and *right subclavian*.
2. The *left carotid*.
3. The *left subclavian*.

I. The *carotids* are divided into *external* and *internal*.

The *external carotids* give off,

1. The *thyroid*.
2. The *lingual*.
3. The *labial*.
4. The *inferior pharyngeal*.
5. The *occipital*.
6. The *posterior auris*.
7. The *internal maxillary*, from which the *spinous artery of the dura mater*, the *lower maxillary*, and *several branches about the palate and orbit* arise.
8. The *temporal*.

The *internal carotid* affords,

1. The *ophthalmic*.
2. The *middle cerebral*.
3. The *communicans*, which inosculates with the *vertebral*.

II. The *subclavians* give off the following branches:

1. The *internal mammary*, from which the *thymic*, *comes phrenici*, *pericardiac*, and *phrenico-pericardiac arteries* arise.
2. The *inferior thyroid*, which gives off the *tracheal*, *ascending thyroid*, and *transversalis humeri*.
3. The *vertebral*, which proceeds within the vertebræ, and forms within the cranium the *basilary artery*, from which the *anterior cerebelli*, the *posterior cerebri*, and *many branches about the brain*, are given off.
4. The *cervicalis profunda*.
5. The *cervicalis superficialis*.
6. The *superior intercostal*.
7. The *supra-scapular*.

As soon as the subclavian arrives at the arm-pit, it is called the *axillary artery*; and when the latter reaches the arm, it is called the *brachial*.

The *axillary artery* gives off,

1. *Four mammary arteries*.
2. The *sub-scapular*.
3. The *posterior circumflex*.
4. The *anterior circumflex*, which ramify about the shoulder-joint.

The *brachial artery* gives off,

1. *Many lateral branches*.
2. The *profunda humeri superior*.
3. The *profunda humeri inferior*.
4. The *great anastomosing artery*, which ramifies about the elbow-joint.

The *brachial artery* then divides, about the bend of the arm, into the *ulnar* and *radial arteries*, which are ramified to the ends of the fingers.

The *ulnar artery* gives off,

1. *Several recurrent branches*.
2. The *common interosseal*, of which the *dorsal ulnar*, the *palmaris profunda*, the *palmary arch*, and the *digitals*, are branches.

The *radial artery* gives off,

1. The *radial recurrent*.
2. The *superficialis volæ*, and then divides into the *palmaris profunda*, and the *digitals*.

b. The DESCENDING AORTA gives off,

In the breast,

1. The *bronchial*.
2. The *œsophageal*.
3. The *intercostals*.
4. The *inferior diaphragmatic*.

Within the abdomen,

1. The *cœliac*, which divides into three branches:
   1. The *hepatic*, from which are given off, before it reaches the liver,
      α. The *duodeno-gastric*, which sends off the *right gastro-epiploic* and the *pancreatico-duodenal*.
      β. The *pylorica superior hepatica*.
   2. The *coronaria ventriculi*.
   3. The *splenic*, which emits the *great* and *small pancreatics*, the *posterior gastric*, the *left gastro-epiploic*, and the *vasa brevia*.
2. The *superior mesenteric*.
3. The *emulgents*.
4. The *spermatics*.
5. The *inferior mesenteric*.
6. The *lumbar arteries*.

7. The *middle sacral.*

c. The aorta then bifurcates into the ILIACS, each of which divide into *external* and *internal.*

The *internal iliac*, called also *hypogastric*, gives off,

1. The *lateral sacrals.*
2. The *gluteal.*
3. The *ischiatic.*
4. The *pudica*, from which the *external hæmorrhoidal*, the *perineal*, and the *arteriæ penis* arise.
5. The *obturatory.*

The *external iliac* gives off, in the groin,

1. The *epigastric.*
2. The *circumflexa iliaca.*

It then passes under Poupart's ligament, and is called the *femoral artery;* and sends off,

1. The *profunda.*
2. The *ramus anastomoticus magnus*, which runs about the knee-joint.

Having reached the ham, where it gives off some small branches, it is termed the *popliteal.* It then divides into the *anterior* and *posterior tibial.*

The *tibialis antica* gives off,

1. The *recurrent.*
2. The *internal malleolar.*
3. The *external malleolar.*
4. The *tarsal.*
5. The *metatarsal.*
6. The *dorsalis externa halicis.*

The *posterior tibial* sends off,

1. The *nutritia tibiæ.*
2. *Many small branches.*
3. The *internal plantar.*
4. The *external plantar*, from which an arch is formed, that gives off the *digitals of the toes.*

ARTHANI'TA. (*a, æ.* f.; from αρ]ος, bread, because it is the food of swine.) The herb sow-bread. See *Cyclamen europæum.*

ARTHRE'MBOLUS. (From αρθρον, a joint, and εμϐαλλω, to impel.) An instrument for reducing luxated bones.

ARTHRI'TIC. (*Arthriticus;* from αρθριτις, the gout.) Pertaining to the gout.

ARTHRITICA HERBA. Several plants were so called, and especially the *Ægopodium podagraria.*

ARTHRI'TIS. (*is, idis.* f.; from αρθρον, a joint, because it is commonly confined to the joints.) Inflammation of a joint. Often applied to the gout, or *podagra*, and to rheumatism of a joint. See *Podagra.*

ARTHROCA'CE. (*e, eos.* f.; from αρθρον, a joint, and κακη, a disease.) An ulcer of the cavity of the bone.

ARTHRO'DIA. (*a, æ.* f.; from αρθροω, to articulate.) A species of moveable connection of bones, in which the head of one bone is received into the superficial cavity of another, so as to admit of motion in every direction, as the head of the humerus with the glenoid cavity of the scapula. See *Diarthrosis.*

ARTHRODY'NIA. (*a, æ.* f.; from αρθρον, a joint, and οδυνη, pain.) Pain in a joint. See *Rheumatismus.*

ARTHROPUO'SIS. (*is, is.* f.; from αρθρον, a joint, and πυον, pus.) *Arthropyosis.* A collection of pus in a joint. It is, however, frequently applied to other affections. See *Lumbar abscess.*

ARTHROSIA. (*a, æ.* f.; from αρθροω, to articulate: whence *arthrosis, arthritis.*) Articular inflammation.

ARTHRO'SIS. (*is, is.* f.; from αρθροω, to articulate, or join together.) Articulation.

ARTICHOKE. See *Cinara scolymus.*

Artichoke, French. See *Cinara scolymus.*

Artichoke, Jerusalem. See *Helianthus tuberosus.*

ARTICULAR. (*Articularis;* from *articulus*, a joint.) Belonging to a joint.

ARTICULARIS MORBUS. A name given to a disease which more immediately infests the joints. The *morbus articularis* is synonymous with the Greek word *arthritis*, and our gout.

ARTICULARIS VENA. A branch of the basilic vein is so called, because it passes under the joint of the shoulder.

ARTICULATION. (*Articulatio, onis.* f.; from *articulus*, a joint.) The skeleton is composed of a great number of bones, which are all so admirably constructed, and with so much affinity to each other, that the extremity of every bone is perfectly adjusted to the end of the bone with which it is connected; and this connection is termed a joint. Anatomists distinguish three kinds of articulation; the first they name *Diarthrosis;* the second, *Synarthrosis;* and the third, *Amphiarthrosis;* which see, under their respective heads.

ARTICULA'TUS. Articulate; jointed. Applied to roots, stems, leaves, &c. when they are apparently formed of distinct pieces, united as if one piece grew out of another, so as to form a jointed but connected whole.

1. In the *Radix articulata*, radicles shoot out from each joint; as in the *Oxalis acetosella*, wood sorrel.

2. The *Caulis articulata* is exemplified in the *Cactus flagelliformis*, and *Lathyrus sylvestris.*

3. The *Cactus opuntia* and *Cactus ficus indica* have articulate leaves.

4. The *Oxalis acetosella* articulate leafstalks.

ARTI'CULUS. (*us, i.* m.; diminutive of *artus*, a joint.) 1. A joint. See *Articulation.*

2. In *Botany*, this term is applied to that part of the stalk of grasses which is intercepted, or lies between two knots; and also to the knot itself.

ARTI'SCUS. (From αρτος, bread.) A troch: so called, because it is made like a little loaf.

ARTO'CREAS. (*as, atis.* n.; from

αρτος, bread, and *κρεας*, flesh.) A nourishing food, made of bread and various meats, boiled together. — *Galen.*

ARTO'GALA. (*a*, *actos.* n.; from *αρτος*, bread, and *γαλα*, milk.) A cooling food made of bread and milk. A poultice.

ARTO'MELI. (*i*, *itos.* n.; from *αρτος*, bread, and *μελι*, honey.) A cataplasm made of bread and honey. — *Galen.*

A'RUM. (*um*, *i.* n.; from the Hebrew word *jaron*, which signifies a dart: so named, because its leaves are shaped like a dart; or from *αρα*, injury.) 1. The name of a genus of plants in the Linnæan system. Class, *Gynandria;* Order, *Polyandria.*

2. The pharmacopœial name of the common arum. See *Arum maculatum.*

ARUM DRACONTIUM. See *Dracontium pertusum.*

ARUM DRACUNCULUS. The systematic name of the plant called, in English, dragon's wort, and many-leaved arum, the *Dracunculus polyphyllus*, *Colubrina dracontia*, *Serpentaria gallorum*, *Erva de Sancta Maria*, *Gigarus serpentaria*, *Arum polyphyllum.* The roots and leaves of this plant are extremely acrimonious; more so than the *Arum maculatum*, with which it agrees in medicinal virtues.

ARUM MACULATUM. The systematic name for common arum, or wake-robin. *Arum* of the pharmacopœias. *Arum — acaule; foliis hastatis, integerrimis; spadice clavato*, of Linnæus. The root is the medicinal part of this plant, which, when recent, is very acrimonious; and, upon being chewed, excites an intolerable sensation of burning and prickling in the tongue, which continues for several hours. When cut in slices, and applied to the skin, it has been known to produce blisters. This acrimony, however, is gradually lost by drying, and may be so far dissipated by the application of heat as to leave the root a bland farinaceous aliment. In this state, it has been made into a wholesome bread. It has also been prepared as starch. Its medicinal quality, therefore, resides wholly in the active volatile matter; and consequently the powdered root must lose much of its power on being long kept. Arum is certainly a powerful stimulant, and, by promoting the secretions, may be advantageously employed in cachectic and chlorotic cases in rheumatic affections, and in various other complaints of phlegmatic and torpid constitutions; but more especially in a weakened or relaxed state of the stomach, occasioned by the prevalence of viscid mucus. If this root is given in powder, great care should be taken that it be young and newly dried, when it may be used in the dose of a scruple, or more, twice a day; but in rheumatisms, and other disorders requiring the full effect of this medicine, the root should be given in a recent state, and, to cover the insupportable pungency it discovers on the tongue, Dr. Lewis advises us to administer it in the form of emulsion, with gum-arabic and spermaceti, increasing the dose from ten grains to upwards of a scruple three or four times a day. In this way, it generally occasioned a sensation of slight warmth about the stomach, and afterwards in the remoter parts; manifestly promoted perspiration, and frequently produced a plentiful sweat. Several obstinate rheumatic pains were removed by this medicine. Bergius tells us, that when taken in doses of half a scruple of the compound powder, he never knew it fail of giving relief in nervous headach, even after the most celebrated remedies had proved useless, or even added to the distress. The root answers quite as well as garlic for cataplasms, to be applied on the feet in deliriums. The London College, in their Pharmacopœia, 1788, ordered a conserve, in the proportion of half a pound of the fresh root to a pound and a half of double refined sugar, beat together in a mortar; which appears to be one of the best forms of exhibiting arum, as its virtues are destroyed by drying, and are not extracted by any menstruum. It may be given to adults in doses of a drachm.

ARUNDINACEUS. (From *arundo*, a reed.) Arundinaceous or reed-like.

ARUNDINACEÆ PLANTÆ. Arundinaceous plants. A name given to a class of plants by Ray, from their appearance.

ARUNDO. (*o*, *inis.* f.; supposed to be derived from *areo*, because it soon becomes dry.) The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia.*

ARUNDO BAMBOS. The bamboo plant. The young shoots of this plant are prepared by the natives of both Indies with vinegar, garlic, pepper, &c. into excellent pickles, which promote the appetite, and assist digestion. A substance called *Tabasheer* or *Tabachir*, which is a concretion of the liquor in the cavities of the cane, and, extracted at certain seasons, is much esteemed as a medicine by the orientalists.

ARUNDO SACCHARIFERA. The sugar-cane. See *Saccharum officinale.*

ARYTÆ'NO. Belonging to the arytænoid cartilage. Some muscles are so named because they are connected with this cartilage: they have also the terminal name of the part they go to; as *ærytæno-epiglottideus.*

ARYTÆNO-EPIGLOTTIDEUS. A muscle of the epiglottis. *Arytæno-epiglottici* of Winslow. It is composed of a number of fibres running between the arytænoid cartilage and epiglottis. It pulls the side of the epiglottis towards the external opening of the glottis; and when both act, they pull it close upon the glottis.

ARYTÆ'NOID. (*Arytænoideus*, and *Arytænoides;* from *αρυταινα*, a funnel, and *ειδος*, shape.) Funnel-shaped: applied to parts of the body which are so formed, as the arytænoid cartilages of the larynx; and

also to the muscles, vessels, nerves, &c. which are connected with the arytænoid cartilages.

ARYTÆNOID CARTILAGE. *Cartilago arytænoidea.* See *Larynx.*

ARYTÆNOIDEUS MAJOR. See *Arytænoideus transversus.*

ARYTÆNOIDEUS MINOR. See *Arytænoideus obliquus.*

ARYTÆNOIDEUS OBLIQUUS. A muscle of the glottis. *Arytænoideus minor* of Douglas. It arises from the base of one arytænoid cartilage, and crossing its fellow, is inserted near the tip of the other arytænoid cartilage. This muscle is occasionally wanting; but when present, and both muscles act, their use is to pull the arytænoid cartilages towards each other.

ARYTÆNOIDEUS TRANSVERSUS. An azygos, or single muscle of the glottis. *Arytænoideus major* of Douglas. It arises from the side of one arytænoid cartilage, from near its articulation with the cricoid to near its tip. The fibres run across, and are inserted in the same manner into the other arytænoid cartilage. Its use is to shut the glottis, by bringing the two arytænoid cartilages, with their ligaments, nearer to each other.

ASA DULCIS. An old name of gum-benjamin. See *Styrax benzoë.*

ASAFŒ'TIDA. See *Ferula assafœtida.*

ASA'PHATUM. (From α, neg. and σαφης, clear: so called by reason of their minuteness.) A cutaneous disorder, described by some as *serpigo*, or *impetigo*, or an intercutaneous itch, worm-like. When squeezed, a long thread escapes, with a black head.

ASA'PHIA. (From α, neg. and σαφης, clear.) A defect in utterance or pronunciation.

ASARABACCA. (*a, æ.* f.) See *Asarum europæum.*

A'SARUM. (*um, i.* n.; from α, neg. and σαιρω, to adorn, because it was not admitted into the ancient coronal wreaths.)

1. The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Monogynia.*

2. The pharmacopœial name of the asarabacca. See *Asarum europæum.*

ASARUM EUROPÆUM. The systematic name of the *asarabacca* of the shops: called also *Nardus montana* and *Nardus rustica. Asarum—foliis reniformibus, obtusis, binis,* of Linnæus. This plant is a native of England, but not very common. Its leaves are extremely acrid, and are occasionally used, when powdered, as a sternutatory. For this purpose the leaves, as being less acrid than the roots, are preferred, and in moderate doses, not exceeding a few grains, snuffed up the nose, for several evenings, produce a pretty large watery discharge, which continues for several days together, by which headach, toothach, ophthalmia, and some paralytic and soporific complaints have been effectually relieved.

Prior to the introduction of ipecacuanha, the leaves and root of this plant were frequently employed on account of their emetic power. The dose of the dried leaves was 20 grains: of the dried roots 10 grains. As they were occasionally violent in their operation, they have fallen into disuse.

ASARUM HYPOCISTIS. A parasitical plant which grows in warm climates, from the roots of the *Cistus.* The juice, *succus hypocistidis,* is a mild astringent, of no particular smell nor flavour It has fallen into disuse.

ASBESTOS. (*os, i.* m.; from ἀσβεστον, inextinguishable.) *Asbestus.* A mineral of which there are several varieties. Their leading property is, not being altered by ignition: hence the ancients manufactured cloth out of the fibres of asbestos, for the purpose, it is said, of wrapping up the bodies of the dead when exposed on the funeral pile.

ASCALONITES. A species of onion.

ASCA'RIDES. The plural of *ascaris.*

A'SCARIS. (*is, idis.* f.; from ασκεω, to move about, so called from its continued troublesome motion.) The name of a genus of intestinal worms, called *oxyurus* by Rudolphi. There are several species of this genus. Those which belong to the human body are:—

1. *Ascaris vermicularis,* the thread or maw worm, which is very small and slender, not exceeding half an inch in length; it inhabits the rectum.

2. *Ascaris lumbricoides,* the long and round worm, which is a foot in length, and about the breadth of a goose-quill. See *Worms.*

ASCE'NDENS. (From *ad* and *scando,* to ascend.) *Adscendens.* Ascending. Applied to muscles, leaves, stalks, &c. from their direction; as, *musculus obliquus ascendens, folium ascendens, caulis ascendens;* as the leaves of the *Geranium vitifolium,* and stem of the *Hedysarum onobrychis,* &c.

ASCENDENS OBLIQUUS. See *Obliquus internus abdominis.*

Ascending aorta. See *Aorta, ascending.*

A'SCIA. An axe or chisel. A simple bandage: so called from its shape in position. — *Galen.*

ASCIDIATUS. (From *ascidium,* a pitcher.) Ascidiate or pitcher-form: a term applied to a leaf and other parts of plants which are so formed; the *folium ascidiatum* which is seen in the *Nepenthes distillatoria,* and in *Saracenia.*

ASCIDIUM. (*um, i.* n.; from ασκιδιον, a small bottle.) A pitcher. A term introduced by Willdenow into botany to express a hollow foliaceous appendage, resembling a small pitcher. It is of rare occurrence, but has been found as a *caulinar, foliar,* and a *peduncular* or *floral,* appendage.

1. The *caulinar* belongs to the Australasian plant, *Cephalotus follicularis.*

2. The *foliar* is peculiar to the genus *Nepenthes.*

3. The *peduncular* is found in the *Surubea quianensis.*

ASCI'TES. (*es, æ.* m.; from ασκος, *utriculum*, a sack, or bottle: so called from its bottle-like protuberancy.) *Hydrops utricularius.* Dropsy of the belly.

Ascites has long been distinguished into two kinds: the one is, when the fluid collects in the cavity of the belly or peritoneum, which is the true ascites; the other, when it is collected in a cyst, as that of the ovarium, omentum, or some other organ, when it is called *Ascites saccatus.* See *Hydrometra*, &c.

Ascites is generally recognised with great facility. The symptoms are, swelling of the abdomen coming on gradually, equable when the patient is upright or laid upon the back, and following the motions of the body by gravitating to the side which is leaned upon. To the touch the swelling is somewhat tense, and has a distinct fluctuation when skilfully struck. There is generally a tumefaction of the ancles and scrotum accompanying that of the abdomen; the urine is commonly high-coloured and scanty, the breathing difficult, and those parts of the body not puffed up by the watery deposition are emaciated.

Although *acute* and *idiopathic* dropsy has been at times observed to arise from sudden checks to the circulating and lymphatic systems, ascites is most commonly known as the result of chronic inflammations of the peritoneum, or long-continued obstruction of the large vessels of the heart or abdominal viscera; with this allowance, that there appears to be what medical writers have termed an *hydropic diathesis*, or constitution, which is something more than what can be traced to local inflammations and partial influences. This exists, in some persons, prior to distinct malady, and in others seems a good deal connected with that universal debility which follows the ravages of any severe disease. The proximate cause of ascites has always been conjectured to consist in a want of equilibrium in the action of the exhalant vessels that give out the fluid which naturally lubricates the peritoneum, and of the absorbent vessels which are destined to remove it; the excess of activity on the one side, or its deficiencies on the other, causing the accumulation of serosity which marks the disease.

It is important to discriminate between true ascites of the general peritoneal cavity and ovarial dropsy, or any other encysted or partial form of a similar disease. This can only be done by tracing the history of the case, as to the first position and progress of tumour, the pre-existence of those morbid conditions which are found to dispose to dropsy, and the sympathetic *wear and tear* of the system, which is most observable in the genuine form of the disease. The *diagnosis* between dropsy and *tympanitis*, or *physconia*, is generally established by the difference in the physical signs of these three conditions; which, however, as is continually seen, may all be present in the same patient. The occurrence of dropsical symptoms during pregnancy, has likewise not unfrequently led to a wrong conclusion in passing judgment upon a case, and has shown the necessity of considering all the collateral signs and circumstances of these variously generated states.

Dropsy is always a dangerous condition, and our *prognosis* is generally unfavourable. This will, however, be a good deal modified by the age and temperament of the patient, the continuance of the disease, and the intensity of the symptoms. When occurring in delicate children, or in old age, with great prostration of strength; when accompanied by burning fever, great emaciation, livid spots on the skin, cough and dyspnœa, scanty and fetid urine, intermitting pulse, and hæmorrhage from the mouth or anus, we must expect an unfavourable result. The connection of ascites with other diseases will throw light upon its probable termination. As a consequence of enlarged and schirrous spleen, pancreas, or liver; or, as an advanced symptom of phthisis or scurvy, it must always be considered as a forerunner of death. On the other hand, dropsy suddenly coming on from the suppression of customary evacuations, from exposure to cold and fatigue, or appearing as a sequel to scarlatina or other exanthematous fevers, is by no means so serious a malady. The dropsical symptoms which, as has been mentioned, occasionally show themselves in pregnant women, are generally relieved after delivery.

The cure of ascites is necessarily a complex and variable undertaking; being adapted to the removal of causes which are manifold, and to the alleviation of symptoms which will not at once yield to simple medication. In more acute cases, with increased action of the heart, and with other signs of deep-seated inflammation, the abstraction of blood has been recommended: but, without entirely discountenancing the employment of the lancet, it must be considered that dropsy, and in particular peritoneal dropsy, rarely happens in the early stage of inflammations, but more commonly occurs in such conditions of the system as are found to bear ill any evacuation of blood. Practitioners have in general trusted, in preference, to emetics, diuretics, and purgatives. Emetics, in the commencement of the treatment of dropsy, are still found useful, but they by no means occupy that share in the estimation of medical men which they formerly claimed. The employment of diuretics seems naturally suggested by that deficiency of urinary excretion which is a frequent concomitant of hydropic disorder. The latest researches into the pathological anatomy of dropsy have shown the frequency of disease of the kidneys in ascites;

and the restoration of their function is never complete while this malady continues.

The employment of purgatives, and especially the *hydrogogues*, when they are not too weakening, is recommended by continual experience. The alternation of diuretics with purgatives, so that the full operation of both may be continued without overpowering the patient, has frequently promoted the most useful evacuation of fluid. Many practitioners have joined chalybeates with diuretic medicines; and it has been stated as a clinical truth, without, however, any attempt at explanation, that the effect upon the kidneys was generally greater in consequence of this combination. In other instances, the use of tonics and chalybeates has been advised, as if to counteract the debilitating effect of hydrogogue medicines. Mercury is a remedy so generally used in dropsy, and so frequently useful, that it calls for a particular notice: it is employed as much to remove any enlargement or obstruction of the viscera which may appear to originate the dropsical tendency, as it is for the purpose of stimulating the absorbents, and equalising the circulation. When the object is to derive all the probable or possible advantages of a mercurial course, it is common, by daily doses, or by frictions, to introduce this medicine till it affect the mouth for a considerable time; and again, mercury is found in various ways serviceable as an addition to other purgatives, or in combination with squills, digitalis, and various diuretics.

When the collection of water in the peritoneal cavities has become so great as to distend the parietes to a painful degree, when difficulty of breathing and obstruction to other functions appear to arise from this same cause, recourse must be had to tapping, or *paracentesis abdominis*. This operation is performed rather to alleviate the urgency of symptoms, than as promising to ensure the cure of dropsy, and it has consequently been repeated as often as sixty times in the same person. The proper time will be indicated by the patient's feelings; but the greatest attention of the medical man should be given to the period immediately after tapping, as any advantage to be derived from the evacuation will depend upon the judicious management of the subsequent symptoms. These are generally such as mark great exhaustion; but care must be taken not on that account to excite or stimulate to excess, but, after allowing the system to rally, any suspended method of treatment which may have been doing good should be resumed: the evacuation of the fluid being merely incidental, and making no essential alteration in the morbid condition of the patient.

The diet of dropsical patients should be nourishing, but light; and permission to drink freely of cooling and acidulated beverages, notwithstanding a vulgar prejudice to the contrary, may be safely given. See *Anasarca* and *Dropsy*.

ASCLEPI'ADES. A celebrated physician, born at Prusa, in Bithynia, who flourished somewhat before the time of Pompey. He supposed disease to arise from the motion of the particles of the blood and other fluids being obstructed by the straitness of the vessels; whence pain, fever, &c. None of his works remain at present. He is said to have pledged his reputation on the preservation of his own health, which he retained to a great age, and died at length from a fall.

ASCLE'PIAS. (*as, ădis.* f.; so named after its discoverer: or from *Æsculapius*, the god of medicine.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

Asclepias gigantea. This plant, called in Hindostan *Nudar*, is a native of the East. Has been successfully employed in the cure of elephantiasis.

Asclepias syriaca. Syrian dog's bane. This plant is particularly poisonous to dogs, and also to the human species. Boiling appears to destroy the poison in the young shoots, which are then said to be esculent, and flavoured like asparagus.

Asclepias vincetoxicum. Swallow wort; tame poison. The systematic name for the *Vincetoxicum* of the pharmacopœias; called also *Hermidinaria*, and *Asclepias*. The root of this plant smells, when fresh, somewhat of valerian; chewed, it imparts at first a considerable sweetness, which is soon succeeded by an unpleasant subacrid bitterness. It is given in some countries in the cure of glandular obstructions.

Ascle'pios. (From *Asclepias*, its inventor.) A dried smegma and collyrium described by Galen.

Asco'ma. (From ασκος, a bottle.) The eminence of the pubes at the years of maturity, so called from its shape.

Ascyroideæ. *Ascyroideus.* A name given by Scopoli to a class of plants which resemble the *Ascyrum*, St. Peter's wort.

ASCYRUM. (Ασκυρον. *um, i.* n.) Most probably a species of St. John's wort, the *Androsemum*.

A'sef. A pustule like a millet seed.

A'segon. *Asegen. Asogen.* Dragon's blood. See *Calamus rotang*.

ASE'LLIUS, Gaspar, of Cremona, born about the year 1580, taught anatomy at Paris with great reputation. In 1622, he discovered the lacteals in a dog opened soon after a meal, and noticed their valves, but supposed they went to the liver. These vessels, he candidly observes, had been mentioned by some of the earliest medical writers, but not described, nor their functions stated; and not being noticed by any modern anatomist previously, the discovery is properly attributed to him.

ASH. See *Fraxinus excelsior*.

Ash-coloured ground liverwort. See *Lichen caninus.*

Asia'ticum balsamum. Balm of Gilead.

ASINA. (*a, æ.* f.) A female ass.

Asini'num lac. Ass's milk. See *Milk.*

A'SINUS. (*us, i.* m.) The ass. A species of the genus *Equus.* Its milk is preferred to cow's and other kinds of milk, in phthisical cases, and where the stomach is weak; as containing less oleaginous particles, and being more easily converted into chyle. See *Milk, ass's.*

ASITIA. (*a, æ.* f.; from α, priv. and σιτος, food.) Without food.

ASI'TUS. (From α, neg. and σιτος, food.) One who takes no food, for want of appetite.

A'sjogam. (Indian.) A tree growing in Malabar and the East Indies, the juice of which is used against the colic.

ASO'DES. (From αδω, to nauseate.) *Assodes.* A nausea or loathing, or a fever with much sense of heat and nausea. — *Aretæus.*

Aspadia'lis. A suppression of urine from an imperforated urethra.

Aspa'lathum. See *Lignum aloës.*

ASPALATHUS. (*us, i.* f.; from α, and σπαω, because the thorns were not easily drawn out of the wounds they made.) The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.*

Aspalathus canariensis. The systematic name of the rose-wood tree. *Lignum rhodium* of the ancients. An essential oil is obtained from the roots, which is used principally as a perfume; but is an excellent cordial and carminative given internally. The best preparation is a tincture, made by macerating four ounces of the wood in a pint of rectified spirit.

ASPARAGIN. A peculiar vegetable principle which spontaneously forms in asparagus juice that has been evaporated to the consistence of syrup. It is found crystallised, and of a white colour, in the form of rhomboidal prisms, hard and brittle, having a cool and slightly nauseous taste. They dissolve in hot water, but sparingly in cold water, and not at all in alkohol. On being heated, they swell and emit penetrating vapours, which affect the eyes and nose like wood-smoke. Their solution does not change vegetable blues; nor is it affected by hydrosulphuret of potash, oxalate of ammonia, acetate of lead, or infusion of galls. Lime disengages ammonia from it; though none is evolved by triturating it with potash. The asparagus juice should be first heated to coagulate the albumen, then filtered and left to spontaneous evaporation for 15 or 20 days. Along with the asparagin crystals, others in needles of little consistency appear analogous to *mannite,* from which the first can be easily picked out. — *Vauquelin and Robiquet. Annales de Chimie,* vol. lv. and *Nicholson's Journal,* 15.

ASPA'RAGUS. (*us, i.* m.; Ασπαραγος, a young shoot, before it unfolds its leaves.) 1. The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia.* Asparagus.

2. The pharmacopœial name of the asparagus. See *Asparagus officinalis.*

Asparagus officinalis. The systematic name of the asparagus. The root of this plant has been esteemed as a diuretic. It is mostly employed as a food; but it contains very little nourishment. A peculiar vegetable principle, called asparagin, has been found in this plant. See *Asparagin.*

Aspa'sia. (From α, for αμα, together, and σπαω, to draw.) A constrictive medicine for the pudendum muliebre. *Capivac.*

ASPER. Rough. Applied to parts which are rough; as *linea aspera,* &c.

In the language of botany, *scaber* and *asper* are used synonymously: thus the *caulis scaber* and *asper* is when it is thickly covered with papillæ, which are not visible, but can be felt when running the finger along it; as in *Galium aperine, Lithospermum arvense, Centaurea nigra,* &c.

Aspera arteria. (Called *aspera* from the inequality of its cartilages.) See *Trachea.*

Aspergo. To sprinkle dry powders over the body. See *Catapasma.*

ASPERIFO'LIUS. (From *asper,* rough; and *folius,* a leaf.) Rough-leaved. Many plants have rough leaves, and therefore the term is applied to a class and an order of plants by Boerhaave, Ray, Linnæus, &c.

ASPERMUS. (*us, i.* n.; from α, priv. and σπερμα, a seed.) Without seed.

Aspersio. Applied to the sprinkling the body with dry powders. See *Catapasma.*

ASPE'RULA. (*a, æ.* f.; a diminutive of *asper,* the seeds being rough.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order *Monogynia.*

Asperula odorata. The systematic name for the officinal *matrisylva.* Woodruff. A low umbelliferous plant, growing wild in woods and copses, and flowering in May. It hath an agreeable odour, which is much improved by moderate drying; the taste is a little austere; it imparts its flavour to vinous liquors, and is commended as a cordial and deobstruent remedy.

Asphalitis. An obsolete name of the fifth vertebra of the loins.

Asphalti'tis. 1. A kind of trefoil.

2. The last vertebra of the loins.

ASPHALTUM. (*um, i.* n.) *Asphaltus.* This substance, likewise called *Bitumen judaicum,* or Jews' pitch, is a smooth, hard, brittle, black, or brown substance, which breaks with a polish, melts easily when heated, and when pure burns without leaving any ashes. It is found in a soft or liquid state

on the surface of the Dead Sea, but by age grows dry and hard. The same kind of bitumen is likewise found in the earth in other parts of the world; in China; America, particularly in the island of Trinidad; and some parts of Europe, as the Carpathian hills, France, Neufchâtel, &c.

According to Neumann, the asphaltum of the shops is a very different compound from the native bitumen, and varies of course in its properties, according to the nature of the ingredients made use of in forming it. On this account, and probably from other reasons, the use of asphaltum, as an article of the materia medica, is totally laid aside.

The Egyptians used asphaltum in embalming, under the name of mumia mineralis, for which it is well adapted. It was used for mortar at Babylon.

ASPHO'DELUS. (*us, i.* m.; from ασπις, a serpent, and δειλος, fearful, because it destroys the venom of serpents; or from σποδελος, ashes, because it was formerly sown upon the graves of the dead.) 1. The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia*.

2. The pharmacopœial name of the daffodil. See *Asphodelus ramosus*.

Asphodelus ramosus. The systematic name for the officinal, or branched asphodel. *Asphodelus: — caule nudo; foliis enciformibus, carinatis, lævibus,* of Linnæus. The plant was formerly supposed to be efficacious in the cure of sordidu ulcers. It is now wholly laid aside.

ASPHY'XIA. (*a, æ.* f.; from α, priv. and σφυξις, a pulse.) Asphyxy, which, strictly speaking, is that state of the body during life in which the pulsation of the heart and arteries cannot be perceived. But asphyxy is mostly applied to that lifeless state produced by accidental causes, and to which the life may be restored. In this state there is a total suspension of the powers of the mind and body.

Asphyxy offers several varieties from a difference of occasional cause, which produces a like diversity in a few of its symptoms: —

1. *Asphyxia suffocationis.* Asphyxy, from suffocation, produced by hanging or drowning: countenance turgid and livid.

2. ——— *mephytica.* Choke-damp; produced by inhaling carbonic acid, or some other irrespirable exhalation: countenance pallid.

3. ——— *electrica.* Electrical asphyxy; produced by a stroke of lightning or electricity: limbs flexible, countenance pale, blood uncoagulable.

4. ——— *algida.* Frost-bitten asphyxy; produced by intense cold: limbs rigid, countenance pale and shrivelled.

In the first variety, from hanging or drowning, the immediate cause is suffocation, or a total obstruction to the respiration. The face is turgid and suffused with livid blood; and the general symptoms are given with much truth and emphasis by Shakspeare, in Suffolk's description of the body of Henry VI. The countenance has a semblance of apoplexy, as though there was a congestion of blood in the head, to which the application of the rope to the neck, in the case of hanging, affords some countenance. And hence, many eminent writers of earlier times referred suffocation from both these causes to apoplexy; while Cullen made it as a subdivision of this last disease. But in apoplexy there is always oppressive, generally stertorous sleep, which never exists in asphyxy, unless, indeed, the exciting cause has only partially operated, and produced a different disease, or apoplexy instead of asphyxy; affording a proof that different maladies may issue from the same cause, according to the degree of its violence, or perhaps the accidental condition or constitution of the patient. In asphyxy, wherever we can trace any sign of diseased action, the lungs are chiefly affected; in apoplexy, the brain. In the first, the irritability of the system is sudden and total; in the second, it is progressive and partial. In the former, the patient is often restored after all the common symptoms of death have, for some minutes, perhaps for nearly an hour, fixed upon him. In genuine apoplexy this is never the case. The appearances on the dissection of drowned animals are very accurately given by Dr. Curry, and precisely coincide with the distinction here offered. The vessels of the brain were found, in every instance, free from distension, or any other morbid condition, while the lungs were overloaded.

The immediate cause of asphyxy, or, in other words, an occlusion of the larynx, may be partial, and, in such case, give a tendency to apoplectic symptoms: and in effect, whereever the larynx or glottis is only imperfectly closed, we meet with such a tendency. And it is on this account that the faces of those who die by hanging is more generally turgid, and the muscles give proof of more convulsive action, than the face of those who die by drowning: for in the former case, either from a rigidity in the coats of the larynx, or from the rope not being properly applied, a small current of air is often capable of moving backward and forward for some time, and particularly in suicides, many of whom suffer much before they die in consequence of applying the rope very bunglingly, and whose cheeks, lips, eyes, and tongue are peculiarly turgid and prominent. The reason of this may be partly collected from the state of the heart in the act of dying. The immediate cause of the contraction or systole of the heart has not been satisfactorily settled; but we may safely affirm that a part of this cause, if not the whole, depends on the

change, whatever that change consists in, which takes place in the blood during its ventilation in the lungs, by which it is rendered more active and stimulant: for as this change gradually subsides in those who are in the act of dying, the heart contracts more feebly; and when, with the last expiration of air, it ceases altogether, the heart as instantly contracts no more; the consequence of which is that the lungs, the heart, and the larger vessels in the vicinity of the heart, are usually found filled with blood, the smaller vessels empty, and the general surface of the body pale. Now whatever has a power of instantaneously cutting off inspiration must necessarily produce the same effect: and hence, as we have already observed, the gorged state of the lungs, and the livid hue of the countenance, in most cases of suffocation by drowning: and consequently the only reason why the lungs are not quite so full, and the countenance more turgid in most cases of suffocation by hanging, is that from the inexpert manner in which the rope is usually applied, and the necessary admission of a certain portion of air to the lungs, the heart is, for some time, able to contract feebly, and to keep up a feeble circulation, while the pressure of the rope on the jugulars prevents a ready return of the blood from the head, and consequently accumulates it in all the vessels of the face; and hence, the more inexpertly this operation is performed, the more turgid these vessels must become, and the more apoplectic the general appearance.

It is the same with persons who are exposed to the action of carbonic acid gas, or other mephitic vapours, so far lowered or intermixed with respirable air as to render them incapable of destroying life instantly; in which cases there has not only been sometimes a feeble prolongation of the circulation, but even a stertorous breathing, and many other symptoms of apoplexy, of which we shall have to speak further under the next variety.

There are some of the narcotic poisons that seem to act in the same manner. Given in a full dose they destroy the life instantly, but in an under dose the circulation is continued feebly, and apoplectic symptoms ensue. Thus, according to Mr. Brodie's experiments, infusion of tobacco, *when injected into the intestines,* and the *Upas antiar*, when applied to a wound, have a power of rendering the heart insensible to the stimulus of the blood, and thus suddenly stopping the circulation: while alkohol, the juice of the leaves of aconite, the woorara, essential oil of almonds, whether applied to wounded surfaces or taken internally, produce death by destroying the functions of the brain, while they act only indirectly on the circulation.

In like manner, De Haen gives one instance of apoplectic signs discovered on the dissection of a criminal who had been publicly executed by hanging, in which the pia mater was found unusually florid, the vessels of the brain turgid, and some degree of serous effusion had taken place under the tunica arachnoides; but in this case, he found also that the lungs were equally overloaded, and that the rope had not pressed upon the trachea, but upon the part lying between the scutiform cartilage and the os hyoides, and consequently that the compression had been imperfect.

But, except in cases where the occlusion of the trachea has not been entire, the patient, who suffers from asphyxy produced by hanging, is as void of apoplectic symptoms as he who suffers the same disease from drowning. In the dogs hanged by way of experiment by De Haen, and cut down as soon as they were dead; and in those drowned by Dr. Goodwin, there was an equal absence of apoplectic signs: and, in truth, wherever an executioner does his duty completely, the death is too sudden to allow of accumulation as its cause. By the double effect, however, of stopping the circulation and obstructing the passage of the air, the public punishment of hanging, when dexterously conducted, is probably attended with very little pain. It has been said of late, that another, and indeed a chief cause of the suddenness of the death hereby produced, is to be found in a luxation of one of the upper vertebræ. Such an effect may take place at times upon our public scaffolds, on which the hardened criminal jumps from the gallows to produce a rapid result, but it is rarely met with in the private retreat of the more timid suicide.

That a total obstruction to the respiration, moreover, is the chief cause of death on hanging, is clear from the cases in which the asphyxy has been cured by inflation of the lungs after the unhappy wretch has been cut down: and from one or two instances in which the individual has escaped death from an ossification of the trachea; of which we have a few curious examples in Bonet and Fallopius; and more particularly from the case of Inetta de Balsham, stated by Dr. Plott in his Natural History of Staffordshire, who having been hung, in the reign of Henry VI., according to the due form of law, was cut down alive, after suspension from nine o'clock on Monday till later than sunrise on the ensuing Tuesday; in consequence of which she received the king's pardon. Dr. Plott ascribes this extraordinary escape, and with great reason, to an ossification of the larynx: — "She could not," says he, "be hanged, upon account that the larynx or upper part of her wind-pipe was turned to bone."

It has hence been occasionally proposed to save a criminal condemned to the gallows by introducing a silver canula into the tra-

chea. It is commonly reported that such an attempt was in agitation among the friends of the unfortunate Dr. Dodd, but we have no reason to believe that it was then, or ever has been actually tried.

The following experiment, however, as related by Dr. Curry, is almost demonstrative as to the immediate organ through which the attack of death is received in hanging. It was performed at Edinburgh many years ago, by the senior Dr. Munro, and, in the language of Dr. Curry, "clearly proves that the exclusion of air from the lungs is the immediate cause of death. A dog was suspended by the neck with a cord; an opening having been previously made in the windpipe, below the place where the cord was applied, so as to admit air into the lungs. In this state he was allowed to hang for three quarters of an hour, during which time both the circulation and breathing went on. He was then taken down without appearing to have suffered much from the experiment. The cord was now shifted from above to below the opening made into the windpipe, so as to prevent the ingress of air into the lungs, and the animal being again suspended, he was completely dead in a few minutes."

Asphyxy from *submersion* has been very generally accounted for, even by many who have regarded it as an effect of suffocation, by supposing the suffocation produced by a rush of the water into the cavity of the lungs, which prevents the access of air, and consequently of respiration. This idea, first perhaps advanced by Galen, has been in modern times adopted by Haller, Goodwin, Ponteau, and, indeed, most physiologists, and attempted to be supported by various experiments on drowned cats. It is now well ascertained, however, that in many cases of death from drowning, not a drop of water enters into the lungs; that where it does enter, the quantity is, for the most part, very small; and that, whether small or large, it passes the trachea after death instead of before it, and consequently cannot be a cause of death.

The immediate cause, as in the case of suspension, is suffocation. The glottis is extremely irritable; the access of the surrounding water produces a rigid or entastic spasm upon its muscles; and the rima is as completely closed against the entrance of air as in the case of a cord round the throat. And hence the suffocation often produced by a very small substance of any other kind accidentally thrust into or stimulating its aperture; as a minute crust of bread, a hair or blade of grass, a peach or even a grapestone; to which last Anacreon is well known to have fallen a victim.

How long the living principle may, under these circumstances, remain attached to the animal frame, and afford a chance of recovery, is not ascertained with any degree of accuracy, even in the present day; and the answer to the question must, in a considerable measure, depend upon the degree of irritability, or perhaps the idiosyncrasy, of the individual.

It has been known, however, from a very early age, that torpitude from drowning may be induced and continue for some minutes without much danger, since this was a common practice among the Greeks and Romans for the cure of hydrophobia, and was carried by Van Helmont so far that he would not suffer the individual to be raised from under the water till the psalm *Miserere* had been solemnly chanted, which was the measure of time he allowed. If the submersion have not exceeded five minutes, and no blow against a stone or other violence have coincided, persons will usually be found to recover without much difficulty. After a quarter of an hour, recovery is not common, and after twenty minutes or half an hour, it is nearly hopeless.

The first report of the establishment for the recovery of drowned persons, at Paris, divides the cases that had occurred to it into three classes; the first of which includes those that were restored to life, and comprehends twenty-three instances. Of these one recovered after having been three quarters of an hour under water; four after having been half an hour, and three after a quarter of an hour; the rest after a still shorter period. Of twelve dogs, drowned by De Haen for the purpose of experiment, not a single one was recovered, though only confined under water for a few minutes. It is very possible, however, that in these cases the force necessary to keep them submerged may have considerably added to the extent of the mortality. Among mankind, where no such force is applied, this eminent physiologist conceives that one in sixteen is no unfavourable average of the proportion that recover.

There are cases, indeed, on record, of recovery from drowning after a submersion of some hours; but these are rare and wonderful, and some of them altogether incredible; but from all which, however, we may at least learn the useful lesson of the necessity of redoubling our exertions when called upon for medical aid, and of not despairing very early.

Unfortunately we have no means of determining whether the vital principle lies latent in the body or has utterly dropped its connection. Want of heat is no more to be relied on than cessation of the pulse or of breathing: for while in submersion, heat, in consequence of its rapid absorption by the surrounding elements, is one of the first properties of life that disappears, whether the patient recover or not: in death, from convulsions, and various other sudden causes, it often continues for hours, and sometimes even for days after the event, cheating the

bystanders with an empty and unfounded hope of a restoration never to take place.

In attempting a *cure* of suffocation by submersion, the two grand means by which we are to operate are those of warmth and inflation of the lungs. The body should be quietly conveyed to a warm and dry situation, and rubbed all over with moderate stimulants, as diluted flower of mustard, or the warmer balsams; while the nostrils are plied with volatile ammonia, and the eyes exposed to a strong light. But a restoration of the action of the lungs is chiefly to be aimed at; and for this purpose a full expiration of warm air from the lips of a bystander should be repeatedly forced into the patient's mouth, and his nostrils held close to prevent its escape by that channel. Inflation may also be attempted by a pair of common bellows; or, which is far better if it can be readily procured, by a pair of bellows communicating with a pipe introduced into the larynx, or, as some have recommended, into an aperture made between the rings of the trachea. Stimulating injections of acrid purgatives, of camphire, ammonia, and brandy, or other spirits, have often been introduced with success into the rectum, and sometimes injections of warm air alone, and it would be better that the air introduced into the lungs should be also moderately warm. Besides this active process, it may be possible to convey some warm and cordial stimulant, as volatile alkali, or the compound spirit of lavender, into the stomach by means of a canula; or what may probably in this case answer better, by a piece of sponge, impregnated with one of these, fixed to the end of a small rod of whalebone: for the sides of the stomach may be, so to speak, mopped round by the sponge thus charged, and stimulated in every direction. In the Berlin Translations is recommended the use of a *ventriculi excutia*, or stomach-brush, to produce internal friction in the same manner; but the stomach-mop, prepared as above, will be found a more serviceable contrivance.

There are no diseases in which the internal use of phosphorus seems to promise more success. The German physicians have employed it very generally in the last ebb of typhus fevers, in apparent death from convulsion, and in most cases in which the nervous fluid seems to be suddenly discharged as by an explosion, or not secreted at all, and they have often employed it with success. It is one of the most powerful stimulants we know, and in asphyxy should be given to the amount of two or three grains for a dose, dissolved in æther.

Venesection, and especially that of the jugular vein, has been strenuously recommended by physicians of high authority; and wherever there is reason to believe that the drowning has followed upon a sudden fit of apoplexy, the recommendation is rational enough, provided it can be practised with effect. But, commonly speaking, it is advice to no purpose; for the blood will not flow: and, in other cases, if it would, such depletion, we have reason to believe, would do more injury by weakening, than good by removing what is erroneously supposed to be congestion. It may occasionally, perhaps, be serviceable as soon as the living powers begin to show themselves, but it is rarely to be tried in the first instance.

Returning life is first usually discoverable by the symptoms of sighing, gasping, twitching, or subsultus, slight palpitation or pulsation of the heart; in effect, by a weak or clonic action in most of the organs. Our efforts should here be redoubled; for the feeble spark still requires to be solicited and nourished into a permanent flame, and has often disappeared from a relaxation of labour. A spoonful or two of warm wine, or wine and water, should now be given by the mouth, as soon as the power of swallowing is sufficiently restored; which should be shortly succeeded by a little light, warm, and nourishing food of any kind, with gently laxative clysters, a well-heated bed, and perfect tranquillity.

The general principles of the remedial treatment here recommended, apply to most of the other varieties under which asphyxy, or suspended animation, is to be traced: and the reader who is desirous of following the operative plan into a still minuter detail, will do well to consult Dr. Cullen's letter to Lord Cathcart, the president of the Board of Police in Scotland, concerning the recovery of persons drowned and seemingly dead; an able extract of which is given in the Medical Commentaries of Edinburgh. We may observe, however, that in attempting the recovery of those who have been hung, and particularly those who have inexpertly hung themselves, bleeding from the jugulars may be more frequently found necessary than in the drowned, since in the former, as we have very fully observed above, there is a greater tendency to apoplectic symptoms than in the latter; yet even here the quantity abstracted needs not be large.

In asphyxy from an *inhalation of irrespirable gases*, death, in many cases, takes place instantaneously; and consequently, for reasons already advanced, the general surface of the body, and even the countenance itself, is pale. Yet as the gas is often in some degree diluted with atmospheric air, the circulation, and even the breathing, are occasionally continued for some time in a feeble and imperfect state, and the asphyxy is united with symptoms of apoplexy, or genuine apoplexy takes place in its stead. In Cornwall and other mining regions, these gases are vulgarly called *damps*, from the German *dampff*, "a vapour or exhalation."

The direct effect of such gases, when in a

concentrated state, is utterly and instantaneously to destroy the irritability and sensibility of the nervous system; of which we have perpetual examples occurring in persons who incautiously descend foul beer-casks, or the shafts of mines. By what means, however, such exhalations, when they have penetrated the lungs, become so rapidly communicated to the nervous system as to prove instantly destructive, we do not seem to be very well informed. Absorption would be the most ready way of accounting for it; but it is an hypothesis that can hardly be allowed. In the case of hanging or drowning, it does not seem to be owing to a direct want of irritability that the heart ceases instantly to contract, but, as we have already remarked, to its being deprived of the necessary stimulus which is no longer afforded by the lungs, however they may act in providing it. Yet in the present case there seems to be not only a cessation of action, for want of a proper stimulus, but a total abstraction of both sensific and motific power: and this as completely in one part of the frame as in another.

The gases of the description before us that are found most fatal, are, the carbonic acid, hydrogene, and several of a more compound kind, which are thrown forth from putrefying animal and vegetable substances, and especially from cemeteries, on opening fresh graves, in which the process of decomposition is proceeding rapidly, and the concentrated effluvium bursts forth with an intolerable stench. Of the powerful effects of this last exhalation, Fourcroy has furnished us with a very particular and striking account, from the narration of grave-diggers examined for the purpose: from which it appears, that those who are immediately hanging over a corpse, whose abdomen is accidentally struck into by a pick-axe, often fall down instantly in a state of senselessness and apparent death, while persons who happen to be at a little distance, and receive the exhalation in a form diluted with atmospheric air, are attacked with nausea, vertigo, faintness, and tremors, which continue for some hours.

The most common of these gases is the carbonic acid, which is chiefly found in the guise of a torpifying vapour in close rooms where charcoal has been burnt, at the bottom of large beer casks, or of wells, and in many natural caverns in the earth's surface. Its weight prevents it from escaping readily, even when there is an accession of atmospheric air; and its want of smell, when pure, prevents it from being detected otherwise than by its effects. As it will not support flame, the common and easiest test, where it is suspected to exist, is that of a lighted candle, which is well known to be extinguished immediately, if this gas be present in a quantity sufficient to be injurious to respiration.

Azote and hydrogene, when pure, have probably as little smell as carbonic acid gas; but they are generally combined with other gases, sulphur, carbon, or phosphorus. The first, formerly denominated phlogistic air, and sometimes mofette, is thrown forth largely during the decomposition of animal matter, and in a small degree during that of vegetable matter. Combined with hydrogene it forms ammonia; with oxygene, nitric acid. Fourcroy asserts that it possesses a peculiar and distinct odour, resembling that of fishes just beginning to putrefy: but this is probably at all times produced by combination with other materials. It seems chiefly concerned in giving the greenish colour to parts, and especially muscular parts, in a putrid state. In some gases of this kind a candle will burn freely.

Hydrogene issues also from fecal matter, and, in combination with sulphur, phosphorus, and carbon, produces the chief part of the nauseating and putrid stench thrown forth from decomposing animal and vegetable substances. It is emitted in a much purer state from the sides of coal and metallic mines, and often exists in considerable abundance without being perceived by the nostrils. If mixed with an equal proportion of oxygene, it may be breathed for about an hour without any great inconvenience. If inhaled beyond this time, or in a more concentrated form, it has a great tendency to occasion the effects we have just noticed, lower the irritability of the animal frame, and induce stupor or an inclination to sleep.

The fumes of mercury, lead, and some other metallic substances, when highly concentrated, seem to operate not very dissimilarly to those of charcoal, and give a check to the mobility of the nervous power at once.

The fumes of charcoal are generally inhaled in a diluted form, but they are still highly deleterious, and produce asphyxy more or less complete, according to their degree of concentration, and in some cases according to the strength or weakness of frame of those who are exposed to them. We have a striking illustration of this in the case of two persons, communicated by Dr. Babington to the Medico-Chirurgical Society, who had gone to bed in a room in which a charcoal fire was kept up through the whole of the night, with whose gas the surrounding atmosphere was strongly impregnated. According to the principle we have endeavoured to establish, we ought here, from the dilution of the vapour, to expect that whatever tendency there might be to asphyxy would be united with a tendency to apoplexy: and such we find to have been the fact; for, of these two persons, the younger and less vigorous, a boy of thirteen, died apparently during his sleep, and without commotion; while the elder and more robust, a man of thirty-eight, was found, upon being called in the morning between six and seven, in an apoplectic state,

with a swollen projecting tongue, suffused and prominent eyes, and laborious breathing.

The patient, if any degree of sensibility remain, should in this variety be freely exposed to the open air, instead of to a heated atmosphere, as in the preceding; and, if he can swallow, acidulated liquids should be given him. If insensible, cold water should be dashed on his face; strong vinegar, and especially aromatic vinegar, be rubbed about his nostrils, and held under them, and stimulating clysters be injected, as recommended under the first variety. The lungs should be inflated with the warm breath of a healthy man, or, which is better, with oxygene gas.

A proper use of voltaic electricity is also, in many instances, found highly serviceable as a nervous stimulant. No advantage, however, is likely to accrue from passing the electric aura across the chest, directly through the heart and lungs, which is a common practice. The fluid should be transmitted along the channel of the nerves, from the seat of the phrenic nerve in the neck, to the seat of the diaphragm, or that of the par vagum and great sympathetic nerve, immediately under the sterno-mastoid muscle, where they lie in a common sheath, and send forth branches to the heart. In Dr. Babington's case, the application of voltaic electricity surprisingly increased the power of the muscles of respiration, but appeared rather to diminish the action of the heart. It was hence used alternately with a forcible inhalation of oxygene gas and various external stimulants. Venesection was tried, but does not seem to have been beneficial. The man recovered in a few days.

Portal recommends a division of the jugular vein; but the blood will rarely flow from any vein, and is still more rarely succeeded by any advantage, even where it is obtained: and if every other remedy fail, he advises bronchotomy, and a scarification of the feet and hands.

The sprinkling or dashing of water upon the body seems to be useful on two accounts; first, from having a tendency to rouse the vessels on the surface to contract; and next as affording an opportunity for a disengagement of oxygene.

In the *third*, or *electric variety*, the whole system appears to be not so much rendered inirritable to stimulants, as to be suddenly exhausted of its entire stock of nervous power; like a Leyden phial upon an application of the discharging rod: in consequence of which the limbs are flexible, the countenance pale, and the blood uncoagulable. The mode in which the electricity is communicated is of little importance; for, if sufficiently powerful for the purpose, real or apparent death is instantaneously produced, whether the stroke flow from lightning, an electric battery, or a voltaic trough; and every organ is equally affected and emptied.

Upon plants, on the contrary, we often find a stroke of lightning, of the same intensity, occasion very different effects in different kinds of branches of the same plant, in consequence of the variety they exhibit as conducting powers. Upon some, it descends without mischief; in others, it exhausts itself on particular parts, which are withered, as though attacked by a hemiplegia. In the common birch, it never runs along the stem, but confines its stroke to the top alone, beating off the boughs in every direction.

In animal life, however, there is also a difference of effect, but only in proportion to the degree of intensity of the electric power that attacks the system; and it is curious to observe the nature of this effect. Small doses of electricity prove a powerful stimulus to the nervous function, increase the flow of sensorial fluid, and augment the irritability of the muscles; while a violent shock, as we have just seen, exhausts the nervous system instantaneously, carries off the entire stock from the animal fabric, and leaves the muscular fibres flaccid and flagging. This singular result is extended to the blood, and extended to it in both cases: for its coagulability, or the firmness of its texture, is increased by the application of small doses of electricity, while the shock of lightning, which renders the muscles lax and uncontracted, renders the blood loose and uncoagulable. It is to this variety of effect that Mr. John Hunter makes a powerful, and certainly a very impressive appeal, in proof that the blood, though a fluid, is actuated by the same living principle as the muscular fibres.

The general principle of medical treatment has been laid down under the first variety. Stimulants of the most active kind should be resorted to without loss of time: but of all stimulants that of electricity, or voltaism, seems to be specially called for in the present modification of asphyxy. It has not been tried to any great extent, in the variety before us, on the human subject, but Abildgaard, in the Transactions of the Copenhagen Medical Society, has related a few experiments on other animals that are well worthy of attention, and were found highly beneficial. The animals chiefly selected were from the poultry-yard, and consisted of cocks and hens. These were first rendered asphyctic, or apparently dead, by a strong shock of electricity passed through the head; and afterwards recovered by another shock passed through from the chest to the back, the animal instantly walking about as if nothing had happened. M. Abildgaard does not say what interval he allowed between the shocks thus administered: but he observed that where no second shock was employed, the apparent was converted into real death; for the animal, in no instance, showed any tokens of resuscitation; and he observed farther, that if the second shock were thrown

through the head like the first, instead of from the chest to the back, the same lifelessness continued, and no benefit whatever was produced.

In *frost-bitten asphyxy*, or that produced by intense cold, the limbs are rigid, and the countenance pale and shrivelled. This variety is always preceded by an insurmountable desire to sleep, which the utmost exertion of the will is unable to overpower. The sleep is, in most cases fatal, and becomes the sleep of death. Captain Cook, in the account he has given of his first voyage round the world, has strikingly exemplified this remark in the case of Dr. Solander and Mr. (afterwards Sir Joseph) Banks. "Dr. Solander," says he, "who had more than once crossed the mountains which divide Sweden from Norway, well knew that extreme cold, especially when joined with fatigue, produces a torpor and sleepiness that are almost irresistible: he therefore conjured the company to keep moving, whatever pain it might cost them. 'Whoever sits down,' said he, 'will sleep, and whoever sleeps will wake no more.' Dr. Solander himself was the first who found the inclination, against which he had warned others, irresistible, and insisted upon being suffered to lie down. He soon fell into a profound sleep, from which, however, by the exertion of Mr. Banks, he was awakened. Several others of the party very narrowly escaped, and two of them slept, and perished from the cold."

For these symptoms, and their effects, it is easy to account. Cold, so long as the living power is capable of producing a reaction, is one of the most strenuous tonics we are possessed of, and the glow that accompanies the reaction is felt to be peculiarly vigorous and elastic. But if it exceed this proportion, and no reaction ensue, the contraction of the vessels on the surface is converted into a rigid spasm, the blood is driven into the interior, and the surface must necessarily be pale. In this extremity of temperature, moreover, cold, instead of being a tonic, is one of the most formidable sedatives in animal chemistry: it carries off the heat of the body far more rapidly than it can be recruited, and as effectually exhausts it of all its irritable and sensible power. But such exhaustion is a cause of stupor or sleep, and a cause so cogent, that the will is, in many cases, incapable of resisting it, and falls a prey to its power.

In applying remedial means to this modification of asphyxy, great caution is necessary respecting the employment of warmth; and particularly where the limbs are peculiarly rigid, and under the influence of frost. In this last case it will be generally found most advisable, in the first instance, as in frost-bitten limbs, to plunge the body for a few minutes into a bath of cold sea-water or salted water, at the same time that warm air may be breathed into the lungs, and the stomach and rectum gently excited by moderate stimulants: for it does not follow that, because the limbs and surface of the body are frozen from frost-bite, the central parts have suffered to the same extent. After a short immersion in sea-water, the body should be taken out, wiped perfectly dry, laid in flannel in a moderately warm room, and submitted to the friction of warm hands; several persons being engaged in this process simultaneously. — *Good.*

Aspidi'scus. (From ασπις, a buckler.) The sphincter muscle of the anus was formerly so called from its shape. — *Cœlius Aurelianus.*

ASPIDIUM. (*um, i.* n.; from ασπις, a shield.) The name of a new genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Filices.*

Aspidium filix mas. The male polypody, or fern; called also, *Polypodium filix mas*, *Filix mas*, *Nephrodium crenatum*, *Pteris*, *Blanknon oribasii*, and *Lanchitis.* The root of this plant has been greatly celebrated for its effects upon the *tænia osculis superficialibus*, or broad tape-worm. Madame Noufer acquired great celebrity by employing it as a specific. This secret was thought of such importance by some of the principal physicians at Paris, who were deputed to make a complete trial of its efficacy, that it was purchased by the French king, and afterwards published by his order. The method of cure is the following: — After the patient has been prepared by an emollient glyster, and a supper of panada, with butter and salt, he is directed to take in the morning, while in bed, a dose of two or three drachms of the powdered root of the male fern. The powder must be washed down with a draught of water, and, two hours after, a strong cathartic, composed of calomel and scammony, is to be given, proportioned to the strength of the patient. If this does not operate in due time, it is to be followed by a dose of purging salts, and if the worm be not expelled in a few hours, this process is to be repeated at proper intervals. Of the success of this, or a similar mode of treatment, in cases of tænia, there can be no doubt, as many proofs in this country afford sufficient testimony; but whether the fern-root or the strong cathartic is the principal agent in the destruction of the worm, may admit of a question; and the latter opinion is the more generally adopted by physicians. It appears, however, from some experiments made in Germany, that the tænia has, in several instances, been expelled by the repeated exhibition of the root, without the assistance of any purgative.

ASPLE'NIUM. (*um, i.* n.; from α, priv. and σπλην, the spleen, because it was supposed to remove disorders of the spleen.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Filices.*

Asplenium adianthum nigrum. Leek fern. Black maiden hair. This is used as an astringent and pectoral.

Asplenium ceterach. The systematic name of the herb spleenwort; called also Miltwaste, *Lonchitis*, *Scolopendria vera*, and *Dorodilla*. This small bushy plant, *Asplenium —frondibus pinnatifidis, lobis alternis confluentibus obtusis*, of Linnæus, grows upon old walls and rocks. It has an herbaceous, mucilaginous, roughish taste, and is recommended as a pectoral. In Spain, it is given with great success in nephritic and calculous diseases.

Asplenium hemionitis. *Hemionitis.* Mules fern. Used with the same intentions as the *Scolopendrium vulgare.*

Asplenium murale. Wall-rue. Tentwort. *Adianthum album*, *Ruta muraria*, *Salvia vitæ*, *Asplenium ruta muraria.* This plant has nearly the same qualities as the true maiden-hair. It is supposed by some to possess specific virtues in the cure of ulcers of the lungs, and is exhibited in the form of decoction.

Asplenium ruta muraria. See *Asplenium murale.*

Asplenium scolopendrium. See *Scolopendrium vulgare.*

Asplenium trichomanes. The common maiden-hair, or spleen-wort. *Trichomanes* of the pharmacopœias. *Adianthum rubrum. Asplenium —frondibus pinnatis, pinnis subrotundis, crenatis*, of Linnæus. This plant is admitted into the Edinburgh pharmacopœia: the leaves have a mucilaginous, sweetish, subastringent taste, without any particular flavour; they are esteemed useful in disorders of the breast, being supposed to promote the expectoration of tough phlegm, and to open obstructions of the viscera.

ASS. See *Asinus.*

Ass's milk. See *Milk, ass's.*

Assaba. A shrub found on the coast of Guinea, the leaves of which are supposed to disperse buboes.

A'ssac. (Arabian.) Gum ammoniacum.

ASSAFŒ'TIDA. (*a, æ.* f.; from the Hebrew word, *asa*, to heal.) See *Ferula assafœtida.*

A'ssala. The nutmeg.

A'ssanus. The name of an old weight, consisting of two drachms.

ASSARABA'CCA. (*a, æ.* f.) See *Asarum europæum.*

Assa'rium. A Roman measure of twelve ounces.

Assarthro'sis. Articulation.

ASSAY. This operation consists in determining the quantity of valuable or precious metal contained in any mineral or metallic mixture, by analysing a small part thereof. The practical difference between the analysis and the assay of an ore, consists in this:—the analysis, if properly made, determines the nature and quantities of all the parts of the compound; whereas, the object of the assay consists in ascertaining how much of the particular metal in question may be contained in a certain determinate quantity of the material under examination. Thus, in the assay of gold or silver, the baser metals are considered as of no value or consequence; and the problem to be resolved is simply, how much of each is contained in the ingot or piece of metal intended to be assayed.

A'sse. A loathing of food, from a conflux of humours. — *Hippocrates.*

ASSIMULA'TION. (*Assimulatio, onis.* f.; from *ad*, and *similis*, to make like to.) Assimulation. The conversion of the food into nutriment.

Assiste'ntes. (From *ad*, and *sisto*, to stand near: so called, because they lie near the bladder.) A name of the prostate glands.

Assodes. See *Asodes.*

A'ssos. A name given formerly to alum.

ASSURGENS. Rising upwards. A botanical term which differs from ascending, in first inclining downwards, and then gradually rising upwards.

A'STACUS. (*us, i.* m.; from *α*, neg. and *ςαζω*, to distil: so called from the hardness and dryness of its shell.) The name of a genus of shell-fish.

Astacus fluviatilis. The officinal crevis or cray-fish. See *Cancer astacus.*

Astacus marinus. The lobster. See *Cancer gammarus.*

A'stapis. (From *ςαφις*, *uva passa.*) A raisin.

Asta'rzof. The name of an ointment of litharge, house-leek, &c. — *Paracelsus.*

Astchachilos. A malignant ulcer.

ASTERA'NTIUM. (*um, i.* n.; from *αςηρ*, a star: so called from its star-like form.) See *Anthemis pyrethrum.*

ASTERICUM. (*um, i.* n.; from the star-like appearance of the flowers.) See *Anthemis pyrethrum.*

ASTHE'NIA. (*a, æ*, f.; from *α*, priv. and *σθενος*, strength.) Debility.

ASTHENOLOGY. (*Asthenologia, æ.* f.; from *α*, priv. and *σθενος*, strength, and *λογος*, a treatise.) The doctrine of diseases arising from debility.

A'STHMA. (*a, atis.* neut. from *ασθμαζω*, to breathe with difficulty.) A disease characterised by a difficulty of breathing, returning at intervals, attended by a sense of constriction across the breast and in the lungs, with a wheezing, cough, and expectoration. Asthma is more commonly a disease of the later than the earlier period of life; for it does not often appear in infancy or youth, although occasional instances of this have occurred, particularly in infancy, that have been mistaken for cases of croup, which the asthma of infancy very much resembles, though admitting of a more easy cure. It soon becomes habitual, and seems some-

times to be hereditary. It invades all temperaments, but more particularly the melancholic, or that which is a compound of the melancholic with the sanguineous.

The paroxysms of asthma are universally preceded by languor, flatulency, headach, heaviness over the eyes, sickness, pale urine, disturbed rest, and asense of straitness, fullness, and anxiety about the præcordia. The accession is usually about the middle of the night, and during the first and deepest sleep: the cause of which has not been rendered very manifest.

For the most part, the patient wakes suddenly, and feels a most distressing tightness about the chest, as if he were bound with cords: his anxiety is inexpressible, and he labours for breath as though every moment would be his last. He is obliged to sit erect, breathes distressfully with a wheezing sound, and cannot bear the weight of the bed-clothes. Cool fresh air is the object of his intense desire. At the same time the extremities are cold; the heart palpitates; the pulse is sometimes quickened, but usually weak, irregular, and often intermitting; the abdomen is distended with flatulence; the stomach is faint, and often rejects with great violence a slimy and frothy material of a greenish or yellowish hue. The eyes stare prominently, and the face is sometimes pale, but more commonly bloated and livid; and the alvine canal, though costive before, will now perhaps pass a loose stool.

In many instances there is an ineffectual effort to spit, with a harsh and dry cough that brings up nothing more than a little clammy or frothy mucus through the whole of the struggle. And in these cases the fit usually subsides, or perhaps altogether leaves the patient in two or three hours. But, in other instances, the cough is far more violent and suffocative; and when it has lasted for an hour or two, an expiration of tough viscid mucus commences, and gradually becomes copious and affords relief. It is occasionally mixed with blood from the severity of the struggle: but the larger the discharge of either, or of both, the more the bronchial vessels are made easy by being thus unloaded of part of their obstruction.

It is often, however, many hours before a paroxysm of this kind very sensibly subsides; and the patient generally feels some degree of constriction during the whole of the ensuing day; and is fortunate if the next night be passed without the return of a like fit. The tendency to such returns usually continues for several nights; in severe cases, for a week or a fortnight. Sir John Floyer, who, from describing his own sufferings, has given us one of the best historical accounts of the disease that has ever been written, mentions a case in which the fits recurred for seven weeks together, during the whole of which time the patient was obliged to sit erect in a chair.

Yet, notwithstanding the violence of the assault, it is not often that asthma, under either of these forms, proves fatal at the time: for this "morbus maxime terribilis," as it is called by Willis, "may be carried on to old age, if supervening diseases do not destroy the patient, or disturb the operations of nature, by which a recovery from the paroxysm may be obtained." But it rarely makes a first attack without subjecting the constitution to subsequent returns; and frequently, by the debility which it hereby produces, lays a foundation for tubercular phthisis, dropsies of the chest or abdomen, aneurisms of the heart, and various other fatal diseases. Whilst it occasionally happens, even where none of these take place, that the mucous glands of the bronchiæ become relaxed, an habitual excess of secretion ensues, and a troublesome dyspnœa is the consequence, from the overloaded state of the air-cells and bronchial vessels; a mischief which, in such cases, is felt most oppressively on first awaking, and is only relieved by a long labour of severe coughing. This overloaded state of the bronchiæ and air-cells, from too large a secretion of mucus, is indeed, at the time, an original exciting cause of the disease; and has by some writers, and especially in our own day by Dr. Bree, been supposed to be the chief cause.

The exciting causes, however, are numerous, and it is difficult to say which is the chief; nor always easy to follow them up, and ascertain them satisfactorily. Yet they may all be resolved into an irritation of some kind or other, existing within the cavity of the chest, and stimulating its moving powers to a convulsive constriction. We say existing *within* the cavity of the chest, because we are now considering asthma as an idiopathic disease. Yet it happens not unfrequently that it occurs as a mere symptom, or result of some other disease, or of a morbid state of some remote organ, as the stomach, liver, or spleen; in which case it becomes a secondary affection, and is only to be removed by removing the primary disorder on which it is dependent. And hence it is of the utmost importance that we should trace out the actual cause, at least so far as to determine whether the asthma be an idiopathic affection originating in the chest, or a subsidiary affection catenated with some other part of the system.

Whether the suffocative tightness of the chest be the result of a spasmodic stricture of the bronchial vessels, spreading thence to the muscles of respiration, or produced by an infraction of these vessels from a superabundant effusion from their exhalents, is a question of a very different kind. Willis first started the former opinion, which has flowed in a regular current, or with little opposition, through Floyer, Hoffman, and Cullen, to the present day. Dr. Bree has

lately proposed the latter, and supported it with great ingenuity and learning, illustrating and fortifying his views by numerous references to unquestionable facts, and the opinions of earlier writers, and especially of the humoral pathologists to whose physiology he seems peculiarly to incline.

Admitting the former hypothesis, the thoracic convulsion is a diseased action from the beginning, and under every degree and modification, and is so regarded by its advocates: while Dr. Bree only allows it to be so when the convulsive action is violent; contending, that in its commencement it is altogether a remedial effort, an instinctive attempt to expel the serum or mucus that clogs the bronchial vessels. And he hence accounts for the pathognomic wheezing, which he does not think the idea of a spasmodic stricture of these vessels is sufficient to explain; as also for the general inefficacy of opium and antispasmodics, to whatever extent they may be carried.

It has been already stated that an excessive secretion from the exhalents of the bronchiæ may be an exciting cause in many cases, and particularly in a relaxed and debilitated condition of the bronchial vessels in consequence of former attacks. But, notwithstanding the masterly manner in which Dr. Bree has argued this point, we cannot regard such a secretion as a common cause of asthma, since, in numerous instances, it happens, in the words of Sir John Floyer, that "the lungs do not appear to be much oppressed with phlegm before the fit; and at the end of the fit the straitness goes off *before* any considerable quantity is spit up:" while in what is commonly called the dry, nervous, or convulsive asthma, there is always very little, and sometimes no mucus whatever excreted from the beginning to the end of the paroxysm. It may, indeed, be maintained that the secretion is absorbed, but this is to beg the question, for we have no proofs of such an absorption. The existence of accumulated mucus in the bronchial vessels of those who have died of asthma, and whose bodies have been opened, does nothing more than establish the fact in those particular cases. And even here we are left in total darkness whether the serum or mucus anticipated the suffocative convulsion and was the cause of it, or whether the latter anticipated the serum or mucous effusion, and forced it into the vessels in which it has been found on dissection. How far the suffocative convulsion may originate in a spasm of the bronchiæ, as contended for by Cullen, we have no means of determining manifestly. That it may exist, however, as well as a spasm of the alimentary canal, no one has been bold enough to deny; that it must produce that strangling constriction or straitness which is a pathognomic sign of asthma, where it does exist, can be as little doubted; and it is extremely difficult to ascribe the disease to any other state of the bronchiæ, in all cases of dry or nervous asthma, in which, as there is little or no discharge from the lungs, we have full ground for inferring that there is little or no accumulation within them.

"It is not, however, intended," says Dr. Bree, "to deny the possible existence of this spasm, but to object to it as a proximate cause; and to state the imprudence of depending upon it as an important indication in practice." Yet it does not appear that the practice suggested by the one opinion needs to be so much at variance with that suggested by the other, as this passage would seem to intimate. For if acids prove a beneficial mode of treatment, and that benefit be ascribed by the upholder of the muculent hypothesis to the astringent power of the acid, by which the flow of mucus is restrained; it may be ascribed by the upholder of the spasmodic hypothesis to the very same power, by which, as a tonic, it takes off irritability, and allays all muscular irregularities.

From the view then thus offered, it will be found convenient to contemplate the genus asthma as comprising, and limited to, the two following species: —

1. *Asthma siccum*, dry asthma, nervous asthma.

2. *Asthma humidum*, humid or common asthma.

Asthma siccum. The paroxysm sudden, violent, and of short duration: constriction hard, dry, spasmodic; cough slight; expectoration scanty, and only appearing towards the close of the fit.

This is the proper convulsive or nervous asthma of Willis, Hoffman, Floyer, and Akenside. Its predisposing cause we are sometimes capable of developing: for we can trace the disease to a morbid stricture of the chest, to an irritable condition of the bronchial vessels, or parenchyma of the lungs, produced by a pleuritis, or a succession of severe and protracted winter coughs; or to an hereditary taint. Of the occasional causes, however, we are often in great ignorance; and mostly so where the disease appears in its simplest character, and totally unconnected with any other affection. In some instances, it evidently follows upon a sudden repulsion of cutaneous eruptions; in others, on a sudden cessation of œdematous swellings in the extremities of cachectic patients; and not unfrequently on inhaling deleterious exhalations. So that it is probably a mere difference in the constitution or habit that renders these causes capable of producing one of these diseases rather than another. And hence dry asthma, like the preceding, as thus diversified by its occasional causes, may be contemplated under the following varieties: —

α *Simplex*. Simple nervous asthma. Without any obvious cause or connection with any other affection.

β *Metastaticum*. Repelled humours. From retropulsion of some acrid humour from the surface of the body.

γ *Phlegmaticum*. A cachectic frame. From repelled œdema of the extremities in phlegmatic or cachectic habits, with a scanty secretion of urine.

δ *Vaporosum*. Deleterious exhalations. From inhaled fumes of metals, especially of lead and arsenic; of sulphur, charcoal, nitric acid, and other deleterious or poisonous substances.

ε *Organicum*. Organic misformation. From organic derangement of the walls or contents of the chest.

Of the first of these varieties, Dr. Bree supposes the unknown and exciting cause to reside in some "subtile acrimony *always* present in the atmosphere in a greater or less degree, and ready to be inspired." It is at least difficult to disprove this opinion; but admitting the fact, we can make little use of it, and are nearly as much in the dark as ever; since we have no information of the nature of this acrimony, and have no means of determining whether it really exist in the atmosphere, in some proportion or other, at all times, as Dr. Bree affirms; or of measuring its occasional excesses, and consequently of guarding against it when it becomes mischievous.

It is a position of far more general assent, that this modification of asthma is more likely to occur "in proportion as the habit is disposed to the condition called nervous." The paroxysm, indeed, frequently makes its attack under those circumstances which are most apt to try the strings of a nervous temperament. A sudden emotion of the mind will give rise to it, an alteration of the wind, a change of residence, or a meal that disagrees with the stomach; and often there is a considerable evacuation of pale urine. While on the contrary, as already observed, it more usually makes its attack without any one of these harbingers, or any other that can be traced out. The small quantity of viscid mucus that is excreted through the whole of the struggle, proves evidently that the inner membrane of the bronchial vessels is in a state of peculiar dryness; and leads us to conceive that, at the onset, it was nearly or altogether destitute of its lubricating fluid. It is on this account that the cough and wheezing are both slight. And it is very possible that the spasmodic exertion is not without its use, as tending to promote an increased action of the exhalents, and to take off that aridity from the mucous tunic of the bronchiæ which may sometimes be a proximate cause of the disease.

Cases of this species of asthma, and even of humid asthma, occurring upon a sudden disappearance of scabid, herpetic, and other cutaneous eruptions, are so common that it is hardly worth while to dwell upon them. They are especially noticed by Sir John Floyer, and have rarely escaped the attention of any pathologist since his day. And that this is an actual cause of the disease, is perfectly manifest from the irrecurrence of the latter as soon as such eruption has been re-excited. A sudden disappearance of gout in the hand or foot, or of an habitual discharge, as that of the hæmorrhoidal vessels, has operated in the same manner, while a renewal of these affections has proved an equal remedy.

But those of relaxed and phlegmatic habits are peculiarly affected by such transfers of morbid action, particularly when the feet and ankles are habitually œdematous, and accustomed to enlarge towards night.

It is not to be wondered at that asthma should be produced by the inhaled fumes of metals, and other mineral substances, since we see it also frequently occasioned, in constitutions prone to the complaint, by clouds of common smoke or dust. And Dr. Perceval has met with two cases in which slight apoplexies were concomitants of asthma, produced by concentrated fumes of nitrous acid.

To this subdivision, also, belong such cases of asthma as proceed from fogs and mists, especially those of populous and extensive towns, which many asthmatics are obliged to abandon as soon as November begins. Where, however, the internal tunic of the bronchiæ is dry, hot, and irritable habitually, the moisture of such an atmosphere cools and softens the harsh membrane, and the patient longs for such a situation instead of flying from it. And hence the reason why fogs are poisonous to some asthmatics and healthy to others. It is also probable that the altered gravity of the atmosphere, in these cases, and the larger and smaller doses of oxygene inhaled on every inspiration, produce some influence that proves beneficial or injurious according to the habit or actual state of the air-vessels. And hence, again, while some asthmatics can only live in a mountainous situation, others find their only relief in lowlands and valleys.

An impregnation of the atmosphere with odorous essences, has also been found, in a few cases of uncommon idiosyncrasy, or where the air-vessels have been peculiarly sensible, a sufficient cause of the asthmatic paroxysm; which has hence been produced by the smell of musk, and, in one instance related by Timæus, by that of roses. And, in consequence, it is not to be wondered at that more pungent and perhaps acuated corpuscles should produce a like effect. Dr. Scott, of Northumberland, has given cases of the greatest danger and extremity, occasioned by accidentally inhaling the effluvia of ipecacuan whilst pulverising.

Another and a very frequent cause of both species of asthma, but more particularly the asthma *siccum*, is some organic derangement of the walls or contents of the chest. Gibbosity is one of the most common of the present group of causes. Lommius asserts, after Hippocrates, that if a person become gibbous before puberty, in consequence of asthma, he dies. On which Dr. Bree has well observed, that the authors have here substituted cause for effect, since it is rather the gibbosity that produces the asthma than the asthma that produces the gibbosity. An osseous and consequently rigid condition of the cartilaginous extremities of the ribs and sternum; pressure upon the lungs produced by a dropsy of the chest, or of the pericardium; by an empyema; by vomicas or indurated tumours, of whatever kind, in the substance of the lungs; an inordinate magnitude of the lungs themselves; have all been found occasional causes of asthma, and are among the most formidable to be attacked. Haller, Bonet, Morgagni, and others, who have been peculiarly attentive to structural diseases and their effects, have recorded numerous instances of this kind.

The general treatment of this distressing affection is still a matter of discussion. A considerable distinction is necessary in the two species under which it makes its appearance; and hence it will be more advantageous to defer the consideration of this subject till we have noticed somewhat more at large the history of humid asthma, so that the plan proper for the one may stand in contrast with that proper for the other.

Asthma humidum. Paroxysm gradual, ingravescent, protracted; constriction heavy, humid, laborious; cough severe; expectoration commencing early; at first scanty and viscid, afterwards copious and affording great relief.

This is the ordinary form under which the asthmatic paroxysm shows itself: and the trivial name of humid or humoral was given to it by earlier writers, most of them advocates of the humoral pathology, from an idea that an acrid humour was hereby discharged from the general mass of the blood, consequently that the expuition was to be encouraged as much as possible; the suffocative struggle being regarded as an instinctive or remedial effort of nature to restore the system to a state of health.

Like the preceding species, it very generally appears without any obvious cause or connection with any other affection. In some cases, however, it seems to be the result of a plethora, or, as Cullen expresses himself, "a turgescence of the blood, or any other cause of unusual fulness and distention of the vessels of the lungs." And sometimes, as in old age or after long-continued and repeated catarrhs, it is produced by an excess of serum or mucus flowing inordinately from a weakened and relaxed state of the bronchial exhalents or mucous glands: thus offering us three varieties as follow: —

α *Simplex.* Simple humid asthma. Without any manifest cause, or combination with any other affection.

β *Plethoricum.* From plethora. Or the suppression of some accustomed sanguineous evacuation.

γ *Atonicum.* From local atony. From a debilitated and relaxed condition of the excretories of the air-vessels, as a consequence of chronic and neglected catarrhs, or of old age.

We also meet with examples of the humid as well as of the dry asthma, as a symptom or sequel of many other diseases; as gout, hypochondrias, hysteria, visceral purgescence, and syphilis.

The attack of the present species is more severe, as well as of longer duration than the preceding; as though the patient were contending with two hostile forces instead of with one — a diminished diameter of the vessels, and infraction from a surplus of viscid mucus; and thus both the exciting causes co-operate, which have been contended for singly by the leaders of opposite principles. That asthma occurs, as in the preceding species, without any increased discharge of mucus, is unquestionable; that it occurs with such increased discharge, is equally incontrovertible; and that this overflow is often the result of a constrictive and irritant struggle, is only analogous to the increased secretion that takes place in the alimentary canal, from the torminal spasms of cholera in various cases in which we are equally incapable of ascertaining its immediate cause. In a relaxed and atonic state of the lungs and their air vessels, constituting the third variety of the species before us, it is very probable that this overflow of mucus, and especially if it possess any morbid acrimony, may itself be the stimulus, as an overflow of bile in a like state of morbid acrimony may occasionally be an exciting cause of cholera: but as in spasmodic cholera, where we have no such overflow, we are compelled to admit the existence of some other though an unknown cause; so in asthma, where there is no expuition, or the expuition does not appear till the paroxysm is subsiding, we ought, in fair reason, rather to acknowledge our inacquaintance with the actual cause, than to place our faith in one that has so little to support it.

But whatever be the source of the aggravated distress endured in humid asthma, after some hours of suffering the patient feels less anxiety, breathes more leisurely and with less labour; and, with a growing freedom of expectoration, acquires general relief and tranquillity. Yet such is the irritable state of the affected organs, that even on the second day "no change of posture is made with impunity, and particular distress

affects him if he engage in the fatigue of dressing whilst the stomach is empty. During the day, if no particular hurry occur, the breathing becomes generally more free till the evening: an inexperienced asthmatic even flatters himself that his disease is leaving him; but he finds, at the approach of night, that he must sustain a new attack. The paroxysm recommences with the usual symptoms, and the night is passed nearly as the former, but the sleep is more perfect, and productive of more relief. The third day the remission is more complete; there is some additional expectoration, and bodily motion is performed with less distress, but still with great inconvenience. After the paroxysm has been renewed in this manner for three nights, the expectoration generally becomes free, but there is no certain termination of the fit at a fixed period. However, except in particular cases, it goes off after a few days; and as the daily remissions become more perfect, the urine is higher coloured and in smaller quantities; the expectorated mucus is more copious and digested; strength of pulse and vigour of action increase; and good humour again enlivens the mind."

In treating asthma, our attention must be directed to the paroxysm itself, and to the nature of the constitution after the paroxysm has ceased; and even during the paroxysm, to the character of the particular species under which the disease shows itself.

Cullen, who regarded plethora and turgescence of the blood-vessels as the usual cause, recommends *blood-letting* in the first attack, and especially in young persons; with the use of acids and neutral salts, as employed by Sir John Floyer, for the purpose of taking off the turgency of the blood. Nevertheless bleeding demands a nice discrimination, and is rarely to be recommended in either species. The relief it affords, even in dry or convulsive asthma, is very temporary; and Cullen allows that it cannot be persevered in without undermining the constitution and laying a foundation for dropsy.

Dr. Bree regards it as a doubtful operation in the first species, or that, to adopt his own language, produced by aërial irritation, and as always imprudent in the second. In this last, "I have repeatedly," says he, "directed it; but I have never had reason to think that the paroxysm was shortened an hour by the loss of blood: and I have often been convinced that the expectoration was delayed, and that more dyspnœa remained in the intermission than was common after former paroxysms. In old people, who have been long used to the disorder, it is certainly injurious."

Purging, beyond the intention of keeping the bowels regularly open, has seldom proved beneficial. When, indeed, the disease is secondary, and depends evidently upon an overloaded liver or stomach, or some suppressed evacuation, active cathartics, and especially such as operate simply, will be of great use; and the increased action excited in the alvine canal will often take off the irregular action in the chest: but where the asthma is idiopathic, and especially where the constitution is infirm, as in old age, a powerful alvine irritation will exacerbate the spasm of the chest instead of diminishing it.

In exciting nausea or vomiting, however, we may be less cautious; for each has often been found highly advantageous in both species of idiopathic asthma. The first, by diminishing generally the living power, and hereby relaxing the convulsive action; and the second, by changing the seat of the convulsive action, and at the same time determining to the surface.

Blistering may also be made use of, but like setons or issues, can only be of ulterior advantage; for the fit must be of far more than ordinary length, if it continue till the blister has produced vesication. It may, however, go far to prevent or shorten a relapse on the ensuing night; and especially when the disease is connected with an asthmatic habit.

Sir John Floyer is said, during his residence at Litchfield, to have found great benefit in his own case by the use of very *strong coffee*. And the practice was afterwards followed up by Sir John Pringle, as he informs us, with equal success. "On reading the section on coffee, in the second volume of your Essays," says he, in a letter to Dr. Percival, "one quality occurred to me which I had observed of that liquor, confirming what you had said of its sedative powers. It is the best abater of the periodic asthma that I have seen. The coffee ought to be of the best Mocha, newly burnt, and made very strong immediately after grinding it. I have commonly ordered an ounce for one dish, which is to be repeated fresh after the interval of a quarter or half an hour, and which I direct to be taken without milk or sugar."

Sedatives and *antispasmodics*, given alone, have rarely been attended with any decisive advantage. They have occasionally afforded relief in the first species, but have had little effect in the second; and, by heating the system unnecessarily, have often augmented and prolonged the paroxysm. Dr. Bree, in relating his own case, which was that of humoral asthma, tells us, that in the access of a paroxysm he took four grains of solid opium, which produced nearly an apoplectic stupor for two days. A few hours after trying the opium, a most debilitating sickness supervened, with incessant efforts to puke. The labour of the respiratory muscles abated, but the wheezing evidently increased, accompanied with an intense headach and a countenance more turgid than usual; the

pulse being at first strong and quick, and afterwards sinking into great weakness. The paroxysm showed itself four hours earlier than usual the next day. He tried it in smaller doses during several subsequent fits, but in no instance without great general mischief, and with little or no local benefit.

Much of this deleterious effect may have depended on idiosyncrasy. But in every instance sedatives and narcotics, if employed at all, should be *combined with diaphoretics.* In this form they often prove a very powerful remedy: and one of the best preparations of this kind is the compound powder of ipecacuan. An universal glow and diapnoe, as it has been called, or breathing moisture on the surface, are among the most favourable symptoms of the disease, under whatever form it makes its appearance. Antispasmodics and narcotics, as musk, castor, valerian, cardamine, camphire, and the fetid gums, may perhaps be employed successfully when the disease is chiefly dependent upon a morbid habit; but even here they will derive a great advantage from an union with diaphoretics, as the neutral salts, and small doses of ipecacuan, or antimonial powder.

The hyoscyamus has often succeeded as a narcotic where opium has failed: but, like the latter, it should not be trusted to by itself in either species of the complaint.

Where the urine is small in quantity, and of a pale hue, and particularly where the disease is connected with a pituitous or phlegmatic habit, *diuretics* have been found unquestionably serviceable. And it is apparently in reference to this variety of the disease, that Sir John Floyer asserts, that swelled legs and copious urine are beneficial changes in asthma. Dr. Percival, indeed, thought them of service generally: but if so, it can only be as co-operating with diaphoretics, or other medicines that prove revellent by exciting increased action in the excretories of remote organs. Dr. Ferriar combined them with opium, and thus unquestionably increases the power of both.

But as there is no discharge that promises such direct benefit as that from the excretories of the bronchial vessels themselves, so is there no tribe of medicines on which we can place so much dependance as on *expectorants*, when judiciously selected and administered. In every kind of idiopathic affection these may be employed with advantage: for if there be a turgescence in the blood-vessels, they will have a tendency to emulge them; if the bronchiæ themselves be surcharged with serum or mucus, they will facilitate their exhaustion; or if their interior tunic be dry and irritable, by taking off the obstruction and restoring the deficient secretion, they will soften and lubricate the irritable membrane.

Among the *fetid gums* which have been employed for this purpose, ammoniacum has acquired the greatest degree of popularity: but its power is inferior to that of asafœtida, the virtue of which is to be judged of by the degree of its offensive odour. Both these, however, are apt to be too heating, except in very flaccid and phlegmatic habits; and it will hence be often necessary to soften their pungency by a saline medium, taking care not to irritate the bowels unduly. And where there is a considerable degree of irritability, and much quickness of pulse, we may prefer several of the oleraceous, and especially the mucilaginous demulcents; but oily demulcents are always to be avoided. Dr. Paulet of Paris has lately employed the *Chenopodium botrys*, and speaks of its good effects in very high terms, especially in humoral asthma: but it has not hitherto been introduced into our own country. He gives it in the form of an electuary, mixing the powder of the plant with honey.

Of all the medicines, however, which act on the excernents of the lungs, the *squill* is by far the most to be depended upon. It is indeed a stimulant of the excernent system generally; for there is no part of this system capable of resisting its power: and it is hence necessary to watch its effects upon the kidneys and intestinal canal, and to attemper it with *opium* or some other guard, if it produce much influence in either of these ways; except, indeed, in the case of asthma connected with the phlegmatic habit, which is the only modification of the disease in which this collateral influence is found to be of advantage. Squills have also a peculiar tendency to stimulate the stomach and produce nausea or vomiting; and it rarely shows much of an expectorating power till it has occasioned the former. But as these are advantages to the disease in both species, and especially in humoral asthma, we are not to discontinue it on this account, but only to moderate its use. There are many practitioners, indeed, who employ it directly as an emetic medicine, and prefer it to ipecacuan. In asthma it may, in some habits, be allowed to supersede it, but in no other disease; for it is rougher in its action, and more offensive in its taste.

Where, however, the lungs seem to be affected only secondarily, and the source of the disease lies in an infarcted and torpid state of the liver, or some other abdominal organ, squills, and indeed expectorants in general, will be found less serviceable than in idiopathic cases. And hence we should prefer the *seneka root*, which has often been found of great success after calomel, or whatever other cathartic may be judged most proper, has been previously made use of. Seneka root, indeed, is in itself a sort of general evacuant; for while it increases very largely the discharge of mucus, it increases also the flow of perspiration and urine, and sometimes acts as an emetic and purgative.

There is a tribe of medicines which are also found of essential benefit in many cases

of both species of asthma, but whose mode of action we are so little acquainted with, that it has been explained on very different principles by different pathologists: the *acids*, both mineral and vegetable. These principles we have not room to examine: nor it it necessary; since if they be really beneficial, it is of little moment whether they act as sedatives in allaying irritation, or as tonics in invigorating the absorbents and restraining the loose and relaxed mouths of the bronchial exhalents. It may be sufficient to observe, that the vegetable seem more efficacious than the mineral acids, probably because, in consequence of their being less corrosive, the patient can take them in larger quantity; and that, of the vegetable acids, those obtained by fermentation seem more useful than the native.

Yet it is rarely that these have been given alone; for it has been found that by uniting them with diaphoretics, as small doses of ipecacuan, or with narcotics, the remedial power of each has been augmented; and that the latter are not only rendered more efficacious, but are borne with less mischief afterwards. Sir John Floyer was in the habit of uniting the acetous acid with squills, and hence, indeed, the popularity which the vinegar of squills has preserved to the present day. Dr. Bree has employed both the vegetable and the mineral acids, but always in union with some other preparation. Thus in humoral asthma, after puking, he advises a draught composed of an ounce of distilled vinegar, and from one to three grains of ipecacuan in a sufficient quantity of pure water, to be taken every four hours, as a mean of determining to the surface of the body, and of promoting absorption and exhalation. And as a mean of taking off irritation and exciting the secernents of the bronchiæ, it may be also employed in nervous or dry asthma, and often with as good effect.

In like manner, Dr. Bree has made use of the nitric acid in union with squills and extract of henbane; giving three grains of the henbane with six minims of the acid and ten of tincture of squills in the form of a draught, and repeating it every three or four hours during the paroxysm. And he tells us, that "many patients, who had taken the most powerful antispasmodics, have assured me that none had been so useful; and two gentlemen now under my direction inform me, that it is the only medicine that has ever given them relief in the paroxysms."

As simple relaxants are always hurtful in this disease, and only add to the debility, it is not to be wondered at that warm bathing should be also injurious. *Cold bathing*, as a tonic between the intervals, has much more to be said in its favour. Dr. Bree tried it in his own person, but did not obtain success. His was a case of humoral asthma. But in the first species, and particularly where habit has given inveteracy to the recurrence of the paroxysms, and where the general constitution is vigorous, there is no single remedy likely to be of more value.

We thus enter upon the prophylaxis of the disease, upon which it will not be necessary to dwell at any great length.

Wherever asthma may be supposed to be dependent upon a turgescent state of the blood, *tonics* can have no claim to be employed, till after such a condition has been removed; and then, perhaps, the best medicine will be the mineral acids. But in all other cases of the idiopathic disease, tonics may be adverted to with great advantage during the interval of the fits: and if one do not seem to succeed, it should only lead to exercise our ingenuity in the choice of another, and not to abandon the principle: for we should never forget that the fundamental evil we have to oppose, whether general or local, is a lax, mobile, and irritable state of the muscular fibres. Peruvian bark is often found to overload the stomach, and especially in dyspeptic patients; and with these columbo generally agrees better, occasionally combined with carbonate of soda. But the best tonics are the metallic oxides; and of these, that of iron, where it is not found too heating.

Inhalations cannot well be tried during the paroxysms, but they have been very generally had recourse to in the intervals, and have consisted of very different vapours. When pneumatic medicine was at the height of its popularity, much benefit was supposed to be derived from the use of oxygene and hydrogene gases. Dr. Beddoes was peculiarly attached to the former, and thus describes its effects with his constitutional warmth of expression: — "No sooner does it touch the lungs, than the livid colour of the countenance disappears, the laborious respiration ceases, and the functions of all the thoracic organs go on easily and pleasantly again." Yet, with all this high recommendation, few patients choose to be cured in this manner in the present day; oxygene gas is now rarely adverted to by asthmatics or their medical attendants: and the remedy, from having been extolled beyond its proper level, has fallen back into an unmerited disesteem. Dr. Ferriar has spoken in soberer terms of the undoubted benefit of hydrogene in the first species.

Warm aromatic fumes have been also tried; as prophylactics, obtained from various substances. The smoking of tobacco has very extensively been recommended; the leaves of the *Scandix odorata* were at one time in still higher repute; but both have of late years given way to those of the *Datura strammonium* or thorn-apple. Most of these contain a narcotic power, and whatever benefit they produce is hence, perhaps, chiefly derived: but either this narcotic power, or the stimulating power with which

it is united so intimately, (for all stimulants exhaust and induce a tendency to paresis or paralysis,) has at times been found to injure deglutition, and induce a difficulty of swallowing. Tobacco is justly chargeable with this effect, and the strammonium still more generally; and hence if they produce any influence whatever upon the bronchiæ, it must be ultimately of the same kind, and therefore highly injurious.

There is another process, which has lately been adopted in France, but of the issue of which we have not yet received any satisfactory information. It consists in a revival of the *impregnated aqueous injections* of Stephen Hales, with a view of determining how far such impregnating materials may reach the lungs and be thrown off by the bronchial exhalents. MM. Magendie and Nysten have been chiefly engaged in these researches, and they have ascertained that alkohol, æther, camphire, and most of the other volatile antispasmodics, together with the gases, are in this manner conveyed to the lungs, and transpire from the surface of their air-cells.

Issues, *setons*, and even *cauteries*, have been long in repute as useful drains or revellents; and, under this character, as highly successful in the cure of asthma. And where the disease has appeared upon a sudden check of a cutaneous eruption, or a sudden cessation of any habitual evacuation, they may be serviceable. Issues, to this end, and indeed for all others, are most conveniently kept open, and produce the most salutary irritations by small pieces of the bark of spurge-laurel or mezereon, both of which contain a very acrid matter; and the latter of which, more especially, has for this purpose been very generally employed in France, under the name of *écorce du Garou*.

It is only necessary to add, that the diet should be light and cordial without being stimulant, the food of a solid rather than of a liquid kind, and the meal never be suffered to overload the stomach: all flatulent fruits and other vegetables should be avoided; but oranges, the alliaceous esculents, and the aromata, may be allowed in moderation. Hot liquors should be sedulously abstained from; and the beverage consist chiefly of coffee, ginger-tea, and acidulated waters.

Where asthma is dependent upon some primary affection of another kind, it can only be effectually attended to by removing or palliating the original disorder.

A'STITES. (From *ad*, and *sto*, to stand near; so called because they are situate near the bladder.) The prostate glands.

ASTRA'GALUS. (*us, i.* m.; Αϛράγαλος, a cockle or die, because it is shaped like the die used in ancient games.)

1. In *Anatomy*, *Astragalus os*, the ankle-bone, the sling-bone, or first bone of the foot; a bone of the *tarsus*, upon which the tibia moves. Also called *Ballistæ os; aristrios; talus; quatrio; tetroros; cavicula; cavilla; diabebos; peza.* It is placed posteriorly and superiorly in the tarsus, and is formed of two parts, one large, which is called its body, the other small, like a process. The part where these two unite is termed the neck.

2. In *Botany*, the name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

ASTRAGALUS EXCAPUS. Stemless milk-vetch. The root of this plant, *Astragalus acaulis excapus; — leguminibus lunatis; foliis villosis*, of Linnæus, is said to cure confirmed syphilis, especially when in the form of nodes and nocturnal pains.

ASTRAGALUS TRAGACANTHA. This species of astragalus was supposed to be the plant that afforded the gum called *tragacantha*. See *Astragalus verus*.

ASTRAGALUS VERUS. The systematic name of the plant called Goat's thorn, Milkvetch, *Spina hirci*, *Astragalus tragacantha*, and *Astragalus aculeatus*. We are indebted to a French traveller, of the name of Olivier, for the discovery that the gum tragacanth of commerce is the produce of a species of astragalus not before known. He describes it under the name of *Astragalus verus*, being different both from the *A. tragacantha* of Linnæus, and from the *A. gummifera* of Labillardière. It grows in the north of Persia. Gum tragacanth, or gum dragant, or dragon, (which is forced from this plant by the intensity of the solar rays, is concreted into irregular lumps or vermicular pieces, bent into a variety of shapes, and larger or smaller proportions, according to the size of the wound from which it issues,) is brought chiefly from Turkey, in irregular lumps, or long vermicular pieces bent into a variety of shapes; the best sort is white, semitransparent, dry, yet somewhat soft to the touch.

Gum-tragacanth differs from all the other known gums, in giving a thick consistence to a much larger quantity of water; and in being much more difficultly soluble, or rather dissolving only imperfectly. Put into water, it slowly imbibes a great quantity of the liquid, swells into a large volume, and forms a soft but not fluid mucilage; if more water be added, a fluid solution may be obtained by agitation; but the liquid looks turbid and wheyish, and on standing, the mucilage subsides, the limpid water on the surface retaining little of the gum. Nor does the admixture of the preceding more soluble gums promote its union with the water, or render its dissolution more durable: when gum-tragacanth and gum-arabic are dissolved together in water, the tragacanth separates from the mixture more speedily than when dissolved by itself.

Tragacanth is usually preferred to the other gums for making up troches, and other like purposes, and is supposed likewise to be

the most effectual as a medicine; but on account of its imperfect solubility, is unfit for liquid forms. It is commonly given in powder with the addition of other materials of similar intention; thus, to one part of gum-tragacanth are added one of gum-arabic, one of starch, and six of sugar.

According to Bucholtz, gum-tragacanth is composed of 57 parts of a matter similar to gum-arabic, and 43 parts of a peculiar substance capable of swelling in cold water without dissolving, and assuming the appearance of a thick jelly. It is soluble in boiling water, and then forms a mucilaginous solution.

The demulcent qualities of this gum are to be considered as similar to those of gum-arabic. It is seldom given alone, but frequently in combination with more powerful medicines, especially in the form of troches, for which it is peculiarly well adapted: it gives name to an officinal compound powder, and was an ingredient in the compound powder of cerusse.

ASTRA'NTIA. (*a, æ.* f.; from αστρον, *astrum*, a star: so called from the star-like shape of its flowers.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Astrantia major. This plant, called also *Astrantia vulgaris*, and *Astrantia nigra*, was employed in the time of Gerard as a rustic purge. It is now fallen into disuse.

A'STRAPE. (From αςραπτω, to corruscate.) Lightning. Galen reckons the appearance of lightning among the remote causes of epilepsy.

ASTRI'CTUS. (From *astringo*, to bind.) When applied to the belly, *alvus astricta*, it signifies costiveness.

ASTRI'NGENS. See *Astringent.*

ASTRI'NGENT. (*Astringens;* from *astringo*, to constringe.) That which, when applied to the body, renders the solids denser and firmer, by contracting their fibres, independently of their living or muscular power. Astringents thus serve to diminish excessive discharges; and, by causing greater compression of the nervous fibrillæ, may lessen morbid sensibility or irritability. Hence they may tend indirectly to restore the strength, when impaired by these causes. The chief articles of this class are the acids, alum, lime-water, chalk, certain preparations of copper, zinc, iron, and lead; the gallic acid, which is commonly found united with the true astringent principle, was long mistaken for it. Seguin first distinguished them, and, from the use of this principle in tanning skins, has given it the name of *tannin.* Their characteristic differences are, the gallic acid forms a black precipitate with iron; the astringent principle forms an insoluble compound with albumen.

ASTRONO'MY. (*Astronomia, æ.* f.; from αςρον, a star, and νομος, a law.) The knowledge of the heavenly bodies. Hippocrates ranks this and astrology among the necessary studies of a physician.

ASTRUC, John, born in France, 1684. He was author of numerous medical and philosophical works, but especially one "on Venereal Diseases," which deservedly became extremely popular, and was translated into various modern languages. He lived to the advanced age of 82.

A'suar. The Indian myrobalan, or purging nut.

A'sugar. Verdigris.

Asu'oli. Soot.

A'tac. Nitre.

ATA'XIA. (*a, æ.* f.; from α, neg. and τασσω, to order.) Want of regularity in the symptoms of a disease, or of the functions of an animal body.

Ata'xir. (Arabian.) 1. A tenesmus. 2. A disease of the eyes.

Ata'xmir. (Arabian.) Removal of preternatural hairs growing under the natural ones of the eyelids.

A'tebras. A chemical subliming vessel.

ATE'CNIA. (*a, æ.* f.; from α, neg. and τικτω, to bring forth.) Venereal impotency: inability to procreate children.

ATER. The deepest black. See *Colour.*

ATHAMANTA. (*a, æ.* f.; so named from Athamas in Thessaly.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Athamanta cretensis. Candy carrot. The systematic name for the *Daucus creticus* of the pharmacopœias; called also *Myrrhus annua.* The seeds of this plant, *Athamanta—foliolis linearibus planis, hirsutis; petalis bipartitis; seminibus oblongis hirsutis*, of Linnæus, are brought from the Isle of Candy: they have an aromatic smell, and a slightly-biting taste; and are occasionally employed as carminatives, and diuretics in diseases of the primæ viæ and urinary passages.

Athamanta meum. See *Æthusa.*

Athamanta oreoselinum. Black mountain parsley. The systematic name for the officinal *oreoselinum.* The root and seed of this plant, *Athamanta—foliolis divaricatis* of Linnæus, as well as the whole herb, were formerly used medicinally. Though formerly in so high estimation as to obtain the epithet of *polycresta*, this plant is seldom used in the practice of the present day. An extract and tincture prepared from the root were said to be attenuant, aperient, deobstruent, and lithontriptic. The oil obtained by distillation from the seed was esteemed to allay the toothach; and the whole was recommended as an antiscorbutic and corroborant.

ATHAMANTICUM. See *Æthusa meum.*

ATHANA'SIA. (*a, æ.* f.; from α, priv. and θανατος, death: a plant is so called because its flowers do not wither easily.)

1. A term given by the ancient physicians

to an antidote supposed to have the power of prolonging life, even to immortality.

2. A name given to tansy; because, when stuffed up the nose of a dead corpse, it is said to prevent putrefaction.

3. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*.

ATHA'NOR. (Arabian.) A chemical digesting furnace.

A'THARA. (From αθηρ, corn.) A panada, or pap for children, made of bruised corn.

ATHENA. A plaster in much repute among the ancients.

ATHENATO'RIUM. A thick glass cover formerly used for chemical purposes.

ATHENIO'NIS CATAPOTIUM. The name of a pill in Celsus's writings.

ATHENI'PPON. *Athenippum.* The name of a collyrium.

ATHERO'MA. (*a*, *atis*. n. Αθηρωμα, pulse, pap.) An encysted tumour that contains a soft substance of the consistence of a poultice.

ATHLETIC. (*Athleticus*; from *Athletæ*, persons of strength, who were disciplined to perform in the public games: from αθλος, combat.) Strong: usually applied to a strong hale constitution.

ATHO'NOR. (Arab.) A chemical furnace.

ATHRIX. (Αθριξ, *Athrix*, weak.)

1. Weakness.

2. (From α, priv. and θριξ, a hair.) Baldness.

ATHY'MIA. (*a*, *æ*. f.; from α, neg. and θυμος, courage.) 1. Pusillanimity.

2. Despondency or melancholy.

ATI'NCAR. (Arabian.) Borax.

A'TLAS. (*as*, *antis*. m.; from ατλαω, to sustain, because it sustains the head; or from the fable of Atlas, who was supposed to support the world upon his shoulders.) The name of the first vertebra. This vertebra differs very much from the others. See *Vertebræ*. It has no spinous process which would prevent the neck from being bent backwards, but in its place it has a small eminence. The great foramen of this is much larger than that of any other vertebra. Its body, which is small and thin, is nevertheless firm and hard. It is somewhat like a ring, and is distinguished into its *great arch*, which serves in the place of its body, and its *small posterior arch*. The atlas is joined superiorly to the head by ginglymus; and inferiorly, to the second cervical vertebra, by means of the inferior oblique processes and the odontoid process by trochoides.

ATMOMETER. The name of an instrument to measure the quantity of exhalation from a humid surface in a given time.

A'TMOSPHERE. (*Atmosphera*, *æ*. f.; from ατμος, vapour, and σφαιρα, a globe.) The elastic invisible fluid which surrounds the earth to an unknown height, and incloses it on all sides.

Neither the properties nor the composition of the atmosphere, seem to have occupied much the attention of the ancients. Aristotle considered it as one of the four elements, situated between the regions of *water* and *fire*, and mingled with two *exhalations*, the *dry* and the *moist*; the first of which occasioned thunder, lightning, and wind; while the second produced rain, snow, and hail. The opinions of the ancients were vague conjectures, until the matter was explained by the sagacity of Hales, and of those philosophers who followed his career.

Boyle proved beyond a doubt, that the atmosphere contained two distinct substances: —

1. An elastic fluid distinguished by the name of *air*.

2. Water in a state of *vapour*.

Besides these two bodies, it was supposed that the atmosphere contained a great variety of other substances which were continually mixing with it from the earth, and which often altered its properties, and rendered it noxious or fatal. Since the discovery of carbonic acid gas by Dr. Black, it has been ascertained that this elastic fluid always constitutes a part of the atmosphere.

The constituent parts of the atmosphere, therefore, are: —

1. Air. 2. Carbonic acid gas. 3. Water. 4. Unknown bodies.

These will be considered in the following order. First the air, next the carbonic acid, then the water, and lastly the unknown bodies.

I. *The air*. This, which is what is generally alluded to as forming our atmosphere, is a compound of oxygene, and nitrogene; but it consists of a general assemblage of every kind of air which can be formed by the various bodies that compose the surface of the globe.

Physical properties. 1. The air of the atmosphere is so transparent as to be invisible, except by the blue colour it reflects when in very large masses, as is seen in the sky or region above us, or in viewing extensive landscapes.

2. It is without smell, except that of electricity, which it sometimes very manifestly exhibits.

3. It is without taste, and impalpable.

4. Not condensible by any degree of cold into the dense fluid state, though easily changing its dimensions with its temperature.

5. It gravitates and is highly elastic.

6. It is indispensably necessary to combustion and respiration.

Mere heating or cooling does not affect the chemical properties of atmospherical air; but actual combustion, or any process of the same nature, combines its oxygene, and leaves its nitrogene separate. Whenever a process of this kind is carried on in a vessel containing atmospherical air, which is enclosed either by inverting the vessel over

mercury, or by stopping its aperture in a proper manner, it is found that the process ceases after a certain time; and that the remaining air (if a combustible body capable of solidifying the oxygene, such as phosphorus, have been employed,) has lost about a fifth part of its volume, and is of such a nature as to be incapable of maintaining any combustion for a second time, or of supporting the life of animals. From these experiments it is clear, that one of the following deductions must be true: — 1. The combustible body has emitted some principle, which, by combining with the air, has rendered it unfit for the purpose of further combustion; or, 2. It has absorbed part of the air which was fit for that purpose, and has left a residue of a different nature; or, 3. Both events have happened; namely, that the pure part of the air has been absorbed, and a principal has been emitted, which has changed the original properties of the remainder.

The facts must clear up these theories. The first induction cannot be true, because the residual air is not only of less bulk, but of less specific gravity, than before. The air cannot therefore have received so much as it has lost. The second is the doctrine of the philosophers who deny the existence of phlogiston, or a principle of inflammability; and the third must be adopted by those who maintain that such a principle escapes from bodies during combustion. This residue was called phlogisticated air, in consequence of such an opinion.

In the opinion that inflammable air is the phlogiston, it is not necessary to reject the second inference that the air has been no otherwise changed than by the mere subtraction of one of its principles: for the pure or vital part of the air may unite with inflammable air supposed to exist in a fixed state in the combustible body; and if the product of this union still continues fixed, it is evident, that the residue of the air, after combustion, will be the same as it would have been if the vital part had been absorbed by any other fixed body. Or, if the vital air be absorbed, while inflammable air or phlogiston is disengaged, and unites with the aëriform residue, this residue will not be heavier than before, unless the inflammable air it has gained exceeds in weight the vital air it has lost; and if the inflammable air falls short of that weight, the residue will be lighter.

These theories it was necessary to mention; but it has been sufficiently proved by various experiments, that combustible bodies take oxygene from the atmosphere, and leave nitrogene; and that when these two fluids are again mixed in due proportions, they compose a mixture not differing from atmospherical air.

The respiration of animals produces the same effect on atmospherical air as combustion does, and their constant heat appears to be an effect of the same nature. When an animal is included in a limited quantity of atmospherical air, it dies as soon as the oxygene is consumed; and no other air will maintain animal life but oxygene, or a mixture which contains it. Pure oxygene maintains the life of animals much longer than atmospherical air, bulk for bulk.

It is to be particularly observed, however, that, in many cases of combustion, the oxygene of the air, in combining with the combustible body, produces a compound, not solid or liquid, but aëriform. The residual air will therefore be a mixture of the nitrogene of the atmosphere with the consumed oxygene, converted into another gas. Thus, in burning charcoal, the carbonic acid gas generated, mixes with the residual nitrogene, and makes up exactly, when the effect of heat ceases, the bulk of the original air. The breathing of animals, in like manner, changes the oxygene into carbonic acid gas, without altering the atmospherical volume.

There are many provisions in nature by which the proportion of oxygene in the atmosphere, which is continually consumed in respiration and combustion, is again restored to that fluid. In fact there appears, as far as an estimate can be formed of the great and general operations of nature, to be at least as great an emission of oxygene, as is sufficient to keep the general mass of the atmosphere at the same degree of purity. Thus, in volcanic eruptions, there seems to be at least as much oxygene emitted or extricated by fire from various minerals, as is sufficient to maintain the combustion, and perhaps even to meliorate the atmosphere. And in the bodies of plants and animals, which appear in a great measure to derive their sustenance and augmentation from the atmosphere and its contents, it is found that a large proportion of nitrogene exists. Most plants emit oxygene in the sunshine, from which it is highly probable that they imbibe and decompose the air of the atmosphere, retaining carbon, and emitting the vital part. Lastly, if to this we add the decomposition of water, there will be numerous occasions in which this fluid will supply us with disengaged oxygene; while, by a very rational supposition, its hydrogene may be considered as having entered into the bodies of plants for the formation of oils, sugars, mucilages, &c. from which it may be again extricated.

To determine the respirability or purity of air, it is evident that recourse must be had to its comparative efficacy in maintaining combustion, or some other equivalent process.

From the latest and most accurate experiments, the proportion of *oxygene* in atmospheric air is by measure about 21 per cent.; and it appears to be very nearly the same,

whether it be in this country or on the coast of Guinea, or low plains or lofty mountains, or even at the height of 7250 yards above the level of the sea, as ascertained by Gay Lussac, in his aërial voyage in September 1805. The remainder of the air is *nitrogene.*

As oxygene and nitrogene differ in specific gravity in the proportion of 135 to 121, according to Kirwan, and of 139 to 120, according to Davy, it has been presumed, that the oxygene would be more abundant in the lower regions, and the nitrogene in the higher, if they constituted a mere mechanical mixture, which appears contrary to the fact. On the other hand, it has been urged, that they cannot be in the state of chemical combination, because they both retain their distinct properties unaltered, and no change of temperature or density takes place on their union. But perhaps it may be said, that, as they have no repugnance to mix with each other, as oil and water have, the continual agitation to which the atmosphere is exposed, may be sufficient to prevent two fluids, differing not more than oxygene and nitrogene in gravity, from separating by subsidence, though simply mixed. On the contrary, it may be argued, that to say chemical combination cannot take place without producing new properties, which did not exist before in the component parts, is merely begging the question; for though this generally appears to be the case, and often in a very striking manner, yet combination does not always produce a change of properties, as appears in M. Biot's experiments with various substances; of which we may instance water, the refraction of which is precisely the mean of that of the oxygene and hydrogene, which are indisputably combined in it.

To get rid of the difficulty, Mr. Dalton of Manchester framed an ingenious hypothesis, that the particles of different gases neither retract nor repel each other; so that one gas expands by the repulsion of its own particles, without any more interruption from the presence of another gas, than if it were in a vacuum. This would account for the state of atmospheric air, it is true; but it does not agree with certain facts. In the case of the carbonic acid gas in the Grotto del Cano, and over the surface of brewers' vats, why does not this gas expand itself freely upward, if the superincumbent gases do not press upon it? Mr. Dalton himself, too, instances as an argument for his hypothesis, that oxygene and hydrogene gases, when mixed by agitation, do not separate on standing. But why should either oxygene or hydrogene require agitation, to diffuse it through a vacuum, in which, according to Mr. Dalton, it is placed?

The theory of Berthollet appears consistent with all the facts, and sufficient to account for the phenomenon. If two bodies be capable of chemical combination, their particles must have a mutual attraction for each other. This attraction, however, may be so opposed by concomitant circumstances, that it may be diminished in any degree. Thus we know, that the affinity of aggregation may occasion a body to combine slowly with a substance for which it has a powerful affinity, or even entirely prevent its combining with it; the presence of a third substance may equally prevent the combination; and so may the absence of a certain quantity of caloric. But in all these cases the attraction of the particles must subsist, though diminished or counteracted by opposing circumstances. Now we know that oxygene and nitrogene are capable of combination; their particles, therefore, must attract each other; but in the circumstances in which they are placed in our atmosphere, that attraction is prevented from exerting itself to such a degree as to form them into a chemical compound, though it operates with sufficient force to prevent their separating by their difference of specific gravity. Thus the state of the atmosphere is accounted for, and every difficulty obviated, without any new hypothesis.

The exact specific gravity of atmospherical air, compared to that of water, is a very nice and important problem.

7. The air of the atmosphere is capable of holding bodies in solution. It takes up water in considerable quantities, with a diminution of its own specific gravity: from which circumstance, as well as from the consideration that water rises very plentifully in the vaporous state *in vacuo*, it seems probable, that the air suspends vapour, not so much by a real solution, as by keeping its particles asunder, and preventing their condensation. Water likewise dissolves or absorbs air.

II. *Carbonic acid gas of the atmosphere.* The existence of carbonic gas as a constituent part of the atmosphere, was observed by Dr. Black immediately after he had ascertained the nature of that peculiar fluid. If we expose a pure alkali or alkaline earth to the atmosphere, it is gradually converted into a carbonate by the absorption of carbonic acid gas. This fact, which had been long known, rendered the inference that carbonic acid gas existed in the atmosphere unavoidable, as soon as the difference between a pure alkali and its carbonate had been ascertained to depend upon that acid. Not only alkalies and alkaline earths absorb carbonic acid when exposed to the air, but several of the metallic oxides also.

Carbonic acid gas not only forms a constituent part of the atmosphere near the surface of the earth, but at the greatest heights which the industry of man has been able to penetrate. Saussure found it at the top of Mount Blanc, the highest point of the old continent; a point covered with eternal snow, and not exposed to the influence of

vegetables or animals. Lime-water, diluted with its own weight of distilled water, formed a pellicle on its surface after an hour and three-quarters' exposure to the open air on that mountain; and slips of paper moistened with pure potash, acquired the property of effervescing with acids after being exposed an hour and a half in the same place. This was at a height no less than 15,668 feet above the level of the sea. Humboldt has more lately ascertained the existence of this gas in air, brought by M. Garnerin from a height not less than 4280 feet above the surface of the earth, to which height he had risen in an air-balloon. This fact is a sufficient proof that the presence of carbonic acid in air does not depend upon the vicinity of the earth.

Now, as carbonic acid gas is considerably heavier than air, it could not rise to great heights in the atmosphere unless it entered into combination with the air. We are warranted, therefore, to conclude, that carbonic acid is not merely mechanically mixed, but that it is chemically combined with the other constituent parts of the atmosphere. It is to the affinity which exists between carbonic acid and air that we are to ascribe the rapidity with which it disperses itself through the atmosphere, notwithstanding its great specific gravity. Fontana mixed 20,000 cubic inches of carbonic acid gas with the air of a close room, and yet half an hour after he could not discover the traces of carbonic acid in that air. Water impregnated with carbonic acid, when exposed to the air, very soon loses the whole of the combined gas. And when a phial full of carbonic acid gas is left uncorked, the gas, as Bergman first ascertained, very soon disappears, and the phial is found filled with common air.

The difficulty of separating this gas from air has hitherto prevented the possibility of determining with accuracy the relative quantity of it in a given bulk of air; but from the experiments which have been made, we may conclude with some degree of confidence, that it is not very different from 0·01. From the experiments of Humboldt, it appears to vary from 0·005 to 0·01. This variation will by no means appear improbable, if we consider that immense quantities of carbonic acid gas must be constantly mixing with the atmosphere, as it is formed by the respiration of animals, by combustion, and several other processes which are going on continually. The quantity, indeed, which is daily formed by these processes is so great, that at first sight it appears astonishing that it does not increase rapidly. The consequence of such an increase would be fatal, as air containing 0·1 of carbonic acid extinguishes light, and is destructive to animals. But there is reason to conclude, that this gas is decomposed by vegetables as rapidly as it forms.

III. *Water of the atmosphere.* That the atmosphere contains water, has been always known. The rain and dew which so often precipitate from it, the clouds and fogs with which it is often obscured, and which deposit moisture on all bodies exposed to them, have demonstrated its existence in every age. Even when the atmosphere is perfectly transparent, water may be extracted from it in abundance by certain substances. Thus, if concentrated sulphuric acid be exposed to air, it gradually attracts so much moisture, that its weight is increased more than three times: it is converted into diluted acid, from which the water may be separated by distillation. Substances which have the property of abstracting water from the atmosphere, have received the epithet of *hygroscopic*, because they point out the presence of that water. Sulphuric acid, the fixed alkalies, muriate of lime, nitrate of lime, and, in general, all deliquescent salts, possess this property. The greater number of animal and vegetable bodies likewise possess it. Many of them take water from moist air, but give it out again to the air when dry. These bodies augment in bulk when they receive moisture, and diminish again when they part with it. Hence some of them have been employed as *hygrometers*, or measures of the quantity of moisture contained in the air around them. This they do by means of the increase or diminution of their length, occasioned by the addition or abstraction of moisture. This change of length is precisely marked by means of an index. The most ingenious and accurate hygrometers are those of Saussure and Deluc. In the first, the substance employed to mark the moisture is a human hair, which by its contractions and dilatations is made to turn round an index. In the second, instead of a hair, a very fine thin slip of whalebone is employed. The scale is divided into 100°. The beginning of the scale indicates extreme dryness, the end of it indicates extreme moisture. It is graduated by placing it first in air made as dry as possible by means of salts, and afterwards in air saturated with moisture. This gives the extremes of the scale, and the interval between them is divided into 100 equal parts.

The water, which constitutes a component part of the atmosphere, appears to be in a state of vapour, and chemically combined with air in the same manner as one gas is combined with another. As the quantity of the water contained in the atmosphere varies considerably, it is impossible to ascertain its amount with any degree of accuracy.

IV. *Bodies found in the atmosphere.* From what has been advanced, it appears that the atmosphere consists chiefly of three distinct elastic fluids united together by chemical affinity; namely, air, vapour, and carbonic acid gas; differing in their proportions at

different times and in different places; the average proportion of each is,

98·6	air
1·0	carbonic acid
0·4	water
100·0	

But besides these bodies, which may be considered as the constituent parts of the atmosphere, the existence of several other bodies has been suspected in it. It is not meant to include here among those bodies electric matter, or the substance of clouds and fogs, and those other bodies which are considered as the active agents in the phenomena of meteorology, but merely those foreign bodies which have been occasionally found or suspected in air. Concerning these bodies, however, very little satisfactory is known at present, as we are not in possession of instruments sufficiently delicate to ascertain their presence. We can indeed detect several of them actually mixing with air, but what becomes of them afterwards we are unable to say.

1. *Hydrogene gas* is said to have been found in air situated near the crater of volcanoes, and it is very possible that it may exist always in a very small proportion in the atmosphere; but this cannot be ascertained till some method of detecting the presence of hydrogene combined with a great proportion of air be discovered.

2. *Carburetted hydrogene gas* is often emitted by marshes in considerable quantities during hot weather. But its presence has never been detected in air; so that in all probability it is again decomposed by some unknown process.

3. *Oxygene gas* is emitted abundantly by plants during the day. There is some reason to conclude that this is in consequence of the property which plants have of absorbing and decomposing carbonic acid gas. Now as this carbonic acid gas is formed at the expense of the oxygene of the atmosphere, as this oxygene is again restored to the air by the decomposition of the acid, and as the nature of atmospheric air remains unaltered, it is clear that there must be an equilibrium between these two processes; that is to say, all the carbonic acid formed by combustion must be again decomposed, and all the oxygene abstracted must be again restored. The oxygene gas which is thus continually returning to the air by combining with it, makes its component parts always to continue in the same ratio.

4. The *smoke* and other bodies which are continually carried into the air by evaporation, &c. are probably soon deposited again, and cannot therefore be considered with propriety as forming parts of the atmosphere.

5. There is another set of bodies, which are occasionally combined with air, and which, on account of the powerful action which they produce on the human body, have attracted a great deal of attention. These are known by the name of *contagions*.

That there is a difference between the atmosphere in different places as far as respects its effects upon the human body, has been considered as an established point in all ages. Hence some places have been celebrated as healthy, and others avoided as pernicious to the human constitution. It is well known that in pits and mines the air is often in such a state as to suffocate almost instantaneously those who attempt to breathe it. Some places are frequented by peculiar diseases. It is known that those who are much in the apartments of persons ill of certain maladies, are extremely apt to catch the infection; and in prisons and other places, where crowds of people are confined together, when diseases once commence, they are wont to make dreadful havoc. In all these cases, it has been supposed that a certain noxious matter is dissolved by the air, and that it is the action of this matter which produces the mischief.

This noxious matter is, in many cases, readily distinguished by the peculiarly disagreeable smell which it communicates to the air. No doubt this matter differs according to the diseases which it communicates, and the substance from which it has originated. Morveau lately attempted to ascertain its nature; but he soon found the chemical tests hitherto discovered altogether insufficient for that purpose. He has put it beyond a doubt, however, that this contagious matter is of a compound nature, and that it is destroyed altogether by certain agents. He exposed infected air to the action of various bodies, and he judged of the result by the effect which these bodies had in destroying the fœtid smell of the air. The following is the result of his experiments:

1. *Odorous* bodies, such as benzoin, aromatic plants, &c. have no effect whatever.

2. Neither have the *solutions of myrrh, benzoin*, &c. in alkohol, though agitated in infected air.

3. *Pyroligneous acid* is equally inert.

4. *Gunpowder*, when fired in infected air, displaces a portion of it; but what remains, still retains its fœtid odour.

5. *Sulphuric acid* has no effect; sulphurous acid weakens the odour, but does not destroy it.

6. *Distilled vinegar* diminishes the odour, but its action is slow and incomplete.

7. *Strong acetic acid* acts instantly, and destroys the fœtid odour of infected air completely.

8. The *fumes of nitric acid*, first employed by Dr. Carmichael Smith, are equally efficacious.

9. *Muriatic acid gas*, first pointed out as a proper agent by Morveau himself, is equally effectual.

10. But the most powerful agent is *oxy-*

muriatic acid gas, first proposed by Mr. Cruikshanks, and now employed with the greatest success in the British navy and military hospitals.

Thus there are four substances which have the property of destroying contagious matter, and of purifying the air; but acetic acid cannot easily be obtained in sufficient quantity, and in a state of sufficient concentration to be employed with advantage. Nitric acid is attended with inconvenience, because it is almost always contaminated with nitrous gas. Muriatic acid and oxymuriatic acid are not attended with these inconveniences; the last deserves the preference, because it acts with greater energy and rapidity. All that is necessary is to mix together two parts of salt with one part of the black oxide of manganese, to place the mixture in an open vessel in the infected chamber, and to pour upon it two parts of sulphuric acid. The fumes of oxymuriatic acid are immediately exhaled, fill the chamber, and destroy the contagion. Of late the bichlorate of soda has superseded all these. Diluted and sprinkled about the room, it is found to destroy the fœtid smell, and, it is believed, the infections of fever, &c. also.

Ato'chia. (From α, neg. and τοκος, offspring; from τικτω, to bring forth.)

1. Inability to bring forth children.
2. Difficult labour.

ATOM. (*Atomus*, *i.* m.; from α, neg. and τεμνω, to cut or divide.) The smallest particle of matter. Asclepiades taught that atoms were the primordia of all things, and that they were not perceptible to our senses, but only to our understandings: that they had no qualities; for the qualities of bodies which they compose, depend on the order, figure, and number of many atoms joined together. Galen says that Asclepiades, adhering to the sentiments of Democritus and Epicurus with regard to the principles of bodies, had only changed the former names of things, calling *atoms* molecules, and a *vacuum* pores. Molecules were hence divisible, but *atoms* not. This doctrine has been generally admitted as sufficiently probable, though incapable of demonstration.

In the chemical combination of bodies with each other, it is observed that some unite in all proportions; others in all proportions as far as a certain point, beyond which combination no longer takes place: there are also many examples, in which bodies unite in one proportion only, and others in several proportions; and these proportions are definite, and in the intermediate ones no combination ensues. And it is remarkable, that when one body enters into combination with another, in several different proportions, the numbers indicating the greater proportions are exact simple multiples of that denoting the smallest proportion. In other words, if the smallest portion in which B combines with A, be denoted by 10, A may combine with twice 10 of B, or with three times 10, and so on; but with no intermediate quantities. Examples of this kind have of late so much increased in number that the law of simple multiples bids fair to become universal with respect at least to chemical compounds, the proportions of which are definite. Mr. Dalton has founded what may be termed the atomic theory of the chemical constitution of bodies. Till this theory was proposed we had no adequate explanation of the uniformity of the proportions of chemical compounds; or of the nature of the cause which renders combination in other proportions impossible. The following is a brief illustration of the theory. Though we appear, when we effect the chemical union of bodies, to operate on masses, yet it is consistent with the most rational view of the constitution of bodies, to believe, that it is only between their ultimate particles, or atoms, that combination takes place. By the term *atoms*, it has been already stated, we are to understand the smallest parts of which bodies are composed. An atom, therefore, must be mechanically indivisible, and of course a fraction of an atom cannot exist, and is a contradiction in terms. Whether the atoms or different bodies be of the same size, or of different sizes, we have no sufficient evidence. The probability is, that the atoms of different bodies are of unequal sizes; but it cannot be determined whether their sizes bear any regular proportion to their relative weights. We are equally ignorant of their shape; but it is probable, though not essential to the theory, that they are spherical. This, however, requires a little qualification. The atoms of all bodies, probably, consist of a solid corpuscle, forming a nucleus, and of an atmosphere of heat, by which that corpuscle is surrounded, for absolute contact is never supposed to take place between the atoms of bodies. The figure of a single atom may therefore be supposed to be spherical. But in compound atoms, consisting of a single central atom surrounded by other atoms of a different kind, it is obvious that the figure (contemplating the solid corpuscles only) cannot be spherical; yet if we include the atmosphere of heat, the figure of a compound atom may be spherical, or some shape approaching to a sphere. Taking for granted that combination takes place between the atoms of bodies only, Mr. Dalton has deduced from the relative weights in which bodies unite, the relative weights of their ultimate particles or atoms. When only one combination of any two elementary bodies exists, he assumes, unless the contrary can be proved, that its elements are united atom to atom: single combinations of this sort he calls *binary*. But if several compounds can be obtained from the same elements, they combine, he supposes, in proportions expressed by some simple multiple of the number of atoms. The following table exhibits a view of these combinations:

1 Atom of A + 1 atom of B = 1 atom of C, binary.
1 Atom of A + 2 atoms of B = 1 atom of D, ternary.
2 Atoms of A + 1 atom of B = 1 atom of E, ternary.
1 Atom of A + 3 atoms of B = 1 atom of F, quaternary.
3 Atoms of A + 1 atom of B = 1 atom of G, quaternary.

A different classification of atoms has been proposed by Berzelius, viz. into, 1. Elementary atoms. 2. Compound atoms. The compound atoms he divides again into three different species; namely, 1st, Atoms formed of only two elementary substances, united or compound atoms of the first order. 2dly, Atoms composed of more than two elementary substances, and these as they are only found in organic bodies, or bodies obtained by the destruction of organic matter, he calls organic atoms. 3dly, Atoms formed by the union of two or more compound atoms; as, for example, the salts. These he calls compound atoms of the second order. If elementary atoms of different kinds were of the same size, the greatest number of atoms of it that could be combined with an atom of B would be 12; for this is the greatest number of spherical bodies that can be arranged in contact with a sphere of the same diameter. But this equality of size, though adopted by Berzelius, is not necessary to the hypothesis of Mr. Dalton, and is, indeed, supposed by him not to exist.

As an illustration of the mode in which the weight of the atoms of bodies is determined, let us suppose that any two elementary substances, A and B, form a binary compound, and that they have been proved experimentally to unite in the proportion by weight of five of the former, to four of the latter, then since (according to the hypothesis) they unite particle to particle, those numbers will express the relative weight of their atoms. But besides combining atom to atom singly, 1 atom of A may combine with 2 of B, or with 3, 4, &c. or 1 atom of B may combine with 2 of A, or with 3, 4, &c. When such a series of compounds exists, the relative proportion of their elements ought necessarily on analysis to be proved to be *5* of A to 4 of B, or *5* to $(4+4=)$ 8 or *5* to $(4+4+4=)$ 12, &c. or contrariwise, 4 of B to *5* of A, or 4 to $(5+5=)$ 10 or 4 to $(5+5+5=)$ 15. Between these there ought to be no intermediate compounds, and the existence of any such (as *5* of A to 6 of B, or 4 of B to $7\frac{1}{2}$ of A) would, if clearly established, militate against the hypothesis. To verify these numbers, it may be proper to examine the combinations of A and B with some third substance, for example, with C. Let us suppose that A and C form a binary compound, in which analysis discovers *5* parts of A and 3 of C. Then if C and B are also capable of forming a binary compound, the relative proportion of its elements ought to be 4 of B to 3 of C, for these numbers denote the relative weights of their atoms. Now, this is precisely the method by which Mr. Dalton has deduced the relative weights of oxygene, hydrogene, and nitrogene, the two first from the known composition of water, and the two last from the proportion of the elements of ammonia. Extending the comparison to a variety of other bodies, he has obtained a scale of the relative weights of their atoms. In several instances additional evidence is acquired of the accuracy of the weight assigned to an element, by our obtaining the same number from an investigation of several of its compounds. For example,

1. In water, the hydrogene is to the oxygene as 1 to 8.

2. In olefiant gas, the hydrogene is to the carbon as 1 to 8.

3. In carbonic acid, the oxygene is to the carbon as 8 to 6.

Whether, therefore, we determine the weight of the atom of carbon from the proportion in which it combines with hydrogene, or with oxygene, we arrive at the same number 6, an agreement which, as it occurs in various other instances, can scarcely be an accidental coincidence. In similar manner, 8 is deducible, as representing the atom of oxygene, both from the combination of that base with hydrogene, and with carbon, and 1 is referred to be the relative weight of the atom of hydrogene, from the two principal compounds into which it enters. In selecting the body which should be assumed as unity, Mr. Dalton has been induced to fix on hydrogene, because it is that body which unites with others in the smallest proportion. Thus, in water, we have 1 of hydrogene, by weight, to 8 of oxygene; in ammonia, 1 of hydrogene to 14 of nitrogene; in carburetted hydrogene, 1 of hydrogene to 6 of carbon; and in sulphuretted hydrogene 1 of hydrogene to 16 of sulphur. Taking for granted that all these bodies are binary compounds, we have the following scale of numbers expressive of the relative weights of the atoms of their elements:

Hydrogene - -	1
Oxygene - -	8
Nitrogene - -	14
Carbon - -	6
Sulphur - -	16

Drs. Wollaston and Thomas, and Professor Berzelius, on the other hand, have assumed oxygene as the decimal unit (the first making it 10, the second 1, and the third 100), chiefly with a view to facilitate the estimation of its numerous compounds with other bodies. This perhaps is to be regretted, even though the change may be in some re-

spects eligible, because it is extremely desirable that chemical writers should employ an universal standard of comparison for the weights of the atoms of bodies. It is easy, however, to reduce their number to Mr. Dalton's by the rule of proportion. Thus, as 8, Mr. Dalton's number for oxygene, corrected by the latest experiments, is to 1, his number for hydrogene, so is 10, Dr. Wollaston's number for oxygene, 1·25, the number for hydrogene. Sir H. Davy has assumed, with Mr. Dalton, the atom of hydrogene as unity; but that philosopher, and Berzelius also, have modified the theory, by taking for granted that water is a compound of one proportion (atom) of oxygene, and two proportions (atoms) of hydrogene. This is founded on the fact that two measures of hydrogene gas and one of oxygene gas are necessary to form water; and on the supposition that equal measures of different gases contain equal numbers of atoms. And as in water the hydrogene is to the oxygene by weight as 1 to 8, two atoms or volumes of hydrogene must, on this hypothesis, weigh 1, and 1 atom of volume of hydrogene 8; or, if we denote a single atom of hydrogene by 1, we must express an atom of oxygene by 16. It is objectionable, however, to this modification of the atomic theory, that it contradicts a fundamental proposition of Mr. Dalton, the consistency of which with mechanical principles he has fully shown; namely, that that compound of any two elements which is with most difficulty decomposed, must be presumed, unless the contrary can be proved, to be a binary one. It is easy to determine, in the manner already explained, the relative weights of the atoms of two elementary bodies which unite only in one proportion; but when one body unites in different proportions with another, it is necessary, in order to ascertain the weight of its atom, that we should know the smallest proportion in which the former combines with the latter. Thus, if we have a body A, 100 parts of which by weight combine with not less than 32 of oxygene, the relative weight of its atom will be to that of oxygene as 100 to 32; or reducing these numbers to their lowest terms, as 25 to 8; and the number 25 will therefore express the relative weight of the atom of A. But if, in the progress of science, it should be found that 100 parts of A are capable of uniting with 16 parts of oxygene, then the relative weight of the atom of A must be doubled; for as 100 is to 16, so is 50 to 8. This example will serve to explain the changes that have been sometimes made in assigning the weights of the atoms of certain bodies; changes which, it must be observed, always consist either in a multiplication or division of the original weight by some simple number. There are, it must be acknowledged, a few cases in which one body combines with another in different proportions; and yet the greater proportions are not multiples of the less by any entire number. For example, we have two oxides of iron, the first of which consists of 100 iron and about 30 oxygene; the second of 100 iron and about 45 oxygene. But the numbers 30 and 45 are to each other as 1 to $1\frac{1}{2}$. It will, however, render these numbers 1 and $1\frac{1}{2}$ consistent with the law of simple multiples: if we multiply each of them by 2, it will change them to 2 and 3; and if we suppose that there is an oxide of iron, though it has not yet been obtained experimentally, consisting of 100 iron and 15 oxygene; for the multiplication of this last number by 2 and 3 will then give us the known oxides of iron. In some cases where we have the apparent anomaly of 1 atom of one substance united with $1\frac{1}{2}$ of another, it has been proposed by Dr. Thomson to remove the difficulty by multiplying both numbers by 2, and by assuming that in such compounds we have 2 atoms of the one combined with 3 atoms of the other. Such combinations, it is true, are exceptions to a law deduced by Berzelius, that in all inorganic compounds one of the constituents is in the state of a single atom; but they are in no respect inconsistent with the views of Mr. Dalton, and are indeed expressly admitted by him to be compatible with this hypothesis, as well as confirmed by experience. Thus, it will appear in the sequel, that some of the compounds of oxygene with nitrogene are constituted in this way. Several objections have been proposed to the theory of Mr. Dalton: of these it is only necessary to notice the most important. It has been contended, that we have no evidence when one combination only of two elements exists, that it must be a binary one, and that we might equally well suppose it to be a compound of 2 atoms of the one body with 1 atom of the other. In answer to this objection, we may urge the probability, that when two elementary bodies A and B unite, the most energetic combination will be that in which one atom of A is combined with one atom of B: for an additional atom of B will introduce a new force, diminishing the attraction of these elements for each other; namely, the mutual repulsion of the atoms of B; and this repulsion will be greater in proportion as we increase the number of the atoms of B. 2dly, It has been said, that when more than one compound of two elements exists, we have no proof which of them is the binary compound, and which the ternary. For example, that we might suppose carbonic acid to be a compound of an atom of charcoal, and an atom of oxygene; and carbonic oxide, of an atom of oxygene with two atoms of charcoal. To this objection, however, it is a satisfactory answer that such a constitution of carbonic acid and carbonic oxide would be directly contradictory of a law of chemical combination; namely, that it is attended, in most cases, with an increase of specific gravity. It would

be absurd, therefore, to suppose carbonic acid, which is the heavier body, to be only once compounded; and carbonic oxide, which is the lighter, to be twice compounded. Moreover, it is universally observed, that of chemical compounds, the most simple are the most difficult to be decomposed; and this being the case with carbonic oxide, we may naturally suppose it to be more simple than carbonic acid. 3dly, It has been remarked, that instead of supposing water to consist of an atom of oxygene united with an atom of hydrogene, and that the atom of the former is $7\frac{1}{2}$ times heavier than that of the latter, we might with equal probability conclude, that in water we have $7\frac{1}{2}$ times more atoms in number of oxygene than of hydrogene. But this, if admitted, would involve the absurdity that in a mixture of hydrogene and oxygene gases, so contrived that the ultimate atoms of each should be equal in number, 7 atoms of oxygene would desert all the proximate atoms of hydrogene in order to unite with one at a distance, for which they must have naturally a less affinity.

Atom, component. Those atoms which, being different in their nature, united, form a third or compound atom.

Atom, compound. See *Atom component.*

Atom, elementary. Such as have not been decomposed.

Atom, organic. Such as are only found in organic bodies.

Atom, primary. Such as have not been decomposed.

Atom, simple. The minutest particles of a body. See *Atom.*

Atomic theory. See *Atom.*

ATONIC. *Atonicus.* Having a diminution of strength.

A'TONY. (*Atonia, æ.* f.; from α, neg. and τεινω, to extend.) Weakness, or a defect of muscular power.

ATRABI'LIS. (From *atra*, black, and *bilis*, bile.) 1. Black bile.

2. Melancholy.

Atrabiliaræ capsulæ. See *Renal glands.*

ATRACHE'LUS. (*us, i.* m.; from α, priv. and τραχηλος, the neck.) Short-necked; in opposition to *macrochelus.*

ATRACTYLIS. (*is, is.* f.; from ατρακτος, a spindle.) The distaff thistle. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

Atractylis gummifera. Gummy-rooted atractylis; pine thistle. The root abounds with a gummy matter, which exudes on being wounded. It is at first milky, and concretes into white tenaceous masses, which resemble wax, and become blackish on being handled. It is chewed by the Italians, in whose country it grows, for the purpose of strengthening the gums. This plant is also called *Carlina gummifera, Carduus pinea,* and *Ixine.*

Atrage'ne. See *Clematis vitalba.*

Atrame'ntum sutorium. A name of green vitriol.

Atra'sia. (From α, neg. and τιτραω, to perforate.) *Atresia.* 1. Imperforate.

2. A disease where the natural openings, as the anus or vagina, have not their usual orifice.

Atretus. (Ἀτρητοι; from α, neg. and τραω, to perforate.) A term formerly applied to one who had an imperforate anus or genitals.

A'TRICES. (From α, priv. and θριξ, hair.) *Attrices.* Small tubercles about the anus, which occasionally recede and again return.

A'tricus. A small sinus in the rectum, which does not reach so far up as to perforate into its cavity.

A'TRIPLEX. (*ex, icis.* f.; said to be named from its dark colour, whence it was called *Atrum olus.*) The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Monœcia.*

Atriplex fœtida. See *Chenopodium vulvaria.*

Atriplex halimus. The sea-purslain: considered an antiscorbutic.

Atriplex hortensis. See *Atriplex sativa.*

Atriplex sativa. Orache: the systematic name for the *Atriplex hortensis* of the pharmacopœias. The herb and seed of this plant, *Atriplex—caule erecto herbaceo, foliis triangularibus,* of Linnæus, have been exhibited medicinally as antiscorbutics; but the practice of the present day appears to have totally rejected them.

ATROPA. (*a, æ.* f.; from Ατροπος, the goddess of destiny: so called from its fatal effects.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

Atropa belladonna. Deadly nightshade or dwale. The systematic name for the *Belladonna* of the pharmacopœias; called also *Solanum melanocerasus,* and *Solanum lethale. Atropa—caule herbaceo; foliis ovatis integris,* of Linnæus. This plant has been long known as a strong poison of the narcotic kind, and the berries have furnished many instances of their fatal effects, particularly upon children that have been tempted to eat them. The activity of this plant depends on a principle *sui generis,* called *Atropia.* (See *Atropia.*) The leaves were first used internally, to discuss scirrhous and cancerous tumours; and from the good effects attending their use, physicians were induced to employ them internally for the same disorders; and there are a considerable number of well-authenticated facts, which prove them a very serviceable and important remedy. The dose, at first, should be small; and gradually and cautiously increased. Five grains are considered a powerful dose, and apt to produce dimness of sight, vertigo, &c.

Atropa mandragora. The mandrake, the root of which often resembles the shape of man, consisting of two lateral shoots or arms, a thick trunk or body, and a bifurcation which corresponds to the legs. This plant affords the *radix mandragoræ* of the pharmacopœias. The boiled root is employed in the form of poultice, to discuss indolent tumours.

ATROPHY. (*Atrophia, æ.* f.; from α, neg. and τρεφω, to nourish.) A wasting away of the flesh.

In this disease the complexion is pale, often squalid; the skin dry and wrinkled; the muscles shrunk and inelastic, and there is little or no fever. Atrophia means literally *innutrition;* a designation peculiarly significant, as the disease in all its forms or varieties seems to be dependent on a defect in the quantity, quality, or application of the nutrient part of the blood, and thus lays a foundation for the three following varieties:

(α) *Inopiæ.* Atrophy of want; the blood being innutritious from scarcity or pravity of food.

(β) *Profusionis.* Atrophy of waste; the blood deprived of nutrition by profuse evacuations.

(γ) *Debilitatis.* Atrophy of debility; the nutrition not sufficiently introduced into the blood by the chylific organs, or not sufficiently separated from it by the assimilating.

In order that the body should maintain its proper strength and plumpness, it is necessary that the digestive organs should be supplied with a proportion of food adequate to the perpetual wear of its respective parts: for this wear, as we all know, produces a waste; and hence the emaciation sustained by those who suffer from famine, in which there is no food introduced into the stomach, or from a meagre or unwholesome diet, in which the quantity introduced is below the ordinary demand. It is this condition that forms the *atrophy of want.*

But the ordinary demand may not be sufficient for the body, or some part of it may be in a state of inordinate wear and waste, as in very severe and protracted labour, in which the supply is rapidly carried off by profuse perspiration, or in rupturing or puncturing a large artery, in which the same effect is produced by a profuse hæmorrhage. Any other extreme or chronic evacuation may prove equally mischievous, as an excessive secretion from the bowels, from the vagina, from the salivary glands, from the breasts; as where a delicate wet-nurse suckles two strong infants. And hence the origin of the *atrophy of waste.*

Now, in all these cases, wherever the system is in possession of an ordinary portion of health, there is a strong effort made by the digestive powers to recruit the excessive expenditure by an additional elaboration of nutriment; and the instinctive effort runs through the entire chain of action to the utmost reach of the assimilating powers, or those secernents with which every organ is furnished to supply itself with a succession of like matter from the common pabulum of the blood. Hence the stomach is always in a state of hunger, as in the case of famine, profuse loss of blood, or recovery from fever; all the chylific organs secrete an unusual quantity of resolvent juices, an almost incredible quantity of food is demanded, and is chymified, chylified, and absorbed, almost as soon as it enters the stomach; the heart beats quicker, the circulation is increased, and the new and unripe blood is hurried forwards to the lungs, which more rapidly expand themselves for the purpose, to be completed by the process of ventilation: in which state it is as rapidly laid hold of by the assimilating powers of every organ it seems to fly to, and almost instantly converted into its own substance. Such is the wonderful sympathy that pervades the entire frame, and that runs more particularly through that extensive chain of action which commences with the digestive and reaches to the assimilating organs, constituting its two extremities.

So long as the surplus of supply is equal to the surplus of expenditure, no perceptible degree of waste ensues; but the greater the demand the greater the labour, and the turmoil is too violent to be long persevered in. The excited organs must have rest, or their action will by degrees become feeble and inefficient. And if this take place while the waste is still continuing, emaciation will be a necessary consequence, even in the midst of the greatest abundance.

Thus far we have contemplated the animal frame in a firm and healthy constitution, and have supposed a general harmony of action pervading every link of the extensive chain of nutrition from the digestive organs to the assimilating powers. But we do not always find it in this condition; and occasionally perceive, or think we perceive, that this necessary harmony is intercepted in some part or other of its tenour: that the digestive powers, or some of them, do not perform their trust as they should do: or that the assimilating powers, or some of them, exhibit a like default: or that the blood is not sufficiently elaborated in its course, or becomes loaded with some peculiar acrimony. And hence another cause, or rather an assemblage of other causes, competent to the disease before.

It is from the one or the other of these sources that we are in most, perhaps in all cases, to derive the third modification of this disease, which is distinguished, for want of a better term, by that of *atrophy of debility.* The disease, under this form, is often very complex, and it is difficult to trace out what link in the great chain of action has first given way. Most probably, indeed, it is sometimes one link, and sometimes an-

other. But from the sympathy which so strikingly pervades the whole, we see at once how easy it is for an unsoundness in one quarter to extend its influence to another, till the disease becomes general to the system.

Where atrophy is connected with a morbid state of the digestive organs, we have a little light thrown on the nature of the disease, but not much. For first, this indigestion does not necessarily produce this effect, since it is no uncommon thing for dyspeptic patients to become plethoric, and gain, instead of lose, in bulk of body. And next, the morbid state of these organs may be a secondary instead of a primary affection, and be dependent upon a general habitude or some other unsound condition of the assimilating powers, constituting the other end of the chain; and hence exercising a stronger sympathy over them than over any intermediate organs whatever: as the digestive organs themselves, if the disease should have originated in them, may exercise a like sympathy over the assimilating powers, and hence produce that general extenuation which, as we have just observed, is not a necessary consequence of dyspepsy. It is at least put beyond a doubt, that more than one set of organs is connected in the atrophy of debility.

Where this atrophy takes place in infants at the breast or young children, it is ushered in by a flaccidity of the flesh, a paleness of the countenance, sometimes alternating with flushes, a bloated prominence of the belly, irregularity of the bowels, pendulousness of the lower limbs, general sluggishness, and debility, and, where walking has been acquired, a disinclination to motion, with fretfulness in the day, and restlessness at night.

There is at first no perceptible fever, no cough, or difficulty of breathing: but if the disease continue, all these will appear as the result of general irritation, and the skin will become dry and heated, and be covered over with ecthyma, impetigo, or some other squalid eruption. The breath is generally offensive; the urine varies in colour and quantity; and in infants at the breast, the stools are often ash-coloured or lienteric, or greenish, loose, and griping. The appetite varies; in some cases it fails, in others it is insatiable.

Where these symptoms, or the greater part of them, occur to an infant at the breast, it becomes us, in the first place, to be particularly attentive to the manner in which it has been nursed, in respect to cleanliness, purity of air, warmth, and exercise: we have next to turn our attention to the nurse's milk; and afterwards to an examination whether the infant is breeding teeth, or has worms, or there be any scrophulous taint in the blood. For the last we have no immediate remedy; the rest we must correct as we find occasion. And if we have no reason to be satisfied upon any of these points, it may still be advisable to change the milk. It is not easy to detect all the peculiarities of milk that may render it incapable of affording full nutrition; and there is reason to believe that one infant may pine away on what proves a healthy breast to another.

In children on their feet, who are confined to the filth and suffocating air of a narrow cell, the common habitation of a crowding family, from Sunday morning to Saturday night; or who are pressed into the service of a large manufactory, and have learnt to become a part of its machinery before they have learnt their mother-tongue; there is no difficulty in accounting for the atrophy that so often prevails among them. The appetite does not here so much fail, as the general strength; their meals are, perhaps, doled out at the allotted hours by weight and measure; but still they are falling victims to emaciation; and are affording proof that air and exercise are of as much importance as food itself; that there are other organs than those of digestion upon which the emaciation must depend; and that, unless the supply furnished by the food to the blood-vessels be sufficiently oxygenised by ventilation, and coagulated by exercise, the blood itself, however pure from all incidental acrimony or hereditary taint, will never stimulate the secernents of the various organs to which it travels, to a proper separation of its constituent principles, and a conversion to their own substance.

In all these cases, therefore, the proximate cause seems to be lodged principally in the assimilating powers of the system; and whenever the digestive organs grow infirm also, it is rather by sympathy with the former than by any primary affection of their own.

In the atrophy of debility common to old age, the cellular membrane, that is, the part containing as well as the parts contained, seems rather to shrivel away, in many cases to be carried away by absorption, and the muscular fibres to become dried up and rigid, rather than loose and flabby. In this case, the assimilating powers seem to have done their duty to the last, and like an empty stomach when loaded with gastric juice in a moment of sudden death, to have preyed upon and devoured themselves: for it is probable that more than half the bulk of the muscles and the parenchyma of many of the organs is carried off in the same manner. Here, therefore, we are to look for the proximate cause of the disease towards the other end of the chain, or among the chylific viscera. And we shall not in general look in vain. Not, indeed, that we shall always, or even commonly, find it in the stomach or in the liver; for the appetite may not fail, though its demand is but small and it is easily satisfied, and probably digests what is introduced into it. Yet here the greater part of the food rests; or rather it passes through the intestines, and very little into the lacteals, insomuch that many of our

most celebrated anatomists have thought that the mesenteric glands of old people become obliterated; while Ruysch contended that mankind pass the latter part of their lives without lacteals, and that he himself was doing so at the time of writing.

Where the disease depends upon a want of wholesome food, or of food of any kind, the cure is obvious: where upon profuse evacuations, it falls within the precincts of some other disease, and is to be governed by its remedies. And where the cause is an infirm condition of any part of the chain of nutritive functions, from the chylific to the assimilating organs, the same tonic course of medicine that may be advisable in the one case will be equally advisable in the other. The bowels should be kept in a state of regularity: mercurial alteratives may sometimes be required, though less frequently than under one or two varieties of tabes; the bitters and astringents that are recommended against indigestion, may be had recourse to according to the peculiarity of the case; and cleanliness, fresh air, exercise, and cold bathing, will complete the rest. The atrophy of old age is to be met by the richest foods, wine, and warmth.

ATROPIA. (*a*, *æ*. f.; so called because obtained from the *Atropa belladonna*.) A poisonous vegetable principle, probably alkaline, recently extracted from the *Atropa belladonna*, or deadly nightshade, by Brande. He boiled two pounds of dried leaves of *Atropa belladonna* in a sufficient quantity of water, pressed the decoction out, and boiled the remaining leaves again in water. The decoctions were mixed, and some sulphuric acid was added, in order to throw down the albumen and similar bodies: the solution is thus rendered thinner, and passes more readily through the filter. The decoction was then supersaturated with potash, by which he obtained a precipitate that, when washed with pure water and dried, weighed 89 grains. It consisted of small crystals, from which, by solution in acids, and precipitation by alkalies, the new alkaline substance, atropia, was obtained in a state of purity.

The external appearance of atropia varies considerably, according to the different methods by which it is obtained. When precipitated from the decoction of the herb by a solution of potash, it appears in the form of very small short crystals, constituting a sandy powder. When thrown down by ammonia from an aqueous solution of its salts, it appears in flakes like wax, if the solution is much diluted; if concentrated, it is gelatinous like precipitated alumina; when obtained by the cooling of a hot solution in alkohol, it crystallises in long, acicular, transparent, brilliant crystals, often exceeding one inch in length, which are sometimes feathery, at other times star-like in appearance, and sometimes they are single crystals. Atropia, however, is obtained in such a crystalline state only when rendered perfectly pure by repeated solution in muriatic acid, and precipitation by ammonia. When pure, it has no taste. Cold water has hardly any effect upon dried atropia, but it dissolves a small quantity when it is recently precipitated; and boiling water dissolves still more. Cold alkohol dissolves but a minute portion of atropia; but when boiling, it readily dissolves it. Æther and oil of turpentine, even when boiling, have little effect on atropia.

Sulphate of atropia crystallises in rhomboidal tables and prisms with square bases. It is soluble in four or five parts of cold water. It seems to effloresce in the air, when freed as much as possible from adhering sulphuric acid, by pressure between the folds of blotting paper. Its composition by Brande seems to be,

Atropia,	38·93
Sulphuric acid,	36·52
Water,	24·55
	100·00

This analysis would make the prime equivalent of atropia so low as 5·3, oxygene being 1. Muriate of atropia appears in beautiful white brilliant crystals, which are either cubes or square plates similar to the muriate of *daturia*. He makes the composition of this salt to be,

Atropia,	39·19
Muriatic acid,	25·40
Water,	5·41
	100·00

This analysis was so conducted as to be entitled to little attention. Nitric, acetic, and oxalic acids, dissolve atropia, and form acicular salts, all soluble in water and alkohol. M. Brande was obliged to discontinue his experiments on the properties of this alkali. The violent headachs, pains in the back, and giddiness, with frequent nausea, which the vapour of atropia occasioned while he was working on it, had such a bad effect on his weak health, that he has entirely abstained from any further experiments.

He once tasted a small quantity of sulphate of atropia. The taste was not bitter, but merely saline; but there soon followed violent headach, shaking in the limbs, alternate sensations of heat and cold, oppression of the chest and difficulty in breathing, and diminished circulation of the blood. The violence of these symptoms ceased in half an hour. Even the vapour of the different salts of atropia produces giddiness. When exposed for a long time to the vapours of a solution of nitrate, phosphate, or sulphate of atropia, the pupil of the eye is dilated. This happened frequently to him, and when he tasted the salt of atropia, it occurred to such a degree, that it remained so for twelve hours, and the different degrees of light had no influence. *Schweigger's Journal*, xxviii. 1.

We may observe on the above, that it is highly improbable that atropia should have a saturating power, intermediate between potash and soda.

ATROPURPUREUS. Very dark reddish purple. See *Colour.*

ATRORUBEUS. Dark red. See *Colour.*

ATROVIRENS. Dark green. See *Colour.*

ATTENTION. See *Mens.*

ATTE'NUANT. (*Attenuans*; from *attenuo*, to make thin.) That which possesses the power of imparting to the blood a more thin and more fluid consistence than it had, previous to its exhibition; such are, water, whey, and all aqueous fluids.

ATTENUA'TUS. Attenuate: growing slender.

ATTO'LLENS. (From *attollo*, to lift up.) Lifting up: applied to some muscles, the office of which is to lift up the parts they are affixed to.

Attollens aurem. A common muscle of the ear: the *Attollens auriculæ* of Albinus and Douglas; *Superior auris* of Winslow; and *Attollens auriculam* of Cowper. It arises, thin, broad, and tendinous, from the tendon of the occipito-frontalis, from which it is almost inseparable, where it covers the aponeurosis of the temporal muscle; and is inserted into the upper part of the ear, opposite to the antihelix. Its use is to draw the ear upwards, and to make the parts into which it is inserted tense.

Attollens auriculæ. See *Attollens aurem.*

Attollens oculi. See *Rectus superior oculi.*

ATTO'NITUS. (*Attonitus*, surprised; from *attono*, to surprise: so called because the person falls down suddenly.) Apoplexy and epilepsy.

Attonitus morbus. See *Attonitus.*

ATTRACTION. (*Attractio, onis.* f.; from *attraho*, to attract.) Affinity. The terms attraction or affinity, and repulsion, in the language of modern philosophers, are employed merely as the expression of the general facts, that the masses or particles of matter have a tendency to approach and unite to, or to recede from one another, under certain circumstances. The term attraction is used synonymously with affinity. See *Affinitas.*

All bodies have a tendency or power to attract each other more or less, and it is this power which is called attraction.

Attraction is mutual; it extends to indefinite distances. All bodies whatever, as well as their component elementary particles, are endued with it. It is not annihilated, at how great a distance soever we suppose them to be placed from each other; neither does it disappear though they be arranged ever so near each other.

The nature of this reciprocal attraction, or at least the cause which produces it, is altogether unknown to us. Whether it be inherent in all matter, or whether it be the consequence of some other agent, are questions beyond the reach of human understanding; but its existence is nevertheless certain.

"The instances of attraction which are exhibited by the phænomena around us, are exceedingly numerous, and continually present themselves to our observation. The effect of gravity, which causes the weight of bodies, is so universal, that we can scarcely form an idea how the universe could subsist without it. Other attractions, such as those of magnetism and electricity, are likewise observable; and every experiment in chemistry tends to show, that bodies are composed of various principles or substances, which adhere to each other with various degrees of force, and may be separated by known methods. It is a question among philosophers whether all the attractions which obtain between bodies be referrible to one general cause modified by circumstances, or whether various original and distinct causes act upon the particles of bodies at one and the same time. The philosophers at the beginning of the present century, were disposed to consider the several attractions as essentially different, because the laws of their action differ from each other; but the moderns appear disposed to generalise this subject, and to consider all the attractions which exist between bodies, or at least those which are permanent, as depending upon one and the same cause, whatever it may be, which regulates at once the motions of the immense bodies that circulate through the celestial spaces, and those minute particles that are transferred from one combination to another in the operations of chemistry. The earlier philosophers observed, for example, that the attraction of gravitation acts upon bodies with a force which is inversely as the squares of the distances; and from mathematical deduction they have inferred, that the law of attraction between the particles themselves follows the same ratio; but when their observations were applied to bodies very near each other, or in contact, an adhesion took place, which is found to be much greater than could be deduced from that law applied to the centres of gravity. Hence they concluded that the cohesive attraction is governed by a much higher ratio, and probably the cubes of the distances. The moderns, on the contrary, have remarked that these deductions are too general, because, for the most part, drawn from the consideration of spherical bodies, which admit of no contact but such as is indefinitely small, and exert the same powers on each other, whichever side may be obverted. They remark, likewise, that the consequence depending on the sum of the attractions in bodies not spherical, and at minute distances

from each other, will not follow the inverted ratio of the square of the distance taken from any point assumed as the centre of gravity, admitting the particles to be governed by that law; but that it will greatly differ, according to the sides of the solid which are presented to each other, and their respective distances; insomuch, that the attractions of certain particles indefinitely near each other will be indefinitely increased, though the ratio of the powers acting upon the remoter particles may continue nearly the same.

That the parts of bodies do attract each other, is evident from that adhesion which produces solidity, and requires a certain force to overcome it. For the sake of perspicuity, the various effects of attraction have been considered as different kinds of affinity or powers. That power which physical writers call the attraction of cohesion, is generally called the *attraction of aggregation* by chemists. Aggregation is considered as the adhesion of parts of the same kind. Thus a number of pieces of brimstone united by fusion, form an aggregate, the parts of which may be separated again by mechanical means. These parts have been called integrant parts; that is to say, the minutest parts into which a body can be divided, either really or by the imagination, so as not to change its nature, are called integrant parts. Thus, if sulphur and an alkali be combined together, and form liver of sulphur, we may conceive the mass to be divided and subdivided to an extreme degree, until at length the mass consists of merely a particle of brimstone and a particle of alkali. This, then, is an integrant part; and if it be divided further, the effect which chemists call decomposition will take place; and the particles, consisting no longer of liver of sulphur, but of sulphur alone, and alkali alone, will be what chemists call component parts or principles.

The union of bodies in a gross way is called *mixture*. Thus sand and an alkali may be mixed together. But when the very minute parts of a body unite with those of another so intimately, as to form a body which has properties different from those of either of them, the union is called *combination* or *composition*. Thus, if sand and an alkali be exposed to a strong heat, the minute parts of the mixture combine, and form glass.

If two solid bodies, disposed to combine together, be brought into contact with each other, the particles which touch will combine, and form a compound; and if the temperature at which this new compound assumes the fluid form be higher than the temperature of the experiment, the process will go no farther, because this new compound being interposed between the two bodies, will prevent their further access to each other; but if, on the contrary, the freezing point of the compound be lower than this temperature, liquefaction will ensue; and the fluid particles being at liberty to arrange themselves according to the law of their attractions, the process will go on, and the whole mass will gradually be converted into a new compound in the fluid state. An instance of this may be exhibited by mixing common salt and perfectly dry pounded ice together. The crystals of the salt alone will not liquefy unless very much heated; the crystals of the water, that is to say, the ice, will not liquefy unless heated as high as thirty-two degrees of Fahrenheit; and we have, of course, supposed the temperature of the experiment to be lower than this, because our water is in the solid state. Now it is a well known fact, that brine, or the saturated solution of sea salt in water, cannot be frozen unless it be cooled thirty-eight degrees lower than the freezing point of pure water. It follows, then, that if the temperature of the experiment be higher than this, the first combinations of salt and ice will produce a fluid brine, and the combination will proceed until the temperature of the mass has gradually sunk as low as the freezing point of brine; after which it would cease if it were not that surrounding bodies continually tend to raise the temperature. And accordingly it is found by experiment, that if the ice and the salt be previously cooled below the temperature of freezing brine, the combination and liquefaction will not take place.

The instances in which solid bodies thus combine together not being very numerous, and the fluidity which ensues immediately after the commencement of this kind of experiment, have induced several chemists to consider fluidity in one or both of the bodies applied to each other, to be a necessary circumstance, in order that they may produce chemical action upon each other. *Corpora non agunt nisi sint fluida.*

If one of two bodies applied to each other be fluid at the temperature of the experiment, its parts will successively unite with the parts of the solid, which will by that means be suspended in the fluid, and disappear. Such a fluid is called a *solvent* or *menstruum;* and the solid body is said to be dissolved.

Some substances unite together in all proportions. In this way the acids unite with water. But there are likewise many substances which cannot be dissolved in a fluid, at a settled temperature, in any quantity beyond a certain portion. Thus, water will dissolve only about one-third of its weight of common salt; and if more salt be added, it will remain solid. A fluid which holds in solution as much of any substance as it can dissolve, is said to be *saturated* with it. But saturation with one substance is so far from preventing a fluid from dissolving another body, that it very frequently happens,

that the solvent power of the compound exceeds that of the original fluid itself. Chemists likewise use the word saturation in another sense, in which it denotes such a union of two bodies as produces a compound the most remote in its properties from the properties of the component parts themselves. In combinations where one of the principles predominate, the one is said to be supersaturated, and the other principle is said to be subsaturated.

Heat in general increases the solvent power of fluids, probably by preventing part of the dissolved substance from congealing, or assuming the solid form.

It often happens, that bodies which have no tendency to unite are made to combine together by means of a third, which is then called *the medium*. Thus water and fat oils are made to unite, by the medium of an alkali, in the combination called soap. Some writers, who seem desirous of multiplying terms, call this tendency to unite *the affinity of intermedium*. This case has likewise been called *disposing affinity*; but Berthollet more properly styles it *reciprocal affinity*. He likewise distinguishes affinity into *elementary*, when it is between the elementary parts of bodies; and *resulting*, when it is a compound only, and would not take place with the elements of that compound.

It very frequently happens, on the contrary, that the tendency of two bodies to unite, or remain in combination together, is weakened or destroyed by the addition of a third. Thus alkohol unites with water in such a manner as to separate most salts from it. A striking instance of this is seen in a saturated or strong solution of nitre in water. If to this there be added an equal measure of alkohol, the greater part of the nitre instantly falls down. Thus magnesia is separated from a solution of Epsom salt by the addition of an alkali, which combines with the sulphuric acid, and separates the earth. The principle which falls down is said to be *precipitated*, and in many instances is called a *precipitate*. Some modern chemists use the term precipitation in a more extended, and rather forced sense; for they apply it to all substances thus separated. In this enunciation, therefore, they would say, that potash precipitates soda from a solution of common salt, though no visible separation or precipitation takes place; for the soda, when disengaged from its acid, is still suspended in the water by reason of its solubility.

From a great number of facts of this nature, it is clearly ascertained, not as a probable hypothesis, but as simple matter of fact, that some bodies have a stronger tendency to unite than others; and that the union of any substance with another will exclude, or separate, a third substance, which might have been previously united with one of them; excepting only in those cases wherein the new compound has a tendency to unite with that third substance, and form a triple compound. This preference of uniting, which a given substance is found to exhibit with regard to other bodies, is by an easy metaphor called elective attraction, and is subject to a variety of cases, according to the number and the powers of the principles which are respectively presented to each other. The cases which have been most frequently observed by chemists, are those called simple elective attractions, and double elective attractions.

When a simple substance is presented or applied to another substance compounded of two principles, and unites with one of these two principles, so as to separate or exclude the other, this effect is said to be produced by *simple elective attraction*.

It may be doubted whether any of our operations have been carried to this degree of simplicity. All the chemical principles we are acquainted with are simple only with respect to our power of decomposing them; and the daily discoveries of our contemporaries tend to decompose those substances, which chemists a few years ago considered as simple. Without insisting, however, upon this difficulty, we may observe, that water is concerned in all the operations which are called humid, and beyond a doubt modifies all the effects of such bodies as are suspended in it; and the variations of temperature, whether arising from an actual igneous fluid, or from a mere modification of the parts of bodies, also tend greatly to disturb the effects of elective attraction. These causes render it difficult to point out an example of simple elective attraction, which may in strictness be reckoned as such.

Double elective attraction takes place when two bodies, each consisting of two principles, are presented to each other, and mutually exchange a principle of each; by which means two new bodies, or compounds, are produced of a different nature from the original compounds.

Under the same limitations as were pointed out in speaking of simple elective attraction, we may offer instances of double elective attraction. Let oxide of mercury be dissolved to saturation in the nitric acid, the water will then contain nitrate of mercury. Again, let potash be dissolved to saturation in the sulphuric acid, and the result will be a solution of sulphate of potash. If mercury were added to the latter solution, it would indeed tend to unite with the acid, but would produce no decomposition; because the elective attraction of the acid to the alkali is the strongest. So, likewise, if the nitric acid alone be added to it, its tendency to unite with the alkali, strong as it is, will not effect any change, because the alkali is already in combination with a stronger acid. But if the nitrate of mercury be added to the solution of sulphate of potash, a change

of principles will take place; the sulphuric acid will quit the alkali and unite with the mercury, while the nitric acid combines with the alkali; and these two new salts, namely, nitrate of potash, and sulphate of mercury, may be obtained separately by crystallisation. The most remarkable circumstance in this process is, that the joint effects of the attractions of the sulphuric acid to mercury, and the nitric acid to alkali, prove to be stronger than the sum of the attractions between the sulphuric acid and the alkali, and between the nitrous acid and the mercury; for if the sum of these two last had not been weaker, the original combinations would not have been broken.

Mr. Kirwan, who first, in the year 1782, considered this subject with that attention it deserves, called the affinities which tend to preserve the original combinations, the *quiescent affinities*. He distinguished the affinities or attractions which tend to produce a change of principles, by the name of the *divellent affinities*.

Some eminent chemists are disposed to consider as effects of double affinities, those changes of principles only which would not have taken place without the assistance of a fourth principle. Thus, the mutual decomposition of sulphate of soda and nitrate of potash, in which the alkalies are changed, and sulphate of potash and nitrate of soda are produced, is not considered by them as an instance of double decomposition; because the nitre would have been decomposed by simple elective attraction, upon the addition of the acid only.

There are various circumstances which modify the effects of elective attraction, and have from time to time misled chemists in their deductions. The chief of these is the temperature, which, acting differently upon the several parts of compounded bodies, seldom fails to alter, and frequently reverses, the effects of the affinities. Thus, if alkohol be added to a solution of nitrate of potash, it unites with the water, and precipitates the salt at a common temperature. But if the temperature be raised, the alkohol rises on account of its volatility, and the salt is again dissolved. Thus again, if sulphuric acid be added, in a common temperature, to a combination of phosphoric acid and lime, it will decompose the salt, and disengage the phosphoric acid; but if this same mixture of these principles be exposed to a considerable heat, the sulphuric acid will have its attraction to the lime so much diminished, that it will rise, and give place again to the phosphoric, which will combine with the lime. Again, mercury kept in a degree of heat very nearly equal to volatilising it, will absorb oxygene, and become converted into the red oxide formerly called precipitate *per se*; but if the heat be augmented still more, the oxygene will assume the elastic state and fly off, leaving the mercury in its original state. Numberless instances of the like nature continually present themselves to the observation of chemists, which are sufficient to establish the conclusion, that the elective attractions are not constant but at one and the same temperature.

Many philosophers are of opinion, that the variations produced by change of temperature arise from the elective attractions of the matter of heat itself. But there are no decisive experiments either in confirmation or refutation of this hypothesis.

If we except the operation of heat, which really produces a change in the elective attractions, we shall find that most of the other difficulties attending this subject arise from the imperfect state of chemical science. If to a compound of two principles a third be added, the effect of this must necessarily be different according to its quantity, and likewise according to the state of saturation of the two principles of the compounded body. If the third principle which is added be in excess, it may dissolve and suspend the compound which may be newly formed, and likewise that which might have been precipitated. The metallic solutions, decomposed by the addition of an alkali, afford no precipitate in various cases when the alkali is in excess; because this excess dissolves the precipitate, which would else have fallen down. If, on the other hand, one of the two principles of the compound body be in excess, the addition of a third substance may combine with that excess, and leave a neutral substance, exhibiting very different properties from the former. Thus, if cream of tartar, which is a salt of difficult solubility, consisting of potash united to an excess of the acid of tartar, be dissolved in water, and chalk be added, the excess unites with part of the lime of the chalk, and forms a scarcely soluble salt; and the neutral compound, which remains after the privation of this excess of acid, is a very soluble salt, greatly differing in taste and properties from the cream of tartar. The metals and the acids likewise afford various phænomena, according to their degree of oxidation. A determinate oxidation is in general necessary for the solution of metals in acids; and the acids themselves act very differently, accordingly as they are more or less acidified. Thus, the nitrous acid gives place to acids which are weaker than the nitric acid: the sulphureous acid gives place to acids greatly inferior in attractive power or affinity to the sulphuric acid. The deception arising from effects of this nature is in a great measure produced by the want of discrimination on the part of chemical philosophers; it being evident that the properties of any compound substance depend as much upon the proportion of its ingredients as upon their respective nature.

The presence and quantity of water is probably of more consequence than is yet

supposed. Thus, bismuth is dissolved in nitrous acid, but falls when the water is much in quantity.

The power of double elective attractions, too, is disturbed by this circumstance: If muriate of lime be added to a solution of carbonate of soda, they are both decomposed, and the results are muriate of soda and carbonate of lime. But if lime and muriate of soda be mixed with just water sufficient to make them into a paste, and this be exposed to the action of carbonic acid gas, a saline efflorescence, consisting of carbonate of soda, will be formed on the surface, and the bottom of the vessel will be occupied by muriate of lime in a state of deliquescence.

Berthollet made a great number of experiments, from which he deduced the following law:— That in elective attractions the power exerted is not in the ratio of the affinity simple, but in a ratio compounded of the force of affinity and the quantity of the agent; so that quantity may compensate for weaker affinity. Thus, an acid which has a weaker affinity than another for a given base, if it be employed in a certain quantity, is capable of taking part of that base from the acid which has a stronger affinity for it; so that the base will be divided between them in the compound ratio of their affinity and quantity. This division of one substance between two others, for which it has different affinities, always takes place, according to him, when three such are present under circumstances in which they can mutually act on each other. And hence it is that the force of affinity acts most powerfully when two substances first come into contact, and continues to decrease in power as either approaches the point of saturation. For the same reason it is so difficult to separate the last portions of any substance adhering to another. Hence, if the doctrine laid down by M. Berthollet be true, to its utmost extent, it must be impossible ever to free a compound completely from any one of its constituent parts by the agency of elective attraction; so that all our best established analyses are more or less inaccurate.

The solubility or insolubility of principles, at the temperature of any experiment, has likewise tended to mislead chemists, who have deduced consequences from the first effects of their experiments. It is evident, that many separations may ensue without precipitation; because this circumstance does not take place unless the separated principle be insoluble, or nearly so. The soda cannot be precipitated from a solution of sulphate of soda by the addition of potash, because of its great solubility; but, on the contrary, the new compound itself, or sulphate of potash, which is much less soluble, may fall down, if there be not enough of water present to suspend it. No certain knowledge can therefore be derived from the appearance or the want of precipitation, unless the products be carefully examined. In some instances all the products remain suspended; and in others they all fall down, as may be instanced in the decomposition of sulphate of iron by lime. Here the acid unites with the lime, and forms sulphate of lime, which is scarcely at all soluble; and the still less soluble oxide of iron, which was disengaged, falls down along with it.

Many instances present themselves, in which decomposition does not take place, but a sort of equilibrium of affinity is perceived. Thus, soda, added to the supertartrate of potash, forms a triple salt by combining with its excess of acid. So likewise ammonia combines with a portion of the acid of muriate of mercury, and forms the triple compound formerly distinguished by the barbarous name of sal alembroth.

Attraction, double elective. See *Affinity, double.*

Aua'nte. (From αυαινω, to dry.) A dry disease, proceeding from a fermentation in the stomach, described by Hippocrates.

Aua'pse. The same.

Au'chen. (From αυχεω, to be proud.) The neck, which, in the posture of pride, is made stiff and erect.

AUCTUS. Increased; multiplied: applied in *Botany* to a calyx when it has the addition of another smaller one.

AUDITORY. (*Auditorius*; from *audio*, to hear.) Belonging to the organ of hearing; as auditory nerve, passage, &c.

Auditory nerve. See *Portio mollis.*

Auditory passage. See *Auris*, and *Meatus auditorius internus.*

AUGITE. Pyroxene of Haüy. A green, brown, or black mineral, found crystallised, and in grains in volcanic rocks in basaltes. It consists of silica, lime, oxide of iron, magnesia, alumina, and manganese.

AUGU'STUS. August. An epithet formerly given to several compound medicines.

AUK. See *Alca.*

Auli'scos. (From αυλος, a pipe.) A catheter, or clyster-pipe.

AU'LOS. (Αυλος. *Aulus, i.* m.; a pipe.) A catheter, canula, or clyster-pipe.

AU'RA. (*a, æ.* f.; from αω, to breathe.) 1. A subtile vapour or exhalation.

2. A sensation like to a wind or vapour.

Aura epileptica. A sensation which is felt by epileptic patients, as if a blast of cold air ascended from the lower parts towards the head. It is often a kind of precursive symptom by which an epileptic fit is ushered in. It usually ascends from the extremities, but there is no organ or part from which it has not issued in different individuals.

Aura seminis. The extremely subtile and vivifying portion of the semen virile, that ascends through the Fallopian tubes, to impregnate the ovum in the ovarium.

Aura vitalis. So Helmont calls the vital heat.

AURANTIACUS. Appertaining to an orange, and applied to its colour. See *Colour*.

AURA'NTIUM. (*um, i.* n.; so called, *ab aureo colore*, from its golden colour, or from *Arantium*, a town of Achaia.) The orange. See *Citrus aurantium*.

AURANTIUM CURASSAVENTE. The Curassoa, or Curassao apple, or orange. The fruit so called seems to be the immature oranges, that by some accident have been checked in their growth. They are a grateful aromatic bitter, of a flavour very different from that of the peel of the ripe fruit, and without any acid; what little tartness they have when fresh, is lost in drying. Infused in wine, or brandy, they afford a good bitter for the stomach. They are used to promote the discharge in issues, whence their name of *issue peas*, and to give the flavour of hops to beer.

AURANTII BACCÆ. See *Citrus aurantium*.

AURANTII CORTEX. See *Citrus aurantium*.

AUREUS. (From *aurum*, gold.)

1. Of or belonging to gold.

2. A golden yellow.

AURICHALCUM. Brass.

AURI'CULA. (*a, æ.* f.; dim. of *auris*, the ear.) An auricle, or little ear.

1. In *Anatomy*, the external ear, upon which are several eminences and depressions; as the *helix*, *antihelix*, *tragus*, *antitragus*, *conchæ auriculæ*, *scapha*, and *lobulus*. See *Auris*.

2. Applied to parts which resemble a little ear, as the auricles of the heart. See *Heart*.

3. In *Botany*, applied to parts of plants which resemble an ear in figure, as *Auricula judæ*, and *Auricula muris*, &c.

AURICULA JUDÆ. See *Peziza auricula*.

AURICULA MURIS. See *Hieracium*.

AURICULÆ CORDIS. The auricles of the heart. See *Cor*.

AURICULA'RIS. (From *auris*, the ear.) Auricular. Pertaining to the ear.

AURICULARIS DIGITUS. The little finger; so called because people generally put it into the ear, when the hearing is obstructed.

AURICULATUS. Auriculate. Ear-shaped. 1. Somewhat of the shape of the human ear.

2. A leaf is said to be so, when furnished at its base with a pair of leaflets, properly distinct, but occasionally liable to be joined to it, as in *Citrus aurantium*.

AURI'GA. (*Auriga*, a waggoner; so called because it is made like the traces of a waggon-horse.) A bandage for the sides. — *Galen*.

AURI'GO. (*o, inis.* f.; *ab aureo colore*, from its yellow colour.) The jaundice. See *Icterus*.

AURIPI'GMENTUM. (*um, i.* n.; from *aurum*, gold, and *pigmentum*, paint: so called from its colour and its use to painters.) Yellow orpiment. See *Arsenic*.

AU'RIS. (*is, is.* f.; from *aura*, air, as being the medium of hearing.) The ear; and also the organ of hearing. See *Ear*.

AURISCA'LPIUM. (*um, i.* n.; from *auris*, the ear, and *scalpo*, to scrape.) An instrument for cleansing the ear.

AURU'GO. The jaundice.

AU'RUM. (*um, i.* n.) 1. Gold. See *Gold*.

2. Applied to many substances by alchemists and chemists, which resemble gold in colour or virtues.

AURUM FULMINANS. The precipitate formed by putting ammonia into a solution of gold.

AURUM GRAPHICUM. An ore of gold.

AURUM HORIZONTALE. Oil of cinnamon and sugar.

AURUM LEPROSUM. Antimony.

AURUM MUSIVUM. Mosaic gold. "A combination of tin and sulphur, which is thus made: Melt twelve ounces of tin, and add to it three ounces of mercury; triturate this amalgam with seven ounces of sulphur, and three of muriate of ammonia. Put the powder into a matrass, bedded rather deep in sand, and keep it for several hours in a gentle heat, which is afterwards to be raised, and continued for several hours longer. If the heat has been moderate, and not continued too long, the golden-coloured scaly porous mass, called *aurum musivum*, will be found at the bottom of the vessel; but if it has been too strong, the *aurum musivum* fuses to a black mass of a striated texture. This process is thus explained: as the heat increases, the tin, by stronger affinity, seizes and combines with the muriatic acid of the muriate of ammonia; while the alkali of that salt, combining with a portion of the sulphur, flies off in the form of a sulphuret. The combination of tin and muriatic acid sublimes; and is found adhering to the sides of the matrass. The mercury, which served to divide the tin, combines with part of the sulphur, and forms cinnabar, which also sublimes; and the remaining sulphur, with the remaining tin, forms the *aurum musivum* which occupies the lower part of the vessel. It must be admitted, however, that this explanation does not indicate the reasons why such an indirect and complicated process should be required to form a simple combination of tin and sulphur.

Aurum musivum has no taste, though some specimens exhibit a sulphureous smell. It is not soluble in water, acids, or alkaline solutions. But in the dry way it forms a yellow sulphuret, soluble in water. It deflagrates with nitre. Bergman mentions a native *aurum musivum* from Siberia, containing tin, sulphur, and a small proportion of copper.

This substance is used as a pigment for giving a golden colour to small statue or plaster figures. It is likewise said to be mixed with melted glass to imitate *lapis lazuli*.

AURUM POTABILE. Gold dissolved and mixed with oil of rosemary, to be drunk.

AURUS BRAZILIENSIS. An obsolete name of the *Calamus aromaticus.*

AUSCULTATION. (*o, onis.* f.; from *ausculto*, to listen.) Listening. In a medical point of view, it is attending to the sound or noise which the several parts of the body give when struck, or without any percussion, in order to form a judgment of the condition of those parts. This has long been one of the methods which pathologists have resorted to in order to assist them in their diagnosis of some diseases. Striking a swelled belly is a common thing to know whether the swelling is gaseous, for when so, it sounds like a drum; and Hippocrates gives directions how, by auscultation, fluids are to be detected in the thorax: but of late Avenbrugger directed the attention of medical men to it in a treatise on this particular subject; and Dr. Laennec soon after prosecuted the method, and has explained, in an able and scientific work, the advantages to be derived from it in diseases of the chest. Auscultation is either immediate or mediate. In immediate auscultation, the ear of the practitioner is placed immediately close to the part, without any intervening instrument to assist. See *Percussion.* Whereas, in mediate auscultation, some instrument, as a *stethoscope*, or piece of ivory or hard wood, or something else, is placed between the part and the practitioner. This latter method is considered as the best, because the naked ear cannot well be placed to many parts; an immediate auscultation is more fatiguing to the patient, and often so to the practitioner. The signs afforded by mediate auscultation, in the diseases of the lungs and pleura, are derived from the changes presented by the sound of respiration, by that of the voice and coughing, within the chest, and also by the rattle, as well as certain other sounds, which occasionally are heard in the same situation. Consult Laennec, *on Diseases of the Chest.*

AUSCULTATOR. A listener.

AUTHE'MERON. (From αυτος, the same, and ἡμερα, a day.) A medicine which gives relief on the same day it is administered.

AUTOCRATE'IA. The healing power of nature. — *Hippocrates.*

AUTOLITHO'TOMUS. (*us, i.* m.; from αυτος, himself, λιθος, a stone, and τεμνω, to cut.) One who cuts himself for the stone.

AUTO'PSIA. (*a, æ.* f.; from αυτος, himself, and οπτομαι, to see.) Autopsy, or ocular evidence.

AUTO'PYROS. (*Autopyrus, i.* m.; from αυτος, itself, and πυρος, wheat.) Bread made with the meal of wheat, from which the bran has not been removed. — *Galen.*

AUTUMN. (*Autumnus, i.* m.; the autumn.) The season of the year from the beginning of August to the beginning of November.

AUTUMNAL. (*Autumnalis*, from *autumnus.*) Of or belonging to the autumn.

AUXILIARY. *Auxiliaris.* Assisting: applied to means which co-operate in curing diseases, and to parts which assist others in performing certain functions. The pyramidales were called auxiliary muscles.

AVA'NSIS. *Avante.* Indigestion.

AVANTURINE. A variety of quartz rock containing mica spangles. It is found in Spain and Scotland.

AVARICE. See *Pathemata animi.*

AVELLA'NA. (*a, æ.* f.; from *Abella*, or *Avella*, a town in Campania, where they grew.) See *Corylus avellana.*

AVELLANA CATHARTICA. A purgative seed or nut, from Barbadoes, the produce of the *Jatropha curcas.* See *Jatropha curcas.*

AVELLANA MEXICANA. Cocoa and chocolate nut.

AVELLANA PURGATRIX. Garden spurge.

AVE'NA. (*a, æ.* f.; from *aveo*, to covet, because cattle are so fond of it.) The oat.

1. The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia.*

2. The pharmacopœial name of the oat.

AVENA SATIVA. The oat. The systematic name for the *avena* of the pharmacopœias. It is the seed which is commonly used, and called the oat. There are two kinds of oats: the black and the white. They have similar virtues, but the black are chiefly sown for horses. They are less farinaceous, and less nourishing than rice or wheat; yet afford a sufficient nourishment, of easy digestion, to such as feed constantly on them. In Scotland, and some of the northern counties of England, oats form the chief bread of the inhabitants. They are much used in Germany; but, in Norway, oat bread is a luxury among the common people. Gruels, made with the flour, or meal, called oatmeal, digest easily, have a soft mucilaginous quality, by which they obtund acrimony, and are used for common drink and food in fevers, inflammatory disorders, coughs, hoarseness, roughness, and exulceration of the fauces; and water gruels answer all the purposes of Hippocrates's ptisan. Externally, poultices, with oatmeal, vinegar, and a very little oil, are good for sprains and bruises. Stimulant poultices, with the grounds of strong beer, mixed up with oatmeal, are made for tumours, &c. of a gangrenous tendency.

AVENACU. A Molucca tree, of a caustic quality.

AVENBRUGGER, LEOPOLD, was born in Styria in 1722. He studied in Germany, and became physician in ordinary to the Spanish nation. In Ersh and Puchhelt's *Literatur dur Medicin*, besides a treatise on *percussion*, he is recorded as the author of two works on *madness.* The work on percussion was first published in 1761, under

the title of *Inventum novum ex percussione thoracis humani, ut signo, abstrusos interni pectoris morbos detegendi.* Van Swieten and Stoll merely noticed this work, which gave rise to the scientific, practical, and admirable work of Laennec on diseases of the chest, in which the subject of stethoscopism is amply illustrated and appreciated.

AVENIUS. Veinless. Without a vein. A term applied by botanists to a leaf which is without what they call a vein; as in *Clusia alba.*

AVENS. (*ens, entis;* from *aves,* to desire.) 1. Immoderate thirst.

2. The English name of a plant. See *Geum urbanum.*

AVENZOAR. A native of Spain, born in the twelfth century; and is said to have attained the uncommon age of 135. His principal work was a compendium of the practice of medicine called "Al-Theiser," containing some diseases not elsewhere described, and numerous cases candidly related.

AVERROES. An eminent philosopher and physician, born about the middle of the twelfth century, at Corduba, in Spain. He studied medicine under Avenzoar. He appears to have first observed, that the small-pox occurs but once in the same person. His principal medical work, called the "Universal," is a compendium of physic, mostly collected from other authors. He died about the year 1206.

AVICENNA. A celebrated philosopher and physician, born in Chorasan, in the year 980. He studied at Bagdat, obtained a degree, and began to practise at 18: and he soon attained great wealth and honour in the court of the Caliph. His chief work on medicine was called "Canon Medicinæ."

AVICE'NNIA. (*a, æ.* f.; named after the celebrated physician of that name.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Angiospermia.*

Avicennia tomentosa. The systematic name of the *Avicennia—foliis cordato-ovatis, subtus tomentosis,* of Linnæus, which affords the Malacca bean, or *Anacardium orientale* of the pharmacopœias. The fruit, or nut, so called, is of a shining black colour, heart-shaped, compressed, and about the size of the thumb-nail. It is now deservedly forgotten in this country.

Avigato pear. See *Laurus persea.*

AVIS. A bird. An animal sufficiently distinguished from all others by the body being covered with feathers, two feet, and two wings formed for flight.

AVOIRDUPOIS. *Averdupois.* A weight very generally used in England, the pound whereof contains sixteen ounces. See *Weight.*

Awl-shaped. See *Subulatus.*

AWN. See *Arista.*

AWNED. See *Aristatus.*

AWNLESS. Without awn or arista.

AXE-STONE. A species of nephrite, and a subspecies of jade, from which it differs in not being of so light a green, and in having a somewhat slaty texture.

AXI'LLA. (*a, æ.* f. *Atzil,* Heb. Scaliger deduces it from *ago,* to act; in this manner, *ago, axo, axa, axula, axilla.*)

1. In *Anatomy,* the cavity under the upper part of the arm, called the arm-pit.

2. In *Botany,* the angle formed by the branch and stem of a plant, or by the leaf with either.

AXILLARIS. (From *axilla,* the armpit.) Axillary. 1. In *Anatomy,* of or belonging to the *axilla,* or arm-pit.

2. In *Botany,* leaves, &c. are said to be axillary which proceed from the angle formed by the stem and branch.

Axillaris arteria. The axillary artery is a continuation of the subclavian, and gives off in the axilla four mammary arteries, the subscapular, and the posterior and anterior circumflex arteries, which ramify about the joint.

Axillaris gemma. Axillary gem. The gem which comes out of the axilla of a plant. It is this which bears the fruit.

Axillaris nervus. The articular nerve. A branch of the brachial plexus, and sometimes of the radial nerve. It runs outwards and backwards, around the neck of the humerus, and is lost in the muscles of the scapula.

Axillaris vena. The axillary vein receives the blood from the veins of the arm, and evacuates it into the subclavian vein.

Axillary. See *Axillaris.*

AXINITE. *Thumerstone.* A massive or crystallised mineral, the crystals of which resemble an axe in the form and sharpness of their edges. It is found in beds at Thum, in Saxony, and in Cornwall.

A'XIS. (*is, is.* m.; from *ago,* to act.) The second vertebra. See *Dentatus.*

AXU'NGIA. (*a, æ.* f.; from *axis,* an axle-tree, and *unguo,* to anoint.) The hard and driest fat of an animal.

Axungia curata. Purified hog's lard.

Axungia de mummia. Marrow.

Axungia porcina. Hog's lard.

A'zac. (Arabian.) Gum ammoniac.

Aza'gor. Verdigris.

AZALÆA. (*a, æ.* f.; from αζαλεος, dry, from its growing in a dry soil.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

Azalæa pontica. The Pontic azalea, used by the natives of Pontus in the cure of diseases.

Azamar. Native cinnabar. Vermilion.

AZAREUS. (From *azure,* the blue colour of the sky.) Azure: applied to a blue colour deeper than sky blue, but brighter, like ultramarine, as in the flower of the *Cynoglossum omphalodes.*

Azed. A fine kind of camphire.

Azotane. The chloride of azote.

AZOTE. (*Azotum, i.* n.; from α, priv. and ζεω, to live, because it is unfit for respiration.) See *Nitrogene.*

Azote, chloride of. See *Nitrogenium.*

Azote, deutoxide of. See *Nitrogenium.*

Azote, gaseous oxide of. See *Nitrogenium.*

Azote, iodide of. See *Nitrogenium.*

Azote, protoxide of. See *Nitrogenium.*

A'ZOTH. An imaginary universal remedy.

A'ZUB. Alum.

AZURESTONE. See *Lapis lazuli.*

Azure spar, prismatic. See *Azurite.*

AZURITE. Prismatic azure spar. Lazulite of Werner. A mineral of a fine blue colour, composed of alumina, magnesia, silica, oxide of iron, and lime. It occurs in Vorau, in Stiria, and the bishopric of Salzburg.

AZU'RIUM. Quicksilver, sulphur, and salammoniac.

A'ZYGES. (From α, priv. and ζυγος, a yoke.) The os sphenoides was so called, because it has no fellow.

A'ZYGOS. (From α, priv. and ζυγος, a yoke; because it has no fellow.) Several single muscles, veins, bones, &c. are so called.

AZYGOS PROCESSUS. A process of the os sphenoides.

AZYGOS UVULÆ. A muscle of the uvula. *Palato-staphilinus* of Douglas. *Staphilinus*, or *Epistaphilinus* of Winslow. It arises at one extremity of the suture which joins the palate bones, runs down the whole length of the velum and uvula, resembling an earth-worm, and adhering to the tendons of the circumflexi. It is inserted into the tip of the uvula. Its use is to raise the uvula upwards and forwards, and to shorten it.

AZYGOS VENA. Azygos vein. *Vena sine pari.* This vein is situated in the right cavity of the thorax, upon the dorsal vertebræ. It receives the blood from the vertebral, intercostal, bronchial, pericardiac, and diaphragmatic veins, and evacuates it into the vena cava superior.

B.

BABUZICA'RIUS. (Βαβουζικαριος; from βαβαζω, to speak inarticulately: so called, because, in this disease, the person is apt to make an inarticulate or confused noise.) The incubus, or night-mare.

BAC'CA. (*a, æ.* f.; a berry.) A pulpy pericarpium, or seed-vessel, enclosing several naked seeds, connected by a slender membrane, and dispersed through the pulp. It is distinguished by its figure into:—

1. *Rotund*, round; as in *Ribes rubrum*, the currant, and *Grossularia*, the gooseberry.

2. *Oblong*; as in *Barbarea vulgaris*, common barberry.

3. *Dicoccous*, double; as in *Jasminum.*

4. *Recutite*, circumcised; like the prominent glans penis, without the prepuce; as in *Taxus baccata.*

From the *substances* it is denominated,

1. *Succose*, juicy; as in *Ribes rubrum.*

2. *Corticose*, covered with a hard bark; as in *Garcinia mangostana.*

3. *Exsicca*, dry; as in *Hedera helix.*

From the number of *loculaments* into,

1. *Unilocular*, with one; as in the *Actæa* and *Cactus.*

2. *Bilocular*, with two; as in *Lonicera.*

3. *Trilocular*, with three; as in *Asparagus* and *Ruscus.*

4. *Quadrilocular*, with four; as in *Paris quadrifolia.*

5. *Quinquelocular*, with five; as in *Melastoma.*

6. *Multilocular*, with many; as in *Nymphæa.*

From the number of the *seeds* into,

1. *Monosperm*, with one only; as in *Daphne, Viscum*, and *Viburnum.*

2. *Disperm*, with two seeds; as in *Barbarea vulgaris*, and *Coffea arabica.*

3. *Trisperm*, with three; as in *Sambucus*, and *Juniperis.*

4. *Quadrisperm*, with four; as in *Ligustrum*, and *Ilex.*

5. *Polysperm*, with many seeds; as in *Arbutus unedo, Ribes*, and *Gardenia.*

The *Bacca* is also distinguished into *simple* and *compound*, when it is composed of several berries, which are called *acini*; as in *Rubus fruticosus.*

BACCA BERMUDENSIS. See *Sapindus.*

BACCA JUNIPERI. See *Juniperus.*

BACCA LAURI. See *Laurus nobilis.*

BACCA MONSPELIENSIS. See *Inula dysenterica.*

BACCA NORLANDICA. See *Rubus arcticus.*

BACCA PISCATORIA. See *Menispermum cocculus.*

BACCA'LIA. (From *baccharum copia*, because it abounds in berries.) The bay, or laurel-tree. See *Laurus nobilis.*

BACCAR. (*ar, aris.* n.; so called in reference to the fragrance of *bacchus*, i. e. wine.) *Bacchar.* The name of a plant supposed to resemble ladies' gloves; by others, clown's spikenard: supposed by the ancients to be

useful in fascinations — "*Bacchare frontem cingite, ne vati noceat mala lingua futuro.*" Virg. Eccl. 7. 27.

BA'CCHARIS. (*is, is.* f.; from *bacchus*, wine: from its fragrance resembling that liquor.) See *Inula dysenterica.*

BA'CCHIA. (*a, æ.* f.; from *bacchus*, wine, because it generally proceeds from hard drinking and intemperance.) A name given by Linnæus to the pimpled face, which results from free living.

BACCI'FEROUS. (*Bacciferus;* from *bacca*, a berry, and *fero*, to bear.) Berry-bearing. Plants are so called which have a berry, or pulpy pericarpium; that is, such as bear berries covered with a thin membrane, wherein is contained a pulp which grows soft and moist when ripe, and encloses the seed within its substance. Mr. Ray divides the bacciferous trees into four kinds:

1. Such as bear a calyculate or naked berry, the flower and calyx both falling off together, and leaving the berry bare; as the *sassafras* tree, &c.

2. Such as have a naked monopyrenous fruit, that is, containing in it only one seed; as the *Arbutus*, the *Ocubinthus*, *Lentiscus*, &c.

3. Such as have a naked, but a polypyrenous fruit, that is, containing two or more kernels or seeds within it; as the *Jasminum*, *Ligustrum*, &c.

4. Such as have their fruit composed of many acini, or round soft balls, set close together, like a bunch of grapes; as the *Rubus idæus*, &c.

BACCILLUM. A little berry.

BACCIUS, Andrew, a native of Ancona. He appears to have had great industry and learning from his numerous publications; of which the chief, "De Thermis," gives an extensive examination of natural waters.

Ba'cculus. (*us, i.* m.; a staff.) *Baculus.*
1. A particular kind of lozenges, shaped into little short rolls, as liquorice frequently is.
2. A surgical instrument. *Hildanus.*

Bacher's Pills. Pilulæ tonicæ Bacheri. A celebrated medicine in France, employed for the cure of dropsies. Their principal ingredient is the extract of melampodium, or black hellebore.

BACON. The flesh of swine, salted and dried in the chimney. Pork, considered as an aliment, is not the best; and when hardened by salt and dried, it becomes more indigestible. Nevertheless, it is a good relish to strong stomachs, and proves a substantial food with potatoes, greens, and vegetables, to those who take strong exercise.

BACTISHUA, George, a celebrated physician of Chorasan. He translated several of the ancient medical authors into the Arabian language; and many of his observations are recorded by Rhazes and other succeeding physicians.

Badia'ga. A kind of sponge usually sold in Russia, the powder of which is said to take away the livid marks of blows and bruises within a few hours. It is only described by Buxbaum, and its nature is not properly understood.

Badian semen. The seed of a tree which grows in China, and smells like aniseed. The Chinese, and Dutch, in imitation of them, sometimes use the badian to give their tea an aromatic taste.

BADIUS. A deep brown liver colour. See *Colour.*

Badi'za aqua. See *Bath waters.*

Badranum semen. Indian aniseed.

Badu'cca. The Indian name for a species of capparis.

Ba'dzcher. An antidote.

Bæ'os. Βαιος. 1. Few. — *Hippocrates.*
2. An epithet for a poultice. — *P. Ægineta.*

BAGLIVI, George, born at Ragusa in 1668. In 1696, he published an excellent work on the practice of physic, condemning the exclusive attachment to theory, and earnestly recommending the Hippocratic method of observation; which, he maintained, assisted by the modern improvements in anatomy and physiology, would tend greatly to the advancement of medicine. He has left also several other tracts, though he died at the early age of thirty-eight.

BAGNIGGE WELLS. A saline mineral spring, near Clerkenwell, in London, resembling the Epsom water. In most constitutions, three half-pints is considered a full dose for purging.

BA'GNIO. (From *bagno*, Italian.) A bathing or sweating house.

Bahobal. See *Adansonia digitata.*

Ba'iac. White lead.

Baikalite. The abestiform species of tremolite.

BAILLIE, Matthew, born in Scotland, in the year 1760. His mother was sister of the two celebrated Hunters, Dr. William, and Mr. John. In the early part of his education he enjoyed great advantages. After studying at Glasgow, where his father was Professor of Divinity, he was sent to one of the exhibitions of that university at Baliol College, Oxford, where he took his degrees in Physic, by which he became a Fellow of the College of Physicians in London, and was soon after elected Fellow of the Royal Society. At an early period he came to London and was an inmate with his uncle, Dr. William Hunter, at that time lecturing to a numerous class of pupils, and who had the superintendence of his education. After demonstrating in the dissecting-room with the celebrated and learned Mr. Cruickshanks, he became, on the death of his uncle, joint lecturer with him, and continued to lecture until 1799.

Dr. Baillie's practice as a physician was for several years extremely small; so much so, that at one time he thought of leaving the metropolis. In the year 1787, he was elected physician to St. George's Hospital;

and he now began to find his practice increase. About this period he married.

Dr. Denman, the celebrated man-midwife of the day, had two daughters; Mr. Croft, afterward Sir Richard, married one, Dr. Baillie the other. The confidence which the two first obtained in the higher circles of society, was great and extensive; and they lost no opportunity of requiring the opinion and attendance of their relation. Dr. Baillie's pupils had now gone yearly to every part of England, and the Indies, and were sending their patients from the most distant parts to profit by his advice and experience. Two other circumstances soon occurred, which at once placed Dr. Baillie in a practice before unheard of. His uncle's, and his own great friend, Dr. Pitcairn, who was in great practice, was, from ill health, obliged to leave England for a more temperate climate, and he previously introduced him to all his patients; and Dr Warren, who had enjoyed the greater part of the practice of the nobility, was suddenly cut off. There was no practitioner left whose opportunities had fitted him to take the lead, and thus a field was opened for aspiring genius, ability, skill, and perseverance, which Dr. Baillie soon occupied, and from which he reaped an abundant harvest for more than twenty years.

Before he discontinued his lectures in 1799, he published an octavo volume, on Morbid Anatomy, in which is compressed more accurate and more useful information than is to be found in the elaborate works of Bonetus, Morgagni, and Lieutaud. This was followed by a large work, consisting of a series of splendid engravings to illustrate Morbid Anatomy. He also gave a description of the gravid uterus, and many important contributions to the transactions and medical collections of the time.

Dr. Baillie presented his collection of specimens of Morbid Parts to the College of Physicians, with a sum of money to be expended in keeping them in order. His professional and moral character cannot be too highly appreciated. He died in the year 1823, in the sixty-third year of his age, from a gradual decay of the powers of nature, continuing to practise until about a year before his death, leaving a wife, a son, a daughter, and a sister, Miss Joanna Baillie, who has acquired a degree of eminence surpassed by none of her sex in any age. A few of his private professional friends have directed a simple tablet and bust from the chisel of Chantry, to be placed in Westminster Abbey, to perpetuate his high and honourable professional character, and his many private virtues.

BAILLOU, Guillaume de, commonly called *Ballonius*, was born in 1538 at Paris. His writings are numerous, though not now much esteemed; but he appears to have been the first who properly discriminated between gout and rheumatism.

Baker's itch. See *Psoriasis.*

Ba'la. The plaintain-tree.

BALÆ'NA. (Βαλαινα. *a*, *æ*. f.; from βαλλω, to cast, from its power in casting up water.) The name of a genus of animals. Class, *Mammalia*; Order, *Cete*.

Balæna macrocephala. The systematic name of a species of whale, which affords a spermaceti.

Balais ruby. See *Spinelle.*

BALANCE. "The beginning and end of every exact chemical process consists in weighing. With imperfect instruments this operation will be tedious and inaccurate; but with a good balance, the result will be satisfactory; and much time, which is so precious in experimental researches, will be saved.

The balance is a lever, the axis of motion of which is formed with an edge like that of a knife; and the two dishes at its extremities are hung upon edges of the same kind. These edges are first made sharp, and then rounded with a fine hone or a piece of buff leather. The excellence of the instrument depends, in a great measure, on the regular form of this rounded part. When the lever is considered as a mere line, the two outer edges are called points of suspension, and the inner the fulcrum. The points of suspension are supposed to be at equal distances from the fulcrum, and to be pressed with equal weights when loaded.

1. If the fulcrum be placed in the centre of gravity of the beam, and the three edges lie all in the same right line, the balance will have no tendency to one position more than another, but will rest in any position it may be placed in, whether the scales be on or off, empty or loaded.

2. If the centre of gravity of the beam, when level, be immediately above the fulcrum, it will overset by the smallest action; that is, the end which is lowest will descend: and it will do this with more swiftness, the higher the centre of gravity, and the less the points of suspension are loaded.

3. But if the centre of gravity of the beam be immediately below the fulcrum, the beam will not rest in any position, but when level; and, if disturbed from this position, and then left at liberty, it will vibrate, and at last come to rest on the level. Its vibrations will be quicker, and its horizontal tendency stronger, the lower the centre of gravity, and the less the weights upon the points of suspension.

4. If the fulcrum be below the line joining the points of suspension, and these be loaded, the beam will overset, unless prevented by the weight of the beam, tending to produce a horizontal position. In this last case, small weights will equilibrate; a certain exact weight will rest in any position of

the beam; and all greater weights will cause the beam to overset. Many scales are often made this way, and will overset with any considerable load.

5. If the fulcrum be above the line joining the points of suspension, the beam will come to the horizontal position, unless prevented by its own weight. If the centre of gravity of the beam be nearly in the fulcrum, all the vibrations of the loaded beam will be made in times nearly equal, unless the weights be very small, when they will be slower. The vibrations of balances are quicker, and the horizontal tendency stronger, the higher the fulcrum.

6. If the arms of a balance be unequal, the weights in equipoise will be unequal in the same proportion. It is a severe check upon a workman to keep the arms equal, while he is making the other adjustments in a strong and inflexible beam.

7. The equality of the arms of a balance is of use, in scientific pursuits, chiefly in making weights by bisection. A balance with unequal arms will weigh as accurately as another of the same workmanship with equal arms, provided the standard weight itself be first counterpoised, then taken out of the scale, and the thing to be weighed be put into the scale, and adjusted against the counterpoise; or when proportional quantities only are considered, as in chemical and in other philosophical experiments, the bodies and products under examination may be weighed against the weights, taking care always to put the weights into the same scale. For then, though the bodies may not be really equal to the weights, yet their proportions among each other may be the same as if they had been accurately so.

8. But though the quality of the arms may be well dispensed with, yet it is indispensably necessary that their relative lengths, whatever they may be, should continue invariable. For this purpose, it is necessary, either that the three edges be all truly parallel, or that the points of suspension and support should be always in the same part of the edge. This last requisite is the most easily obtained.

The balances made in London are usually constructed in such a manner, that the bearing parts form notches in the other parts of the edges; so that the scales being set to vibrate, all the parts naturally fall into the same bearing. The balances made in the country have the fulcrum edge straight, and confined to one constant bearing by two side plates. But the points of suspension are referred to notches in the edges, like the London balances. The balances here mentioned, which come from the country, are enclosed in a small iron japanned box; and are to be met with at Birmingham and Sheffield warehouses, though less frequently than some years ago; because a pocket contrivance for weighing guineas and half-guineas has got possession of the market. They are, in general, well made and adjusted, turn with the twentieth of a grain when empty, and will sensibly show the tenth of a grain, with an ounce in each scale. Their price is from five shillings to half a guinea; but those which are under seven shillings have not their edges hardened, and consequently are not durable. This may be ascertained by the purchaser, by passing the point of a penknife across the small piece which goes through one of the end boxes: if it make any mark or impression, the part is soft.

9. If a beam be adjusted so as to have no tendency to any one position, and the scales be equally loaded; then, if a small weight be added in one of the scales, that balance will turn, and the points of suspension will move with an accelerated motion, similar to that of falling bodies, but as much slower, in proportion, very nearly, as the added weight is less than the whole weight borne by the fulcrum.

10. The stronger the tendency to a horizontal position in any balance, or the quicker its vibrations, the greater additional weight will be required to cause it to turn, or incline to any given angle. No balance, therefore, can turn so quick as the motion deduced. Such a balance as is there described, if it were to turn with the ten-thousandth part of the weight, would move at quickest ten thousand times slower than falling bodies; that is, the dish containing the weight, instead of falling through sixteen feet in a second of time, would fall through only two hundred parts of an inch, and it would require four seconds to move through one-third part of an inch; consequently all accurate weighing must be slow. If the indices of two balances be of equal lengths, that index which is connected with the shorter balance will move proportionally quicker than the other. Long beams are the most in request, because they are thought to have less friction: this is doubtful; but the quicker angular motion, greater strength, and less weight of a short balance, are certainly advantages.

11. Very delicate balances are not only useful in nice experiments, but are likewise much more expeditious than others in common weighing. If a pair of scales with a certain load be barely sensible to one-tenth of a grain, it will require a considerable time to ascertain the weight to that degree of accuracy, because the turn must be observed several times over, and is very small. But if no greater accuracy were required, and scales were used which would turn with the hundredth of a grain, a tenth of a grain, more or less, would make so great a difference in the turn, that it would be seen immediately.

12. If a balance be found to turn with a certain addition, and is not moved by any smaller weight, a greater sensibility may be

given to that balance, by producing a tremulous motion in its parts. Thus, if the edge of a blunt saw, a file, or other similar instrument, be drawn along any part of the case or support of a balance, it will produce a jarring which will diminish the friction on the moving parts so much, that the turn will be evident with one-third or one-fourth of the addition that would else have been required. In this way, a beam which would barely turn by the addition of one-tenth of a grain, will turn with one-thirtieth or fortieth of a grain.

13. A balance, the horizontal tendency of which depends only on its own weight, will turn with the same addition, whatever may be the load; except so far as a greater load will produce a greater friction.

14. But a balance, the horizontal tendency of which depends only on the elevation of the fulcrum, will be less sensible the greater the load; and the addition requisite to produce an equal turn will be in proportion to the load itself.

15. In order to regulate the horizontal tendency in some beams, the fulcrum is placed below the points of suspension, and a sliding weight is put upon the cock or index, by means of which the centre of gravity may be raised or depressed. This is a useful contrivance.

16. Weights are made by a subdivision of a standard weight. If the weight be continually halved, it will produce the common pile, which is the smallest number for weighing between its extremes, without placing any weight in the scale with the body under examination. Granulated lead is a very convenient substance to be used in this operation of halving, which, however, is very tedious. The readiest way to subdivide small weights, consists in weighing a certain quantity of small wire, and afterward cutting it into such parts, by measure, as are desired; or the wire may be wrapped close round two pins, and then cut asunder with a knife. By this means it will be divided into a great number of equal lengths, or small rings. The wire ought to be so thin, as that one of these rings may barely produce a sensible effect on the beam. If any quantity (as, for example, a grain) of these rings be weighed, and the number then reckoned, the grain may be subdivided in any proportion, by dividing that number, and making the weights equal to as many of the rings as the quotient of the division denotes. Then, if 750 of the rings amounted to a grain, and it were required to divide the grain decimally, downwards, 9-10ths would be equal to 675 rings, 8-10ths would be equal to 600 rings, 7-10ths to 525 rings, &c. Small weights may be made of thin leaf brass. Jewellers' foil is a good material for weights below 1-10th of a grain, as low as to 1-100th of a grain; and all lower quantities may be either estimated by the position of the index, or shown by actually counting the rings of wire, the value of which has been determined.

17. In philosophical experiments, it will be found very convenient to admit no more than one dimension of weight. The grain is of that magnitude as to deserve the preference. With regard to the number of weights the chemists ought to be provided with, writers have differed according to their habits and views. Mathematicians have computed the least possible number, with which all weights within certain limits might be ascertained; but their determination is of little use. Because, with so small a number, it must often happen that the scales will be heavily loaded with weights on each side, put in with a view only to determine the difference between them. It is not the least possible number of weights which it is necessary an operator should buy to effect his purpose that we ought to enquire after, but the most convenient number for ascertaining his enquiries with accuracy and expedition. The error of adjustment is the least possible, when only one weight is in the scale; that is, a single weight of five grains is twice as likely to be true, as two weights, one of three, and the other of two grains, put into the dish to supply the place of the single five; because each of these last has its own probability of error in adjustment. But since it is as inconsistent with convenience to provide a single weight, as it would be to have a single character for every number; and as we have nine characters, which we use in rotation, to express higher values according to their position, it will be found very serviceable to make the set of weights correspond with our numerical system. This directs us to the set of weights as follows: 1000 grains, 900 g. 800 g. 700 g. 600 g. 500 g. 400 g. 300 g. 200 g. 100 g. 90 g. 80 g. 70 g. 60 g. 50 g. 40 g. 30 g. 20 g. 10 g. 9 g. 8 g. 7 g. 6 g. 5 g. 4 g. 3 g. 2 g. 1 g. $\frac{9}{10}$ g. $\frac{8}{10}$ g. $\frac{7}{10}$ g. $\frac{6}{10}$ g. $\frac{5}{10}$ g. $\frac{4}{10}$ g. $\frac{3}{10}$ g. $\frac{2}{10}$ g. $\frac{1}{10}$ g. $\frac{9}{100}$ g. $\frac{8}{100}$ g. $\frac{7}{100}$ g. $\frac{6}{100}$ g. $\frac{5}{100}$ g. $\frac{4}{100}$ g. $\frac{3}{100}$ g. $\frac{2}{100}$ g. $\frac{1}{100}$ g. With these the philosopher will always have the same number of weights in his scales as there are figures in the number expressing the weights in grains. Thus, 742·5 grains will be weighed by the weights 700, 40, 2, and 5-10ths." —*Ure's Chemical Dictionary.*

Balani'num oleum. Oil of the ben-nut.

BALANOCA'STANUM. (*um, i,* n.; from βαλανος, a nut, and καϛανον, a chestnut; so called from its tuberous root.) See *Bunium bulbocastanum.*

BA'LANOS. (*os, i.* f.; from βάλλω, to cast, because it sheds its fruit upon the ground.) *Balanus.* 1. An acorn.

2. The oak-tree. See *Quercus robur.*

3. Theophrastus uses it sometimes to express any glandiferous tree.

4. From the similitude of form, this word is used to express suppositories and pessaries, βαλανος signifying a nut.

5. A name of the glans penis.

Balas ruby. See *Spinelle.*

BALAUSTINUS. Balaustine; like the pomegranate.

BALAU'STIUM. (*um, i.* n.; from βαλιος, various, and αυω, to dry: so called from the variety of its colours, and its becoming soon dry; or from βλαςανω, to germinate.) A large rose-like flower, of a red colour, the produce of the plant from which we obtain the pomegranate. See *Punica granatum.*

BALBU'TIES. (From βαϐαζω, to stammer; or from *balbel*, Heb. to stammer.) A defect of speech; properly, that sort of stammering where the patient sometimes hesitates, and immediately after speaks precipitately.

BALDMONEY. See *Æthusa meum.*

BALDNESS. This affection of the hair has been named *calvities* and *alopecia*, also *ophiasis*, in consequence of the serpentine direction which the baldness, in some cases, takes round the head. Sennutus calls it *defluum capillorum.* Whatever tends to give an established relaxation and want of tone to the cutaneous vessels, becomes a cause of baldness, and hence it is a frequent sequel upon fevers of various kinds. It is also a symptom of tabes, consumption, porrigo, and impetigo. Tonics and cold bathing have been found serviceable in cases where it appeared to be an idiopathic disease, and dependent on relaxation: but in tabes, phthisis, &c. where it is symptomatic, it must depend on the disease that gives rise to it. Baldness often arises from the very opposite state; instead of relaxation, the cutaneous secernents are dry and rigid: very little nourishment is afforded to the roots or bulbs, or to the vaginæ of the hair, in consequence of which they become arid and brittle, particularly at the extreme point of the head or crown, and are perpetually breaking off at their origin. The remedies against baldness from this cause are tepid fomentations, and relaxing aromatic oils. A blister has been found very beneficial in some instances.

Baldwin's phosphorus. Ignited nitrate of lime.

BALISMUS. (Βαλλισμος. *us, i.* m.; from βαλλιζω, *tripudio, pedibus plando.*) Shaking palsy. See *Chorea* and *Tremor.*

BALI'STA. (*a, æ.* f.; from βαλλω, to cast, because the ancients used to cast it from their slings.) The astragalus, a bone of the foot.

BALLOO'N. (*Ballon*, or *balon*, French.)

1. A large glass receiver in the form of a hollow globe. For certain chemical operations *balloons* are made with two necks, placed opposite to each other; one to receive the neck of a retort, and the other to enter the neck of a second *balloon:* this apparatus is called *enfiladed balloons.* Their use is to increase the whole space of the receiver, because any number of these may be adjusted to each other. The only one of these vessels which is generally used, is a small oblong *balloon* with two necks, which is to be luted to the retort, and to the receiver, or great *balloon;* it serves to remove this receiver from the body of the furnace, and to hinder it from being too much heated.

2. A spherical bag filled with a gas of a small specific gravity, or with heated air, by the buoyancy of which it is raised into the atmosphere.

BALLO'TE. (*e, es.* f.; from βαλλω, to send forth, and ους, ωτος, the ear, because it sends forth flowers like ears.) *Ballota.* The name of a genus of plants. Class, *Didynamia;* Order, *Gymnospermia.*

BALLOTE NIGRA. Stinking horehound; called also, *Marrubiastrum.* A nettle-like plant, used, when boiled, by the country people against scurvy and cutaneous eruptions.

BALM. See *Melissa.*

Balm of Gilead. See *Dracocephalum.*

Balm of Mecca. See *Amyris gileadensis.*

Balm, Turkey. See *Dracocephalum.*

BA'LNEUM. (Βαλανειον. *um, i.* n. a bath.) A bath.

1. A convenient receptacle of water, for persons to wash or plunge in, either for health or pleasure. These are distinguished into hot and cold, and are either natural or artificial. The natural hot baths are formed of the water of hot springs, of which there are many in different parts of the world; especially in those countries where there are, or have evidently been volcanoes. The artificial hot baths consist either of water, or of some other fluid, made hot by art. The cold bath consists of water, either fresh or salt, in its natural degree of heat; or it may be made colder by art, as by a mixture of nitre, sal-ammoniac, &c. The chief hot baths in our country are those of Bath and Bristol, and those of Buxton and Matlock; which latter, however, are rather warm, or tepid, than hot. The use of baths is found to be beneficial in diseases of the head, as palsies, &c.; in cuticular diseases, as leprosies, &c.; obstructions and constipations of the bowels, the scurvy, and stone; and in many diseases of women and children. The cold bath, though popularly esteemed one of the most innocent remedies yet discovered, is not, however, to be adopted indiscriminately. On the contrary, it is liable to do considerable mischief in some cases of diseased viscera, and is not, in any case, proper to be used during the existence of costiveness. As a preventive remedy for the young, and as a general bracer for persons of a relaxed fibre, especially of the female sex, it often proves highly advantageous; and, in general, the popular idea is a correct one, that the *glow* which succeeds the use of cold or temperate baths, is a test of their utility; while, on the other hand, their producing *chilliness*, headach, &c. is a proof of their being pernicious.

1. *The Cold Bath.* The diseases and morbid symptoms for which the cold bath, under one form or another, may be applied with advantage, are very numerous; and some of them deserve particular attention. One of the most important of its uses is in *ardent fever;* and, under proper management, it forms a highly valuable remedy in this dangerous disorder. It is highly important, however, to attend to the precautions which the use of this vigorous remedial process requires. "Affusion with cold water," Dr. Currie observes, "may be used whenever the heat of the body is steadily above the natural standard, when there is no sense of chilliness, and especially when there is no general nor profuse perspiration. If used during the cold stage of a fever, even though the heat be higher than natural, it brings on interruption of respiration, a fluttering, weak, and extremely quick pulse, and certainly might be carried so far as to extinguish animation entirely." The most salutary consequence which follows the proper use of this powerful remedy, is the production of free and general perspiration. It is this circumstance that appears to give so much advantage to a general affusion of cold water in fevers, in preference to any partial application. The cold bath is better known, especially in this country, as a general tonic remedy in various chronic diseases. The general circumstances of disorder for which cold bathing appears to be of service, according to Dr. Saunders, are a languor and weakness of circulation, accompanied with profuse sweating and fatigue, on very moderate exertion; tremors in the limbs, and many of those symptoms usually called nervous; where the moving powers are weak, and the mind listless and indolent; but, at the same time, where no permanent morbid obstruction, or visceral disease, is present. Such a state of body is often the consequence of a long and debilitating sickness, or of a sedentary life, without using the exercise requisite to keep up the activity of the bodily powers. In all these cases the great object to be fulfilled, is to produce a considerable re-action, from the shock of cold water, at the expense of as little heat as possible; and when cold bathing does harm, it is precisely where the powers of the body are too languid to bring on re-action, and the chilling effects remain unopposed. When the patient feels the shock of immersion very severely, and, from experience of its pain, has acquired an insuperable dread of this application; when he has felt little or no friendly glow to succeed the first shock, but on coming out of the bath remains cold, shivering, sick at the stomach, oppressed with headach, languid, drowsy, and listless, and averse to food and exercise during the whole of the day, we may be sure that the bath has been too cold, the shock too severe, and no re-action produced at all adequate to the impression on the surface of the body.

There is a kind of slow, irregular fever, or rather febricula, in which Dr. Saunders has often found the cold bath of singular service. This disorder principally affects persons naturally of a sound constitution, but who lead a sedentary life, and at the same time are employed in some occupation which strongly engages their attention, requires much exertion of thought, and excites a degree of anxiety. Such persons have constantly a pulse rather quicker than natural, hot hands, restless nights, and an impaired appetite, but without any considerable derangement in the digestive organs. This disorder will continue for a long time in an irregular way, never entirely preventing their ordinary occupation, but rendering it more than usually anxious and fatiguing, and often preparing the way for confirmed hypochondriasis. Persons in this situation are remarkably relieved by the cold bath, and, for the most part, bear it well; and its use should also, if possible, be aided by that relaxation from business, and that diversion of the mind from its ordinary train of thinking, which are obtained by attending a watering place. The Doctor also found cold bathing hurtful in chlorosis, and observes, that it is seldom admissible in those cases of disease in the stomach which are brought on by high living, and constitute what may be termed the true dyspepsia.

The topical application of cold water, or of a cold saturnine lotion, in cases of local inflammation, has become an established practice, the efficacy of which is daily experienced. Burns of every description will bear a most liberal use of cold water, or even of ice; and this may be applied to a very extensive inflamed surface, without even producing the ordinary effects of general chilling, which would be brought on from the same application to a sound and healthy skin. Another very distressing symptom remarkably relieved by cold water, topically applied, is that intolerable itching of the vagina, which women sometimes experience, entirely unconnected with any general cause, and which appears to be a kind of herpes confined to that part. Cold water has also been used topically in the various cases of strains, bruises, and similar injuries, in tendinous and ligamentous parts, with success; also in rigidity of muscles, that have been long kept at rest, in order to favour the union of bone, where there appears to have been no organic injury, but only a deficiency of nervous energy, and immobility of parts, or, at most, only slight adhesions, which would give way to regular exercise of the weakened limb. Another very striking instance of the powerful effects of topical cold, in stimulating a part to action, is shown in the use of cold, or even iced water, to the vagina of parturient women during the dangerous hæmorrhages that take place from

the uterus, on the partial separation of the placenta.

2. *The Shower Bath.* A species of cold bath. A modern invention, in which the water falls through numerous apertures on the body. A proper apparatus for this purpose is to be obtained at the shops. The use of the shower bath applies, in every case, to the same purposes as the cold bath, and is often attended with particular advantages. 1. From the sudden contact of the water, which, in the common cold bath, is only momentary, but which, in the shower bath, may be prolonged, repeated, and modified, at pleasure; and, secondly, from the head and breast, which are exposed to some inconvenience and danger in the common bath, being here effectually secured, by receiving the first shock of the water.

3. *The Tepid Bath.* The range of temperature, from the lowest degree of the hot bath to the highest of the cold bath, forms what may be termed the tepid. In general the heat of water which we should term tepid, is about 90 deg. In a medicinal point of view, it produces the greatest effect in ardent fever, where the temperature is little above that of health, but the powers of the body weak, not able to bear the vigorous application of cold immersion. In cutaneous diseases, a tepid bath is often quite sufficient to produce a salutary relaxation, and perspirability of the skin.

4. *The Hot Bath.* From 93 to 96 deg. of Fahrenheit, the hot bath has a peculiar tendency to bring on a state of repose, to alleviate any local irritation, and thereby induce sleep. It is, upon the whole, a safer remedy than the cold bath, and more peculiarly applicable to very weak and irritable constitutions, whom the shock produced by cold immersion would overpower, and who have not sufficient vigour of circulation for an adequate re-action. In cases of topical inflammation, connected with a phlogistic state of body, preceded by rigor and general fever, and where the local formation of matter is the solution of the general inflammatory symptoms, experience directs us to the use of the warm relaxing applications, rather than those which, by exciting a general re-action, would increase the local complaint. This object is particularly to be consulted when the part affected is one that is essential to life. Hence it is that in fever, where there is a great determination to the lungs, and the respiration appears to be locally affected, independently of the oppression produced by mere febrile increase of circulation, practitioners have avoided the external use of cold, in order to promote the solution of the fever; and have trusted to the general antiphlogistic treatment, along with the topically relaxing application of warm vapour inhaled by the lungs. Warm bathing appears to be peculiarly well calculated to relieve those complaints that seem to depend on an irregular or diminished action of any part of the alimentary canal; and the state of the skin, produced by immersion in warm water, seems highly favourable to the healthy action of the stomach and bowels. Another very important use of the warm bath, is in herpetic eruptions, by relaxing the skin, and rendering it more pervious, and preparing it admirably for receiving the stimulant applications of tar ointment, mercurials, and the like, that are intended to restore it to a healthy state. The constitutions of children seem more extensively relieved by the warm bath than those of adults; and this remedy seems more generally applicable to acute fevers in them than in persons of a more advanced age. Where the warm bath produces its salutary operation, it is almost always followed by an easy and profound sleep. Dr. Saunders strongly recommends the use of the tepid bath, or even one of a higher temperature, in the true menorrhagia of females. In paralytic affections of particular parts, the powerful stimulus of heated water is generally allowed; and in these cases, the effect may be assisted by anything which will increase the stimulating properties of the water; as, for instance, by the addition of salt. In these cases, much benefit may be expected from the use of warm sea-baths. The application of the warm bath topically, as in pediluvia, or fomentations of the feet, often produces the most powerful effects in quieting irritation in fever, and bringing on a sound and refreshing repose. The cases in which the warm bath is likely to be attended with danger, are particularly those where there exists a strong tendency to a determination of blood to the head; and apoplexy has sometimes been thus brought on. The lowest temperature will be required for cutaneous complaints, and to bring on relaxation in the skin, during febrile irritation; the warmer will be necessary in paralysis: more heat should be employed on a deep-seated part than one that is superficial.

5. *The Vapour Bath.* The vapour bath, called also *Balneum laconicum*, though not much employed in England, forms a valuable remedy in a variety of cases. In most of the hot natural waters on the Continent, the vapour bath forms a regular part of the bathing apparatus, and is there highly valued. In no country, however, is this application carried to so great an extent as in Russia, where it forms the principal and almost daily luxury of all the people, in every rank; and it is employed as a sovereign remedy for a great variety of disorders. The late Hon. Mr. Bazil Cochrane has published a Treatise on the Vapour Bath, from which, it appears, he has brought the apparatus to such perfection, that he can apply it of all degrees of temperature, partially or generally, by shower, or by steam,

with a great force or a small one; according to the particular circumstances under which patients are so variously placed, who require such assistance. See *Cochrane on Vapour Bath.* Connected with this article is the *air-pump vapour-bath;* a species of vapour bath, or machine, to which the inventor has given this name. This apparatus has been found efficacious in removing paroxysms of the gout, and preventing their recurrence; in acute and chronic rheumatism, palsy, cutaneous diseases, ulcers, &c. It has also been proposed in chilblains, leprosy, yaws, tetanus, amenorrhœa, and dropsy.

II. Those applications are called *dry baths,* which are made of ashes, salt, sand, &c. The ancients had many ways of exciting a sweat, by means of a dry heat; as by the use of hot sand, stove rooms, or artificial bagnios; and even from certain natural hot steams of the earth, received under a proper arch, or hothouse, as we learn from Celsus. They had also another kind of bath by insolation, where the body was exposed to the sun for some time, in order to draw forth the superfluous moisture from the inward parts; and to this day it is a practice, in some nations, to cover the body over with horse-dung, especially in painful chronic diseases. In New England, they make a kind of stove of turf, wherein the sick are shut up to bathe or sweat. It was probably from a knowledge of this practice, and of the exploded doctrines of Celsus, that the noted empiric, Dr. Graham, drew his notions of the salutary effects of what he called *earth bathing;* a practice which, in the way he used it, consigned some of his patients to a perpetual mansion under the ground. The like name of *dry* bath, is sometimes also given to another kind of bath, made of kindled coals, or burning spirit of wine, the patient being placed in a convenient close chair, for the reception of the fume, which rises and provokes sweat in a plentiful manner; care being taken to keep the head out, and to secure respiration. This bath has been said to be very effectual in removing old obstinate pains in the limbs.

III. *Medicated baths* are such as are saturated with various mineral, vegetable, or sometimes animal substances. Thus we have sulphur and iron baths, aromatic and milk baths. There can be no doubt that such ingredients, if duly mixed, and a proper temperature given to the water, may, in certain complaints, be productive of effects highly beneficial. Water, impregnated with sulphate of iron, will abound with the bracing particles of that metal, and may be useful for strengthening the part to which it is applied, re-invigorating debilitated limbs, stopping various kinds of bleeding, restoring the menstrual and hæmorrhoidal discharges when obstructed, and, in short, as a substitute for the natural iron bath.

There are various other medicated baths, such as those prepared with alum, and quick-lime, sal-ammoniac, &c. by boiling them together, or separately, in pure rain water. These have long been reputed as eminently serviceable in paralytic, and all other diseases arising from nervous and muscular debility.

Of late years an acid medicated bath has been much used in the cure of diseases. It was first invented by Dr. Scott of Calcutta, against many morbid, and principally functional, diseases of the liver, especially a torpid state of it. It consists of a very dilute nitro-muriatic acid. For nearly forty years Dr. Scott was in the habit of using this preparation, and has tried it in almost every variety of strength, and almost every variety of proportion, which the two acids may be made to bear to each other. He commenced his experiments in India, where, on account of the greater degree of torpitude the liver is apt to acquire than in more temperate climates, he was in the habit of forming his bath stronger, and making it deeper than he has found it proper to do in his own country, and where, upwards of twenty years ago, he plunged the Duke of Wellington into one up to his chin, for a severe hepatic affection he was then labouring under, and thus restored him to health in a short time. In England, it is not found necessary to raise the bath much above the knees, and a mere foot bath, or common wash hand basin, is occasionally sufficient; in which cases the attendants sponge the parts above the knee, or the arms, with the acid water or bath.

Three parts, by measure, of muriatic acid, and two of nitric acid, are to be carefully mixed, and added to as much distilled water. The bath is to consist of three ounces of this dilute acid to every gallon of water. If the acids be of adequate strength, the mixture further diluted for bathing, will, to the taste, have the sourness of weak vinegar, and perhaps prick the skin slightly, if very delicate, but not otherwise, after it has been applied to the surface for half an hour. But as these acids vary very much in their degree of concentration, as distilled by different chemists, there will be some variation in their power. The strength of the bath, however, should not be much greater at any time than the proportion here laid down; for otherwise it may excite a troublesome rash, and give a yellow hue to the nails and skin of the feet, or whatever part is exposed to its action.

A narrow tub for a knee bath, just wide enough to hold the feet and reach the knees, should contain three gallons of the prepared bath liquor, and consequently about nine ounces in measure of the dilute nitro-muriatic acid. For a foot bath, half a gallon may be sufficient, and a common wash-hand basin may be employed as a vessel for the purpose.

The feet should remain in the bath for twenty minutes or half an hour; and the legs, thighs, and abdomen be, in the mean time, frequently sponged with the same. In the winter, the bath may be used warm; but this is not necessary in the summer.

The bath may be employed at first daily, for a fortnight or three weeks, and afterwards every other day, or only twice a week.

Dr. Scott affirms, that he has employed this process with decided advantage in almost all cases dependent on a morbid secretion of bile; whether the secretion be superabundant, defective, or depraved. He found it often, within a few hours after the first bathing, increase the flow of bile and ameliorate its character, and, in consequence hereof, excite an expulsion of dark-coloured fæces, bright-coloured bile, or bile of a brown, green, or black colour, like tar mixed with oil. In the paroxysm of pain from a gall-stone passing the bile ducts, or from common spasm, he also found it act like a charm, and produce almost immediate ease.

Dr. Scott was of opinion, from the rapidity with which it acts in some cases, that it operates on the nerves, and not by the absorbents; and he made various experiments to show that it is the chlorine of the muriatic acid alone, decomposed by the process, that is the beneficial ingredient of the bath.

IV. A term in *Chemistry:* when the vessels in which bodies are exposed to the action of heat are not placed in immediate contact with the fire, but receive the required degree of heat by another intermediate body, such apparatus is termed a bath. These have been variously named, as dry, vapour, &c. Modern chemists distinguish three kinds:

1. *Balneum arenæ*, or the sand bath. This consists merely of an open iron or baked clay sand-pot, whose bottom is mostly convex, and exposed to the furnace. Finely sifted sea-sand is put into this, and the vessel containing the substance to be heated, &c. in the sand bath, immersed in the middle.

2. *Balneum mariæ*, or the water bath. This is very simple, and requires no particular apparatus. The object is to place the vessel containing the substance to be heated, in another containing water; which last must be of such a nature as to be fitted for the application of fire, as a common still, or kettle.

3. *The vapour bath*. When any substance is heated by the steam, or vapour, of boiling water, chemists say it is done by means of a vapour bath.

Balneum animale. The wrapping any part of an animal, just killed, round the body, or a limb.

Balneum arenæ. A sand bath.

Balneum calidum. A hot bath.

Balneum frigidum. A cold bath.

Balneum mariæ. See *Balneum*.

Balneum medicatum. A bath impregnated with drugs.

Balneum siccum. A dry bath, either with ashes or sand.

Balneum sulphureum. A bath, containing some preparation of sulphur.

Balneum tepidum. A tepid bath.

Balneum vaporis. A vapour bath.

BA'LSAM. (*Balsamum, i.* n.; from *baal samen*, the Hebrew for the prince of oils.) Balsam. This term was anciently applied to any strong-scented, natural vegetable resin of about the fluidity of treacle, inflammable, not miscible with water, without addition, and supposed to be possessed of many medical virtues. All the turpentines, the Peruvian balsam, copaiba balsam, &c. are examples of natural balsams. Besides, many medicines compounded of various resins, or oils, and brought to this consistence, obtained the name of balsam. Latterly, however, chemists have restricted this term to vegetable juices, either liquid, or which spontaneously become concrete, consisting of a substance of a resinous nature, combined with benzoic acid, or which are capable of affording benzoic acid, by being heated alone, or with water. They are insoluble in water, but readily dissolve in alkohol and æther. The liquid balsams are copaiva, opo-balsam, Peru, styrax, Tolu; the concrete are benzoin, dragon's blood, and storax.

Balsam apple, male. See *Momordica elaterium.*

Balsam, artificial. Compound medicines are thus termed which are made of a balsamic consistence and fragrance. They are generally composed of expressed or ethereal oils, resins, and other solid bodies, which give them the consistence of butter. The basis, or body of them, is expressed oil of nutmeg, and frequently wax, butter, &c. They are usually tinged with cinnabar and saffron.

Balsam of Canada. See *Pinus Balsamea.*

Balsam, Canary. See *Dracocephalum.*

Balsam of Copaiba. See *Copaifera officinalis.*

Balsam, natural. A resin which has not yet assumed the concrete form, but still continues in a fluid state, is so called; as common turpentine, balsamum copaiva, peruvianum, tolutanum, &c.

Balsam, Peruvian. See *Myroxylon peruiferum.*

Balsam of sulphur. See *Balsamum sulphuris.*

Balsam of Tolu. See *Toluifera balsamum.*

Balsam, Turkey. See *Dracocephalum.*

BALSAMA'TIO. (From *balsamum*, a balsam.) The embalming of dead bodies.

BALSA'MEA. (From *balsamum*, balsam; so called from its odour.) See *Pinus balsamea.*

BALSAMELÆ'ON. (From *balsamum*, balsam, and ελαιον, oil.) Balm of Gilead. See *Amyris gileadensis.*

Ba'lsami oleum. Balm of Gilead. See *Amyris gileadensis.*

BALSAMIC. (*Balsamicus*; from βαλσαμον, balsam.) A term generally applied to substances of a smooth and oily consistence, which possess emollient, sweet, and generally aromatic qualities. Hoffman calls those medicines by this name, which are hot and acrid, and also the natural balsams, stimulating gums, &c. by which the vital heat is increased. Dr. Cullen speaks of them under the joint title of *balsamica* et *resinosa*, considering that turpentine is the basis of all balsams.

BALSAMI'FERA. (*a, æ.* f.; from *balsamum*, balsam, and *fero*, to bear.) Balsam-bearing.

Balsamifera braziliensis. See *Copaifera officinalis*.

Balsamifera indicana. See *Myroxylon peruiferum*.

Balsamita fœminea. See *Achillea*.

Balsamita lutea. See *Polygonum*.

Balsamita major. See *Tanacetum*.

Balsamita mas. See *Tanacetum*.

Balsamita minor. Sweet maudlin. The *Achillea ageratum*.

BALSAMUM. See *Balsam*.

Balsamum ægyptiacum. See *Amyris*.

Balsamum alpinum. See *Amyris*.

Balsamum americanum. See *Myroxylon peruiferum*.

Balsamum anodynum. A preparation made from tacamahacca, distilled with turpentine and soap liniment, and tincture of opium, but there were a great number of balsams sold under this name formerly.

Balsamum arcæi. A preparation composed of gum-elemi and suet.

Balsamum asiaticum. See *Amyris*.

Balsamum braziliense. See *Pinus*.

Balsamum canadense. See *Pinus*.

Balsamum carpathicum. The essential oil distilled very carefully from the fresh cones of the trees which yield the common turpentine.

Balsamum cephalicum. A distillation from oils, nutmegs, cloves, amber, &c.

Balsamum commendatoris. A composition of storax, benzoe, myrrh, aloes.

Balsamum copaibæ. See *Copaifera officinalis*.

Balsamum embryonum. A preparation of aniseed, fallen into disuse.

Balsamum genuinum antiquorum. See *Amyris gileadensis*.

Balsamum gileadense. See *Amyris gileadensis*.

Balsamum guaiacinum. Balsam of Peru and spirits of wine.

Balsamum guidonis. The same as balsamum anodynum.

Balsamum hungaricum. A balsam prepared from a coniferous tree on the Carpathian mountains. It is also said to be an exudation from the tops of the *Pinus sylvestris*.

Balsamum judaicum. See *Amyris gileadensis*.

Balsamum lucatelli. A preparation made of oil, turpentine, wax, and red saunders, now disused; formerly exhibited in coughs of long standing.

Balsamum mas. See *Tanacetum balsamita*.

Balsamum e mecca. See *Amyris gileadensis*.

Balsamum mexicanum. See *Myroxylon peruiferum*.

Balsamum novum. A new balsam from a red fruit in the West Indies.

Balsamum odoriferum. A preparation of oil, wax, and any essential oil.

Balsamum persicum. A balsam composed of storax, benzoe, myrrh, and aloes.

Balsamum peruvianum. See *Myroxylon peruiferum*.

Balsamum rackasira. This balsam, which is inodorous when cold, but of a smell approaching to that of Tolu balsam when heated, is brought from India in gourd shells. It is slightly bitter to the taste, and adheres to the teeth, on chewing. It is supposed to be one of the factitious balsams, and is scarcely ever prescribed in this country.

Balsamum samech. A factitious balsam, composed of tartar and spirits of wine.

Balsamum saponaceum. A name given to the preparation very similar to the compound soap liniment.

Balsamum saturni. The remedy so named is prepared by dissolving the acetate of lead in oil of turpentine, by digesting the mixture till it acquires a red colour. This is found to be a good remedy for cleansing foul ulcers; but it is not acknowledged in our dispensatories.

Balsamum styracis benzoini. See *Styrax benzoin*.

Balsamum succini. Oil of amber.

Balsamum sulphuris. A solution of sulphur in oil.

Balsamum sulphuris anisatum. Terebinthinated balsam of sulphur, and oil of aniseed.

Balsamum sulphuris barbadense. Sulphur boiled with Barbadoes tar.

Balsamum sulphuris crassum. Thick balsam of sulphur.

Balsamum sulphuris simplex. Sulphur boiled with oil.

Balsamum sulphuris terebinthinatum. This is made by digesting the sulphur with oil of turpentine; it is now confined to veterinary medicine.

Balsamum syriacum. See *Amyris gileadensis*.

Balsamum tolutanum. See *Toluifera balsamum*.

Balsamum traumaticum. Vulnerary balsam. A form of medicine intended to supply the place of the tincture commonly called Friar's balsam, so famous for curing old ulcers. See *Tinctura benzoini composita*.

Balsamum universale. See *Ceratum plumbi compositum*.

Balsamum verum. See *Amyris gileadensis*.

Balsamum viride. Linseed-oil, turpentine, and verdigris, mixed together.

Balsamum vitæ hoffmanni. An artificial balsam, so named from its inventor, and composed of a great variety of the warmest and most grateful essential oils, such as nutmegs, cloves, lavender, &c. with balsam of Peru, dissolved in highly rectified spirit of wine; but it is now greatly abridged in the number of ingredients, and but little used.

Balzoi'num. The gum-benjamin.

BAMBA'LIO. (*o, onis.* m.; from βαμβαινω, to speak inarticulately.) One who stammers or lisps.

BAMBO'O. (An Indian root.) See *Arundo bambos.*

Ba'mia moschata. See *Hibiscus.*

Bamier. The name of a plant common in Egypt, the husk of which they dress with meat, and, from its agreeable flavour, make great use of it in their ragouts.

Ban arbor. The coffee-tree.

Bana'na. (An Indian word.) *Bananeira.* See *Musa sapientum.*

Ba'ncia. The wild parsnip.

BANDAGE. *Deligatio. Fascia.* An apparatus consisting of one or several pieces of linen, or flannel, and intended for covering or surrounding parts of the body for surgical purposes. Bandages are either simple or compound. The chief of the simple are the circular, the spiral, the uniting, the retaining, the expellant, and the creeping. The compound bandages used in surgery, are the T bandage, the suspensory one, the capistrum, the eighteen-tail bandage, and others, to be met with in surgical treatises.

Bandu'ra. A plant which grows in Ceylon, the root of which is said to be astringent.

BANDY-LEG. A curvature of the bones of the leg outward, or in any direction.

BANGU'E. *Bange.* A species of opiate in great use throughout the East, for its intoxicating qualities. It is the leaf of a kind of wild hemp, growing in the countries of the Levant, and made into powder, pills, or conserves.

Ba'nica. The wild parsnip.

Bani'las. See *Epidendrum vanilla.*

Bani'lia. See *Epidendrum vanilla.*

Bao'bab. See *Adansonia digitata.*

Ba'ptica coccus. The kermes berry.

BAPTISTE'RIUM. (From βαπτω, to immerge.) A bath, or repository of water, to wash the body.

Bapti'strum. (From βαπτω, to dye.) A species of wild mustard, so called from its reddish colour.

Ba'rac. (From *borak,* Arabian, splendid.) *Barach panis.* Nitre.

Ba'ras. (Arabian.) In M. A. Severinus, it is synonymous with Alphus, or Leuce.

Bara'thrum. (Arabian.) Any cavity or hollow place.

BA'RBA. (*a, æ.* f.; from *barbarus,* because wild nations are usually unshaven.)

1. In *Anatomy,* the beard of man, or hair which grows on the chin and adjacent parts of the face of adult males.

2. In *Botany,* a species of pubescence, or down, with which the surface of some plants are covered, sometimes in patches; as in the leaves of the *Mesembryanthemum barbatum.*

Some vegetables have the specific name of *barba,* the ramifications of which are bushy, like a beard; as *Barba jovis,* &c.

Barba aronis. See *Arum maculatum.*

Barba capræ. See *Spirea ulmaria.*

Barba hirci. See *Tragopogon.*

Barba jovis. Jupiter's beard. This name is given to several hairy plants from some superstitious notions. See *Sempervivum tectorum.*

BARBADOES. The name of an island in the West Indies, from which we obtain a mineral tar, and several medicinal plants.

Barbadoes cherry. See *Malphigia glabra.*

Barbadoes leg. The disease which is so called is indigenous to Barbadoes: but it is not confined to that island, for it is of high antiquity, as well as of very wide range, in hot, and especially in tropical climates, and constitutes the elephant leg of the Arabians. It has been known immemorially in India. It is also indigenous to the Polynesian islands, where it takes the name of yavaskin, as being supposed to originate from drinking the heating beverage called yava. In this disease the limb is tumid, hard, livid, and enormously misshapen; the skin at first is glabrous, afterwards thick, scaly, and warted, successively bulging and indented: and these appearances are occasioned by an effusion of albuminous material into the cellular tissue under the skin of the affected part, in consequence, it is presumed, of inflammation of the lymphatics of the limb, and especially of the inguinal glands, the cause of which is different in different cases, but which is most commonly cold operating upon a set of vessels peculiarly irritable, and especially so when affected with inflammation in tropical climates. The blood-vessels, and particularly those of the surface, are here also greatly relaxed; and hence the skin very soon becomes suffused with a deep red or purple hue: while the saburral fluid that exudes from the cutaneous exhalents, concretes, as its finer parts fly off, into rough and sordid scales, and the skin itself becomes enormously thickened and coriaceous. The effusion is usually preceded by an attack of febrile symptoms, which are induced by the inflammation of the part; and these feverish symptoms have a tendency to recur, though often at irregular periods, so as to resemble somewhat an erratic intermittent. Every

fresh attack adds considerably to the effusion, and consequently to the morbid size of the limb, and aggravates every symptom: hence the monstrous disfigurement of the leg and foot. In many instances the inflammation extends to the surrounding parts, and the scrotum becomes of enormous magnitude; while occasionally the glands of the axilla participate with those of the groin, and the fore-arm becomes also enlarged. In this manner the disease at length assumes a chronic character: the monstrous size and bloated wrinkles of the leg are rendered permanent; the pain felt acutely at first, subsides gradually, and the brawny skin becomes insensible. Yet even from the first, except during the recurrence of the febrile paroxysms, the patient's constitution and general functions are little disturbed, and he sometimes lives to an advanced age, incommoded only by carrying about such a troublesome load of leg; which, however, is regarded by the Polynesians as a badge of honour. In this country the disease is rarely met with but in its confirmed and inveterate state, after repeated attacks of the fever and effusion have completely altered the organisation of the integuments, and rendered the limb altogether incurable. In this state the distended skin is hard, firm, and peculiarly thickened, and even horny; while the muscles, tendons, ligaments, and bones are, for the most part, little affected.

In this advanced stage the disease seems to be altogether hopeless: nor in any stage has the practice hitherto pursued been productive of decided success. This has consisted chiefly in endeavours to alleviate the febrile paroxyms by laxatives and sudorifics, and subsequently to strengthen the system by bark. It would be better, perhaps, by active and repeated bleedings, as well general as local, and powerful purgatives, to endeavour to carry off the whole of the first effusion as quickly as possible, and then to direct the attention to the prevention of the paroxysms.

Barbadoes nut. See *Jatropha curcas.*

Barbadoes tar. See *Petroleum barbadense.*

BARBA'REA. (From St. Barbary, who is said to have found its virtues.) See *Erysimum barbarea.*

BARBA'RIA. *Barbaricum.* An obsolete term, formerly applied to rhubarb.

BARBARO'SSÆ PILULA. Barbarossa's pill. An ancient composition of quicksilver, rhubarb, diagridium, musk, amber, &c. It was the first internal mercurial medicine which obtained any real credit.

BA'RBARUM. The name of a plaster in Scribonius Largus.

BARBATE. See *Barbatus.*

BARBATINA. A Persian vermifuge seed.

BARBA'TUS. (From *barba*, a beard.) Bearded: applied to leaves which have a hairy or beard-like pubescence; as those of the *Mesembryanthemum barbatum*, and *Spananthe paniculata*; and also to such animals and fishes as have an appendage which resembles a beard.

BA'RBEL. See *Cyprinus barbus.*

BARBERRY. See *Berberis.*

BARBIERS. See *Beriberi.*

BARBO. See *Cyprinus barbus.*

BARBO'TA. The barbut. A small river-fish. It is remarkable for the size of its liver, which is esteemed the most delicate part of it.

BARBUS. (*us, i.* m.; so called from *barba*, a beard, because it has four beard-like processes on the under jaw.) See *Cyprinus barbus.*

BARDA'NA. (*a, æ.* f.; from *bardus*, foolish: because silly people are apt to throw them on the garments of passengers, having the property of sticking to whatever they touch.) Burdock. See *Arctium lappa.*

BARE'GE. The small village of Barege, celebrated for its thermal waters, is situated on the French side of the Pyrenees, about half way between the Mediterranean and the Bay of Biscay. The hot springs are four in number. They have all the same component parts, but differ somewhat in their temperature, and in the quantity of sulphur, the hottest being most strongly penetrated with this active ingredient. The coolest of these waters raises Fahrenheit's thermometer to 73 deg.; the hottest to 120 deg. Barege waters are remarkable for a very smooth soapy feel; they render the skin very supple and pliable, and dissolve perfectly well soap and animal lymph; and are resorted to as a bath in resolving tumours of various kinds, rigidities, and contractions of the tendons, stiffness of the joints, left by rheumatic and gouty complaints, and are highly serviceable in cutaneous eruptions. Internally taken, this water gives considerable relief in disorders of the stomach, especially attended with acidity and heartburn, in obstinate colics, jaundice, and in gravel, and other affections of the urinary organs.

BARI'GLIA. See *Barilla.*

BARI'LLA. (*a, æ.* f.) The term is given in commerce to the impure soda imported from Spain and the Levant, which is called *Barillor*; *Bariglia.* It is made by burning to ashes different plants that grow on the sea shore, chiefly of the genus *salsola*, and is brought to us in hard porous masses, of a speckled brown colour. Kelp, which is made in this country by burning sea-weeds, and is called *British barilla*, is much more impure.

BARIUM. (*um, i.* n.; from *barytes*, from which it is obtained.) The metallic basis of the earth barytes, so named by Sir Humphrey Davy, who discovered it.

"Take pure barytes, make it into a paste with water, and put this on a plate of platinum. Make a cavity in the middle of the barytes, into which a globule of mercury is to be placed. Touch the globule with the negative wire, and the platinum with the positive wire, of a voltaic battery of about

100 pairs of plates in good action. In a short time an amalgam will be formed, consisting of mercury and barium. This amalgam must be introduced into a little bent tube, made of glass, free from lead, sealed at one end, which being filled with the vapour of naphtha, is then to be hermetically sealed at the other end. Heat must be applied to the recurved end of the tube, where the amalgam lies. The mercury will distil over, while the barium will remain.

This metal is of a dark grey colour, with a lustre inferior to that of cast iron. It is fusible at a red heat. Its density is superior to that of sulphuric acid; for though surrounded with globules of gas, it sinks immediately in that liquid. When exposed to air, it instantly becomes covered with a crust of barytes; and when gently heated in air, burns with a deep red light. It effervesces violently in water, converting this liquid into a solution of barytes.

BARK. *Cortex.* 1. The outermost universal covering of all vegetables.

2. Frequently employed to signify by way of eminence, Peruvian bark. See *Cinchona.*

Bark, Caribæan. See *Cinchona caribæa.*

Bark, Jamaica. See *Cinchona caribæa.*

Bark, Peruvian. See *Cinchona.*

Bark, red. See *Cinchona oblongifolia.*

Bark, yellow. See *Cinchona cordifolia.*

BARLEY. See *Hordeum.*

Barley, caustic. See *Cevadilla.*

Barley, pearl. See *Hordeum.*

BARNET. A town near London, where there is a mineral water of a purging kind, of a similar quality to that of Epsom, and about half its strength.

BARO'METER. (From βαρος, weight, and μετρον, measure.) An instrument to determine the weight of the air; it is commonly called a weather-glass.

Barolyte. A carbonate of barytes.

Baro'nes. Small worms.

Baro'ptis. A black stone, said to be an antidote to venomous bites.

BA'ROS. (βαρος.) Gravity. 1. Hippocrates uses this word to express by it an uneasy weight in any part.

2. The Indian name for a species of camphire, which is distilled from the roots of the true cinnamon tree.

Barras. The resinous incrustation on the wounds made in fir-trees.

BARREN. In *Botany,* a barren flower, called *flos abortivus,* and *masculus,* is such as produces no perfect seeds. The barren flowers are generally such as have stamens, but no pistils: these are also called male flowers. Flowers which have only pistils, are sometimes barren, owing to the absence of other flowers which bear the stamens. In the umbelliferous flowers, it is not uncommon to have several of the florets barren, though they are furnished both with stamens and pistils, perhaps owing to some imperfection in the pistils: but future observation must determine this. See *Abortivus,* and *Flos.*

2. In *Animal Physiology.* See *Sterility.*

BA'RRENNESS. See *Sterility.*

BA'RTHOLINE, Thomas, was born at Copenhagen, in 1616, where he became professor of anatomy, in which office he greatly distinguished himself, as well as in many other branches of learning. He was the first who described the lymphatics with accuracy; though some of these vessels, as well as the lacteals and thoracic duct, had been before discovered by other anatomists. Besides many learned works which he published, several others were unfortunately destroyed by fire in 1670; and he particularly regretted a dissertation on the ancient practice of midwifery, of which an outline was afterwards published by his son *Caspar.* Of those which remain, the most esteemed are, his epistolary correspondence with the most celebrated of his contemporaries; his collection of cases where fœtuses have been discharged by preternatural outlets; and the "Medical and Philosophical Transactions of Copenhagen," enriched by the communications of many correspondents. This last work was in four volumes, published within the ten years preceding his death, which happened in 1680; and a fifth was afterwards added by his son.

Bartholinia'næ glandulæ. See *Sublingual glands.*

BARYCOI'A. (*a, æ.* f.; from βαρυς, heavy, and ακουω, to hear.) Deafness.

Baryoco'ccalon. (From βαρυς, heavy, and κοκκαλος, a nut; because it gives a deep sound.) See *Datura stramonium.*

BARYPHO'NIA. (*a, æ.* f.; from βαρυς, dull, and φωνη, the voice.) A difficulty of speaking.

BARYTE. See *Heavy spar.*

BARY'TES. (*es, æ.* f.; from βαρυς, heavy: so called because it is very ponderous.) 1. The name of a mineral which is also called *Terra ponderosa, baryta,* cauk, calk. There are several species of this mineral. See *Heavy spar.*

2. The name of a compound of barium and oxygene.

Barytes is a compound of barium and oxygene. Oxygene combines with two portions of barium, forming, 1. *Barytes.* 2. *Deutoxide of barium.*

1. *Barytes,* or *protoxide of barium.* This is obtained by igniting the nitrate of barytes, and by decomposing the sulphate with carbonate of potash, and exposing the carbonate of barytes thus obtained to a violent heat. That which is obtained from the ignited nitrate is a whitish-grey colour; more caustic than strontites, or perhaps even lime. It renders the syrup of violets green, and the infusion of turmeric red. When swallowed it acts as a violent poison. It is destitute of smell.

2. The *deutoxide of barium* is of a greenish-grey colour; it is caustic, renders the syrup of violets green, and is not decomposable by heat or light.

Sulphur combines with barytes, when they are mixed together, and heated in a crucible. This *sulphuret* is of a reddish yellow colour, and when dry without smell. When put into hot water, a powerful action is manifested. The water is decomposed, and two new products are formed. The one crystallises as the liquid cools, the other remains dissolved.

1. The *hydrosulphuret* is a compound of 9·75 of barytes with 2·125 sulphuretted hydrogene. Its crystals are white scales, have a silky lustre, are soluble in water, and yield a solution having a greenish tinge. Its taste is acrid, sulphureous, and when mixed with the hydroguretted sulphuret, eminently corrosive. It rapidly attracts oxygene from the atmosphere, and is converted into the sulphate of barytes.

2. The *hydroguretted sulphuret* is a compound of 9·75 barytes with 4.125 bisulphuretted hydrogene: but contaminated with sulphite and hyposulphite in unknown proportions.

Phosphuret of barytes may be easily formed by exposing the constituents together to heat in a glass tube. Their reciprocal action is so intense as to cause ignition. Like phosphuret of lime, it decomposes water, and causes the disengagement of phosphuretted hydrogene gas, which spontaneously inflames with contact of air. When sulphur is made to act on the deutoxide of barytes, sulphuric acid is formed, which unites to a portion of the earth into a sulphate.

The *salts of barytes* are white, and more or less transparent. All the soluble sulphates cause in the soluble salts of barytes a precipitate insoluble in nitric acid. They are all poisonous except the sulphate; and hence the proper counter-poison is dilute sulphuric acid for the carbonate, and sulphate of soda for the soluble salts of barytes.

Barytæ murias. The muriate of barytes, called also *terra ponderosa salita*, is a very acrid and poisonous preparation. In small doses it proves sudorific, diuretic, deobstruent, and alterative; in an over-dose, emetic, and violently purgative. The late Dr. Crawford found it very serviceable in all diseases connected with scrophula; and the Germans have employed it with great success in some diseases of the skin and viscera, and obstinate ulcers. The dose of the saturated solution in distilled water is from five to fifteen drops for children, and from fifteen to twenty for adults.

Basaal. (Indian.) The name of an Indian tree. A decoction of its leaves, with ginger, in water, is used as a gargle in disorders of the fauces. The kernels of the fruit kill worms. — *Ray's Hist.*

Basaliscus lapis. See *Adamus.*

BASA'LTES. (*es, æ.* m. In the Ethiopic tongue, this word means *iron*, which is the colour of the stone.) A heavy and hard kind of stone, found standing up in the form of regular angular columns, composed of a number of joints, one placed upon and nicely fitted to another, as if formed by the hands of a skilful architect. It is found in beds and veins in granite and mica slate, the old red sandstone, limestone, and coal formations. It is distributed over the whole world; but no where is met with in greater variety than in Scotland.

Basaltic hornblende. See *Hornblende.*

BASANITE. See *Flinty slate.*

Basani'tes. (*es, æ.* m.; from βασανιζω, to find out.) A stone said, by Pliny, to contain a bloody juice, and useful in diseases of the liver: also a stone upon which, by some, the purity of gold was formerly said to be tried, and of which medical mortars were made.

BASE. See *Basis.*

Base, acidifiable. See *Acid.*

Base, acidifying. See *Acid.*

BASIA'TIO. (*o, onis.* f.; from *basio*, to kiss.) Venereal connection between the sexes.

Basia'tor. See *Orbicularis oris.*

BASIL. See *Ocimum basilicum.*

BASILA'RIS. (From βασιλευς, a king.) Several parts of the body, bones, arteries, veins, processes, &c. were so named by the ancients, from their situation, being connected with or leading to the liver or brain, which they considered as the seat of the soul or royalty.

Basilaris apophysis. See *Occipital bone.*

Basilaris arteria. Basilary artery. An artery of the brain; so called, because it lies upon the basilary process of the occipital bone. It is formed by the junction of the two vertebral arteries within the skull, and runs forwards to the sella turcica along the pons varolii, which it supplies, as well as the adjacent parts, with blood.

Basilaris processus. See *Occipital bone.*

BASILA'RY. See *Basilaris.*

Basi'lica mediana. See *Basilica vena.*

Basilica nux. The walnut.

Basilica vena. The large vein that runs in the internal part of the arm, and evacuates its blood into the axillary vein. The branch which crosses, at the head of the arm, to join this vein, is called the *basilic median.* They may either of them be opened in the operation of blood-letting.

Basilicon. See *Basilicum unguentum.*

BASI'LICUM. (From βασιλικος, royal; so called from its great virtues.) See *Ocimum basilicum.*

Basilicum unguentum. *Unguentum basilicum flavum.* An ointment popularly so called from its having the ocimum basilicum in its composition. It came afterwards to be composed of wax, resin, &c. and is now called *ceratum resinæ.*

BASILICUS. (From $\beta\alpha\sigma\iota\lambda\epsilon\upsilon\varsigma$, a king.) Many compositions were, by the ancients, so called, from their supposed pre-eminence. Basilic: royal. See *Basilaris*.

Basilicus pulvis. The royal powder. A preparation formerly composed of calomel, rhubarb, and jalap.

Basili'dion. An itchy ointment was formerly so called by Galen.

Ba'silis. A name formerly given to collyriums of supposed virtues, by Galen.

BASILI'SCUS. (*us, i.* m.; from $\beta\alpha\sigma\iota\lambda\epsilon\upsilon\varsigma$, a king.) 1. The basilisk, or cockatrice, a poisonous serpent; so called from a white spot upon its head, which resembles a crown.

2. The philosopher's stone.

3. Corrosive sublimate.

BASIO. Some muscles so have the first part of their names, because they originate from the basilary process of the occipital bone.

Basio-cerato-chondro-glossus. See *Hyoglossus*.

Basio-glossus. See *Hyoglossus*.

Basio-pharyngæus. See *Constrictor pharyngis medius*.

BA'SIS. (*is, is.* f.; from $\beta\alpha\iota\nu\omega$, to go: the support of any thing, upon which it stands or goes.) Base. 1. In *Anatomy*, this word is frequently applied to the body of any part, or to that part from which the other parts appear, as it were, to proceed, or by which they are supported.

2. In *Pharmacy*, the principal ingredient.

3. In *Chemistry*, usually applied to alkalies, earths, and metallic oxides, in their relations to the acids and salts. It is sometimes also applied to the particular constituents of an acid or oxide, on the supposition that the substance combined with the oxygene, &c. is the basis of the compound to which it owes its particular qualities. This notion seems unphilosophical, as these qualities depend as much on the state of combination as on the nature of the constituent.

Bassi colica. The name of a medicine in Scribonius Largus, compounded of aromatics and honey.

BASSORINE. This substance is extracted from the gum resins which contain it, by treating them successively with water, alkohol, and æther. Bassorine being insoluble in these liquids, remains mixed merely with the woody particles, from which it is easy to separate it, by repeated washings and decantations; because one of its characteristic properties is to swell extremely in the water, and to become very buoyant. This substance swells up in cold as well as in boiling water, without any of its parts dissolving. It is soluble, however, almost completely by the aid of heat, in water sharpened with nitric or muriatic acid. If after concentrating with a gentle heat the nitric solution, we add highly rectified alkohol, there results a white precipitate, flocculent and bulky, which, washed with much alkohol and dried, does not form, at the utmost, the tenth of the quantity of bassorine employed, and which presents all the properties of gum-arabic.—*Vauquelin, Bulletin de Pharmacie,* iii. 56.

BASTARD. A term often employed in medicine, and botany, to designate a disease, or plant, which has the appearance of, but is not in reality what it resembles. The name of that which it similates is generally attached to it, as bastard peripneumony, bastard pellitory, &c. See *Nothus*, and *Pseudo*.

Bastard pellitory. See *Achillæa ptarmica.*

Bastard pleurisy. See *Peripneumonia notha.*

BATA'TAS. So the natives of Peru call the root of a convolvulus, and also the potato, which is a native of that country. See *Solanum tuberosum*, and *Convolvulus batatas.*

Batatas peregrina. See *Ipomœa quamoclit.*

BATH. 1. *Balneum.* See *Balneum.*

2. The name of a place or city in Gloucestershire that has been celebrated, for a long series of years, for its numerous hot springs, called *Bathoniæ aquæ, Solis aquæ, Badiguæ aquæ*, which are of a higher temperature than any in this kingdom (from 112° to 116°), and, indeed, are the only natural waters which we possess that are at all hot to the touch; all the other thermal waters being of a heat below the animal temperature, and only deserving that appellation from being invariably warmer than the general average of the heat of common springs. By the erection of elegant baths, these waters are particularly adapted to the benefit of invalids, who find here a variety of establishments, contributing equally to health, convenience, and amusement. There are three principal springs in the city of Bath, namely, those called the *King's Bath*, the *Cross Bath*, and the *Hot Bath*; all within a short distance of each other, and emptying themselves into the river Avon, after having passed through the several baths. Their supply is so copious, that all the large reservoirs used for bathing are filled every evening with fresh water, from their respective fountains. In their sensible and medicinal properties, there is but a slight difference. According to Dr. Falconer, the former are—1. That the water, when newly drawn, appears clear and colourless, remains perfectly inactive, without bubbles, or any sign of briskness, or effervescence. 2. After being exposed to the open air, for some hours, it becomes rather turbid, by the separation of a pale, yellow, ochery precipitate, which gradually subsides. 3. No odour is perceptible from a glass of the fresh water, but a slight pungency to the taste from a large mass of it, when fresh drawn; which, however, is

neither fœtid nor sulphureous. 4. When hot from the pump, it affects the mouth with a strong chalybeate impression without being of a saline or pungent taste. And, fifthly, on growing cold, the chalybeate taste is entirely lost, leaving only a very slight sensation on the tongue, by which it can scarcely be distinguished from common hard spring-water. The temperature of the King's Bath water, which is usually preferred for drinking, is, when fresh drawn in the glass, above 116 deg.; that of the Cross Bath, 112 deg. But, after flowing into the spacious bathing vessels, it is generally from 100 to 106 deg. in the hotter baths, and from 92 to 94 deg. in the Cross Bath; a temperature which remains nearly stationary, and is greater than that of any other natural spring in Britain. A small quantity of gas is also disengaged from these waters, which Dr. Priestley first discovered to contain no more than one-twentieth part of its bulk of fixed air, or carbonic acid. The chemical properties of the Bath waters, according to the most accurate analysers, Doctors Lucas, Falconer, and Gibbs, contain so small a proportion of iron, as to amount only to one-twentieth or one thirty-eighth of a grain in the pint; and, according to Dr. Gibbs, fifteen grains and a quarter of siliceous earth in the gallon. Dr. Saunders estimates a gallon of the King's Bath water to contain about eight cubic inches of carbonic acid, and a similar quantity of air, nearly azotic, about eighty grains of solid ingredients, one-half of which probably consists of sulphate and muriate of soda, fifteen grains and a half of siliceous earth, and the remainder is selenite, carbonate of lime, and so small a portion of oxide of iron as to be scarcely calculable. Hence he concludes, that the King's Bath water is the strongest chalybeate; next in order, the Hot Bath Water; and, lastly, that of the Cross Bath, which contains the smallest proportions of chalybeate, gaseous, and saline, but considerably more of the earthy particles; while its water, in the pump, is also two degrees lower than that of the others. It is likewise now ascertained, that these springs do not exhibit the slightest traces of sulphur, though it was formerly believed, and erroneously supported on the authority of Dr. Charleton, that the subtile aromatic vapour in the Bath waters, was a sulphureous principle, entirely similar to common brimstone.

With regard to the effect of the Bath waters on the human system, independent of their specific properties as a medicinal remedy not to be imitated completely by any chemical process, Dr. Saunders attributes much of their salubrious influence to the natural degree of warmth peculiar to these springs, which, for ages, have preserved an admirable degree of uniformity of temperature. He thinks, too, that one of their most important uses is that of an external application, yet supposes that, in this respect, they differ little from common water, when heated to the same temperature, and applied under similar circumstances.

According to Dr. Falconer, the Bath water, when drunk fresh from the spring, generally raises, or rather accelerates the pulse, increases the heat, and promotes the different secretions. These symptoms, in most cases, become perceptible soon after drinking it, and will sometimes continue for a considerable time. It is, however, remarkable, that they are only produced in invalids. Hence we may conclude, that these waters not only possess heating properties, but their internal use is likewise attended with a peculiar stimulus, acting more immediately on the nerves.

One of the most salutary effects of the Bath water, consists in its action on the urinary organs, even when taken in moderate doses. Its operation on the bowels varies in different individuals, like that of all other waters which do not contain any cathartic salt; but, in general, it is productive of costiveness: an effect resulting from the want of an active stimulus to the intestines, and probably also from the determination this water occasions to the skin, more than from any astringency which it may possess; for, if perspiration be suddenly checked during the use of it, a diarrhœa is sometimes the consequence. Hence it appears that its stimulant powers are primarily, and more particularly exerted in the stomach, where it produces a variety of symptoms, sometimes slight and transient, but, occasionally, so considerable and permanent, as to require it to be discontinued. In those individuals with whom it is likely to agree, and prove beneficial, the Bath waters, excite, at first, an agreeable glowing sensation in the stomach, which is speedily followed by an increase both of appetite and spirits, as well as a quick secretion of urine. In others, when the use of them is attended with headach, thirst, and constant dryness of the tongue, heaviness, loathing of the stomach, and sickness; or if they are not evacuated, either by urine or an increased perspiration, it may be justly inferred that their further continuance is improper.

The diseases for which these celebrated waters are resorted to, are very numerous, and are some of the most important and difficult of cure of all that come under medical treatment. In most of them, the bath is used along with the waters, as an internal medicine. The general indications of the propriety of using this medicinal water, are in those cases where a gentle, gradual, and permanent stimulus is required. Bath water may certainly be considered as a chalybeate, in which the iron is very small in quantity, but in a highly active form; and the degree of temperature is in itself a sti-

mulus, often of considerable powers. These circumstances again point out the necessity of certain cautions, which, from a view of the mere quantity of foreign contents, might be thought superfluous. Although in estimating the powers of this medicine, allowance must be made for local prejudice in its favour, there can be no doubt but that its employment is hazardous, and might often do considerable mischief, in various cases of active inflammation, especially in irritable habits, where there exists a strong tendency to hectic fever; and even in the less inflammatory state of diseased and suppurating viscera; and, in general, wherever a quick pulse and dry tongue indicate a degree of general fever. The cases, therefore, to which this water is peculiarly suited, are mostly of the chronic kind; and by a steady perseverance in this remedy, very obstinate disorders have given way. The following, Dr. Saunders, in his Treatise on Mineral Waters, considers as the principal, viz. 1. Chlorosis, a disease which, at all times, is much relieved by steel, and will bear it, even where there is a considerable degree of feverish irritation, receives particular benefit from the Bath water; and its use, as a warm bath, excellently contributes to remove that languor of circulation, and obstruction of the natural evacuations, which constitute the leading features of this common and troublesome disorder. 2. The complicated diseases, which are often brought on by a long residence in hot climates, affecting the secretion of bile, the functions of the stomach and alimentary canal, and which generally produce organic derangement in some part of the hepatic system, often receive much benefit from the Bath water, if used at a time when suppurative inflammation is not actually present. 3. Another and less active disease of the biliary organs, the jaundice, which arises from a simple obstruction of the gall-ducts, is still oftener removed by both the internal and external use of these waters. 4. In rheumatic complaints, the power of this water, as Dr. Charleton well observes, is chiefly confined to that species of rheumatism which is unattended with inflammation, or in which the patient's pains are not increased by the warmth of his bed. A great number of the patients that resort to Bath, especially those that are admitted into the hospital, are affected with rheumatism in all its stages; and it appears, from the most respectable testimony, that a large proportion of them receive a permanent cure. (See *Falconer on Bath Water in Rheumatic Cases.*) 5. In gout, the greatest benefit is derived from this water, in those cases where it produces anomalous affections of the head, stomach, and bowels; and it is here a principal advantage to be able to bring, by warmth, that active local inflammation in any limb, which relieves all the other troublesome and dangerous symptoms. Hence it is that Bath water is commonly said to produce the gout; by which is only meant that, where persons have a gouty affection, shifting from place to place, and thereby much disordering the system, the internal and external use of the Bath water will soon bring on a general increase of action, indicated by a flushing in the face, fulness in the circulating vessels, and relief of the dyspeptic symptoms; and the whole disorder will terminate in a regular fit of the gout in the extremities, which is the crisis always to be wished for. 6. The colica pictonum, and the paralysis, or loss of nervous power in particular limbs, which is one of its most serious consequences, is found to be peculiarly relieved by the use of the Bath waters, more especially when applied externally, either generally, or upon the part affected.

The quantity of water taken daily, during a full course, and by adults, is recommended by Dr. Falconer, not to exceed a pint and a half, or two pints; and in chlorosis, with irritable habits, not more than one pint is employed; and when the bath is made use of, it is generally two or three times a week, in the morning. The Bath waters require a considerable time to be persevered in, before a full and fair trial can be made. Chronic rheumatism, habitual gout, dyspepsia, from a long course of high and intemperate living, and the like, are disorders not to be removed by a short course of any mineral water; and many of those who have once received benefit at the fountains, find it necessary to make an annual visit to them, to repair the waste in health during the preceding year.

Bath, acid. See *Balneum.*

BATH, CAUTERES. A sulphureous bath near Barege, which raises the mercury in Fahrenheit's thermometer to 131°.

Bath, cold. See *Balneum.*

Bath, hot. See *Balneum.*

BATH, ST. SAVIOUR'S. A sulphureous and alkaline bath, in the valley adjoining Barege, the latter of which raises Fahrenheit's thermometer as high as 131°. It is much resorted to from the South of France, and used chiefly externally, as a simple thermal water.

Bath, tepid. See *Balneum.*

Bath, vapour. See *Balneum.*

BATHING. See *Balneum.*

BA'THMIS. (From βαινω, to enter.) *Bathmus.* The seat, or base; the cavity of a bone, with the protuberance of another, particularly those at the articulation of the humerus and ulna, according to Hippocrates and Galen.

BATHO'NIÆ AQUÆ. See *Bath.*

BA'THRON. (From βαινω, to enter.) *Bathrum.* The same as bathmis; also an instrument used in the extension of fractured limbs, called *Scamnum.* — *Hippo-*

crates. It is described by Oribasius and Scultetus.

Ba'tia. A retort.

Bati'non-moron. (From βατος, a bramble, and μορον, a raspberry.) The raspberry.

Batra'chium. (*um, i.* n.; from βατραχος, a frog: so called from its likeness to a frog.) The herb crow's foot. See *Ranunculus.*

BA'TRACHUS. (*us, i.* m.; from βατραχος, a frog: so called because they who are infected with it croak like a frog.) See *Ranula.*

Battari'smus. (From βαττος, a Cyrenæan prince, who stammered.) Stammering. See *Psellismus.*

Battata peregrina. The cathartic potato. See *Ipomœa quamoclit.*

Battata virginiana. See *Solanum tuberosum,* and *Convolvulus batatas.*

BATTIE, William, was born in 1757. He published a treatise on madness; and a few years after, having exposed before the House of Commons the abuses often committed in private madhouses, they became the subject of legislative interference, and were at length placed under the control of the College of Physicians, and the magistrates in the country. He died at the age of 72.

Battledore-shape. See *Spatulatus.*

Bau'da. A vessel for distillation was formerly so called.

BAUHIN, John, was born at Lyons, in 1541. Being greatly attached to botany, he accompanied the celebrated Gesner in his travels through several countries of Europe, and collected abundant materials for his principal work, the "Historia Plantarum," which contributed greatly to the improvement of his favourite science. He died in 1613. A Treatise on Mineral Waters, and some other publications by him also remain.

BAUHIN, Gaspard, was brother to the preceding, but younger by 20 years. He graduated at Basle, after studying at several universities, and was chosen Greek professor at the early age of 22; afterwards professor of anatomy and botany; then of medicine, with other distinguished honours, which he retained till his death in 1624. Besides the plants collected by himself, he received material assistance from his pupils and friends, and was enabled to add considerably to the knowledge of botany: on which subject, as well as anatomy, he has left numerous publications. Among other anatomical improvements, he claims the discovery of the valve of the colon. His "Pinax" contains the names of six thousand plants mentioned by the ancients, tolerably well arranged; and being continually referred to by Linnæus, must long retain its value.

BAUM. See *Fermentum cerevisiæ.*

BAUME, Anthony, born at Senlis in 1728. He distinguished himself at an early age by his skill in chemistry and pharmacy. He gave lectures on Chemistry for several years with great credit. Among other works, he published "Elements of Pharmacy," and a "Manual of Chemistry," which met with considerable approbation: also a detailed account of the differents kinds of soil, and the method of improving them for the purposes of agriculture.

Bau'rach. (An Arabian word.) *Bowrach.* A name formerly applied to nitre, borax, soda, and many other salts.

Baxa'na. (Indian.) *Rabuxit.* A poisonous tree growing near Ormuz.

BAY. A name of several articles; as bay-cherry, bay-leaf, bay-salt, &c.

Bay-cherry. See *Prunus lauro-cerasus.*

Bay-laurel. See *Prunus lauro-cerasus.*

Bay-leaves. See *Prunus lauro-cerasus.*

Bay-leaved passion-flower. See *Passiflora laurifolia.*

Bay salt. A very pure salt, prepared from sea-water by spontaneous evaporation.

Ba'zcher. A Persian word for antidote.

Bde'lla. (From βδαλλω, to suck.) *Bdellerum.* A leech. See *Leech.*

BDE'LLIUM. (*um, i.* n.; from *bedallah,* Arab.) A gum resin, like very impure myrrh: called also *Adrobolon, Madeleon, Bolchon, Balchus,* and, by the Arabians, *Mokel.* The best bdellium is of a yellowish-brown, or dark-brown colour, according to its age; unctuous to the touch, brittle, but soon softening, and growing tough betwixt the fingers; in some degree transparent, not unlike myrrh; of a bitterish taste, and a moderately strong smell. It does not easily take flame, and, when set on fire, soon goes out. In burning it sputters a little, owing to its aqueous humidity. Its sp. grav. is 1·371. Alkohol dissolves about three-fifths of bdellium, leaving a mixture of gum and cerasin. Its constituents, according to Pelletier, are 59 resin, 9·2 gum, 30·6 cerasin, 1·2 volatile oil and loss. It is one of the weakest of the deobstruent gums. It was sometimes used as a pectoral and an emmenagogue. Applied externally, it is stimulant, and promotes suppuration. It is never met with in the shops of this country.

BDE'LLUS. (From βδεω, to break wind.) A discharge of wind by the anus.

Bdely'gmia. (From βδεω, to break wind.) Any filthy and nauseous odour.

BEADED. See *Granulatus.*

BEAK. See *Rostrum.*

BEAN. See *Vicia faba.*

Bean, French. See *Phaseolus vulgaris.*

Bean, kidney. See *Phaseolus vulgaris.*

Bean, Malacca. See *Avicennia tomentosa.*

Bean of Carthagena. See *Bejuio.*

Bean, St. Ignatius'. See *Ignatia amara.*

BEAR. The name of a well-known animal. Several things are designated after it, or a part of it; bear's berry, bear's foot, &c. See *Ursus.*

Bear's berry. See *Arbutus uva ursi.*

Bear's bilberry. See *Arbutus uva ursi.*

Bear's breech. See *Acanthus.*

Bear's foot. See *Helleborus fœtidus.*

Bear's whortleberry. See *Arbutus uva ursi.*

Bear's whorts. See *Arbutus uva ursi.*

BEARD. See *Barba.*

BEARDED. See *Barbatus.*

Be'cca. A fine kind of resin from the turpentine and mastich trees of Greece and Syria, formerly held in great repute.

BECCABU'NGA. (*a, æ.* f.; from *bach bungen,* water-herb, German, because it grows in rivulets). See *Veronica beccabunga.*

Be'cha. See *Bechicus.*

BE'CHICUS. (From βηξ, a cough.) A medicine to relieve a cough. The *trochisci bechici albi* consist of starch and liquorice, with a small proportion of florentine orris root made into lozenges, with mucilage of gum tragacanth. They are a soft pleasant demulcent. The *trochisci bechici nigri* consist chiefly of the juice of liquorice, with sugar and gum tragacanth.

BE'CHION. (*um, i.* n.; from βηξ, a cough; so called from its supposed virtues in relieving coughs.) See *Tussilago farfara.*

Becui'ba nux. A large nut growing in Brazil, from which a balsam is drawn that is held in estimation in rheumatism.

Bede'guar. (Arabian.) The *Carduus marianus* is so called, and also the *Rosa canina.*

Bedengian. The name of the love-apple in Avicenna.

BEDSTRAW. See *Galium aparine.*

BEE. See *Apis mellifica.*

BEECH. See *Fagus sylvatica.*

BEER. See *Cerevisia.*

Bees' wax. See *Cera.*

BEET. See *Beta vulgaris.*

Beet, red. See *Beta.*

Beet, white. See *Beta alba.*

Be'gma. (From βησσω, to cough.) *Bregma.* A cough; also the expectorated mucus, according to Hippocrates.

BE'HEN. (Indeclinable. The Arabian for finger.)

Behen album. See *Centaurea behen.*

Behen officinarum. See *Cucubalus behen.*

Behen rubrum. See *Statice limonium.*

Beide'lsar. *Beidellopar.* A species of *Asclepias,* used in Africa as a remedy for fever and the bites of serpents. The caustic juice which issues from the roots when wounded, is used by the negroes to destroy venereal and similar swellings.

Beju'io. *Habilla de Carthagenâ.* Bean of Carthagena. A kind of bean in South America, famed for being an effectual antidote against the poison of all serpents, if a small quantity is eaten immediately. This bean is the peculiar product of the jurisdiction of Carthagena.

Bela-aye. (An Indian word.) See *Nerium antidysentericum.*

BELEMNOI'DES. (From βελεμνον, a dart, and ειδος, form: so named from their dart-like shape.) The styloid process of the temporal bone, and the lower end of the ulna, were formerly so called.

BELILIA. See *Mussenda frondosa.*

BELL-METAL. A mixture of tin and copper.

BELLADO'NNA. (*a, æ.* f.; from *bella donna,* Italian, a handsome lady: so called because the ladies of Italy use it, to take away the too florid colour of their faces.) See *Atropa belladonna.*

Be'llegu. See *Myrobalanus bellirica.*

Bellere'gi. See *Myrobalanus bellirica.*

Belle'rica. See *Myrobalanus bellirica.*

BELLIDIOI'DES. (From *bellis,* a daisy, and ειδος, from.) Daisy-like. See *Chrysanthemum leucanthemum.*

BELLI'NI, Laurence, born at Florence in 1643. He was one of the chief supporters of the mathematical theory of medicine, and having imprudently regulated his practice accordingly, he was generally unsuccessful. In his anatomical researches he first accurately described the nervous papillæ of the tongue, and discovered them to be the organ of taste; and made better known the structure of the kidney. He was author of several other publications, and died in 1704.

BE'LLIS. (*is, is.* f.; *à bello colore,* from its fair colour.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.* The daisy.

Bellis major. See *Chrysanthemum leucanthemum.*

Bellis minor. See *Bellis perennis.*

Bellis perennis. The systematic name of the *Bellis,* or common daisy, or bruisewort; called also *Bellis minor. Bellis perennis.—scaponudo,* of Linnæus, was formerly directed in pharmacopœias by this name. Although the leaves and flowers are rather acrid, and are said to cure several species of wounds, they are never employed by modern surgeons.

BELLO'CULUS. (From *bellus,* fair, and *oculus,* the eye.) A precious stone, resembling the eye, and formerly supposed to be useful in its disorders.

Be'llon. The *Colica pictonum.*

BELLONA'RIA. (*a, æ.* f.; from *Bellona,* the goddess of war.) A herb which, if eaten, makes people mad, and act outrageously, like the votaries of Bellona.

BELLOSTE, Augustin, born at Paris in 1654. The work by which he is principally known, is called the "Hospital Surgeon," which passed through numerous editions, and was translated into most of the European languages.

BELL-SHAPED. See *Campanulatus.*

Bellu'tta tsjampacam. (Indian.) A tree of Malabar, to which many virtues are attributed.

Belmu'schus. See *Hibiscus abelmoschus.*

Be'lnileg. See *Myrobalanus bellirica.*

Belo'ere. (Indian.) An evergreen plant of America, the seeds of which purge moderately, but the leaves roughly.

Belonoi'des. See *Belemnoides.*

Belu'lcum. (From βελος, a dart, and ελκω, to draw out.) A surgeon's instrument for extracting thorns, or darts.

Belu'zzar. *Beluzaar.* The Chaldee word for antidote.

Belzo'e. See *Styrax benzoin.*

Belzoi'num. See *Styrax benzoin.*

Bem-ta'mara. See *Nymphæa nelumbo.*

BEN. An Arabian word formerly very much used. See *Guilandina moringa.*

Ben magnum. Monardus calls a species of esula, or garden spurge, by this name, which purges and vomits violently.

Ben tamara. See *Nymphæa nelumbo.*

Be'nath. An Arabian word. See *Planta.*

Benedicta aqua. Many compound waters have been so called, especially lime-water, and a water distilled from *Serpyllum.* In Schroeder, it is the name for an emetic.

Benedicta herba. See *Geum urbanum.*

Benedicta laxativa. A compound of turbeth, scammony, and spurges, with some warm aromatics.

Benedictum laxativum. Rhubarb, and sometimes the lenitive electuary.

Benedictum lignum. Guaiacum.

Benedictum vinum. Antimonial wine.

BENEDI'CTUS. (From *benedico*, to bless.) Blessed. 1. A specific name prefixed to many compositions or herbs, on account of their supposed good qualities; as *Benedicta herba, Benedicta aqua,* &c.

2. *Benedictus lapis.* The philosopher's stone.

Benedictus carduus. See *Centaurea benedicta.*

BENEOLE'NS. (From *bene*, well, and *oleo*, to smell.) Sweet scented.

Bengal quince. See *Erateva marmelos.*

Benga'læ radix. (From *Bengal*, its native place.) See *Cassumuniar.*

Benga'lle indorum. (From *Bengal*, its native place.) See *Cassumuniar.*

Be'ngi eiri. A species of evergreen. Indian *ricinus*, which grows in Malabar.

Beni'vi arbor. See *Styrax benzoin.*

BENJAMIN. See *Styrax benzoin.*

Benjamin flowers. See *Benzoic acid.*

Bennet, herb. See *Geum urbanum.*

BENT. See *Cernuus.*

Bent grass. See *Agrostis.*

BENZO'AS. (*as, atis.* m.; so called because formed from benzoic acid.) The benzoic acid unites without much difficulty with the earthy and alkaline bases. These compounds are called *benzoates.*

The *benzoate of barytes* is soluble, crystallises tolerably well, is not affected by exposure to the air, but is decomposable by fire, and by the stronger acids. That of *lime* is very soluble in water, though much less in cold than in hot, and crystallises on cooling. It is in like manner decomposable by the acids and by barytes.

The *benzoate of magnesia* is soluble, crystallisable, a little deliquescent, and more decomposable than the former.

That of *alumina* is very soluble, crystallises in dendrites, is deliquescent, has an acerb and bitter taste, and is decomposable by fire, and even by most of the vegetable acids.

The *benzoate of potash* crystallises on cooling in little compacted needles. All the acids decompose it, and the solution of barytes and lime form with it a precipitate.

The *benzoate of soda* is very crystallisable, very soluble, and not deliquescent like that of potassæ, but is decomposable by the same means. It is sometimes found native in the urine of graminivorous quadrupeds, but by no means so abundantly as that of lime.

The *benzoate of ammonia* is volatile, and decomposable by all the acids and all the bases. The solutions of all the benzoates, when drying on the sides of a vessel wetted with them, form dendritical crystallisations.

Trommsdorf found in his experiments, that benzoic acid united readily with *metallic oxides.*

The benzoates are all decomposable by heat, which, when it is slowly applied, first separates a portion of the acid in a vapour, that condenses in crystals. The soluble benzoates are decomposed by the powerful acids, which separate their acid in a crystalline form. None of the benzoates are yet found useful in medicine.

BENZO'E. See *Styrax benzoin.*

Benzoe amygdaloides. See *Styrax benzoin.*

Benzoes flores. See *Benzoic acid.*

BENZOIC. (*Benzoicus*: from *benzoe*, the gum-resin so called.) Appertaining to benzoe.

Benzoic acid. (*Acidum benzoicum*; so called because it is procured from the substance termed *benzoe.*) This is easily obtained by subliming gum benjamin, as well as by more complicated chemical means. "The usual method of obtaining it affords a very elegant and pleasing example of the chemical process of sublimation. For this purpose a thin stratum of powdered benzoin is spread over the bottom of a glazed earthen pot, to which a tall conical paper covering is fitted: gentle heat is then to be applied to the bottom of the pot, which fuses the benzoin, and fills the apartment with a fragrant smell, arising from a portion of essential oil and acid of benzoin, which are dissipated into the air, at the same time the acid itself rises very suddenly in the paper head, which may be occasionally inspected at the top, though with some little care, because the fumes will excite coughing. This saline sublimate is condensed in the form of long

needles, or straight filaments of a white colour, crossing each other in all directions. When the acid ceases to rise, the cover may be changed, a new one applied, and the heat raised: more flowers of a yellowish colour will then rise, which require a second sublimation to deprive them of the empyreumatic oil they contain.

The sublimation of the acid of benzoin may be conveniently performed by substituting an inverted earthen pan instead of the paper cone. In this case the two pans should be made to fit, by grinding on a stone with sand, and they must be luted together with paper dipped in paste. This method seems preferable to the other, where the presence of the operator is required elsewhere; but the paper head can be more easily inspected and changed. The heat applied must be gentle, and the vessels ought not to be separated till they have become cool.

The quantity of acid obtained in these methods differs according to the management, and probably also from difference of purity, and in other respects, of the resin itself. It usually amounts to no more than about one-eighth part of the whole weight. Indeed Scheele says, not more than a tenth or twelfth. The whole acid of benzoin is obtained with greater certainty in the humid process of Scheele: this consists in boiling the powdered balsam with lime water, and afterwards separating the lime by the addition of muriatic acid. Twelve ounces of water are to be poured upon four ounces of slaked lime; and, after the ebullition is over, eight pounds, or ninety-six ounces, more of water are to be added: a pound of finely powdered benzoin being then put into a tin vessel, six ounces of the lime water are to be added, and mixed well with the powder; and afterwards the rest of the lime water in the same gradual manner, because the benzoin would coagulate into a mass, if the whole were added at once. This mixture must be gently boiled for half an hour with constant agitation, and afterwards suffered to cool and subside during an hour. The supernatant liquor must be decanted, and the residuum boiled with eight pounds more of lime water; after which the same process is to be once more repeated: the remaining powder must be edulcorated on the filter by affusions of hot water. Lastly, all the decoctions, being mixed together, must be evaporated to two pounds, and strained into a glass vessel. This fluid consists of the acid of benzoin combined with lime. After it is become cold, a quantity of muriatic acid must be added, with constant stirring, until the fluid tastes a little sourish. During this time the last-mentioned acid unites with the lime, and forms a soluble salt, which remains suspended, while the less soluble acid of benzoin, being disengaged, falls to the bottom in powder. By repeated affusions of cold water upon the filter, it may be deprived of the muriate of lime and muriatic acid with which it may happen to be mixed. If it be required to have a shining appearance, it may be dissolved in a small quantity of boiling water, from which it will separate in silky filaments by cooling. By this process the benzoic acid may be procured from other substances, in which it exists.

Mr. Hatchell has shown, that, by digesting benzoin in hot sulphuric acid, very beautiful crystals are sublimed. This is perhaps the best process for extracting the acid. If we concentrate the urine of horses or cows, and pour muriatic acid into it, a copious precipitate of benzoic acid takes place. This is the cheapest source of it." — *Ure.*

The London Pharmacopœia directs it to be made thus:—Take of gum benzoin, a pound and a half: fresh lime, four ounces: water, a gallon and a half: muriatic acid, four fluid ounces. Rub together the benzoin and lime; then boil them in a gallon of the water, for half an hour, constantly stirring; and, when it is cold, pour off the liquor. Boil what remains, a second time, in four pints of water, and pour off the liquor as before. Mix the liquors, and boil down to half, then strain through paper, and add the muriatic acid gradually, until it ceases to produce a precipitate. Lastly, having poured off the liquor, dry the powder in a gentle heat; put it into a proper vessel, placed in a sand bath; and, by a very gentle fire, sublime the benzoic acid. In this process a solution of benzoate of lime is first obtained; the muriatic acid then, abstracting the lime, precipitates the benzoic acid, which is crystallised by sublimation.

The Edinburgh Pharmacopœia forms a benzoate of soda, precipitates the acid by sulphuric acid, and afterwards crystallises it by solution in hot water, which dissolves a larger quantity than cold.

As an economical mode of obtaining this acid, Fourcroy recommends the extraction of it from the water that drains from dunghills, cowhouses, and stables, by means of the muriatic acid, which decomposes the benzoate of lime contained in them, and separates the benzoic acid, as in Scheele's process. He confesses the smell of the acid thus obtained differs a little from that of the acid extracted from benzoin; but this, he says, may be remedied, by dissolving the acid in boiling water, filtering the solution, letting it cool, and thus suffering the acid to crystallise, and repeating this operation a second time.

The acid of benzoin is so inflammable, that it burns with a clear yellow flame without the assistance of a wick. The sublimed flowers in their purest state, as white as ordinary writing paper, were fused into a clear transparent yellowish fluid, at the two hundred-and-thirtieth degree of Fahrenheit's thermometer, and at the same time began to rise in sublimation. It is probable that a

heat somewhat greater than this may be required to separate it from the resin. It is strongly disposed to take the crystalline form in cooling. The concentrated sulphuric and nitric acids dissolve this concrete acid, and it is again separated without alteration, by adding water. Other acids dissolve it by the assistance of heat, from which it separates by cooling, unchanged. It is plentifully soluble in ardent spirit, from which it may likewise be separated by diluting the spirit with water. It readily dissolves in oils, and in melted tallow. If it be added in a small proportion to this last fluid, part of the tallow congeals before the rest, in the form of white opake clouds. If the quantity of acid be more considerable, it separates in part by cooling, in the form of needles or feathers. It did not communicate any considerable degree of hardness to the tallow, which was the object of this experiment. When the tallow was heated nearly to ebullition, it emitted fumes which affected the respiration, like those of the acid of benzoin, but did not possess the peculiar and agreeable smell of that substance, being probably the sebacic acid. A stratum of this tallow, about one-twentieth of an inch thick, was fused upon a plate of brass, together with other fat substances, with a view to determine its relative disposition to acquire and retain the solid state. After it had cooled, it was left upon the plate, and, in the course of some weeks, it gradually became tinged throughout of a bluish-green colour. If this circumstance be not supposed to have arisen from a solution of the copper during the fusion, it seems a remarkable instance of the mutual action of two bodies in the solid state, contrary to that axiom of chemistry which affirms, that bodies do not act on each other, unless one or more of them be in the fluid state. Tallow itself, however, has the same effect.

Pure benzoic acid is in the form of a light powder, evidently crystallised in fine needles, the figure of which is difficult to be determined from their smallness. It has a white and shining appearance; but when contaminated by a portion of volatile oil, is yellow or brownish. It is not brittle, as might be expected from its appearance, but has rather a kind of ductility and elasticity, and, on rubbing in a mortar, becomes a sort of paste. Its taste is acrid, hot, acidulous, and bitter. It reddens the infusion of litmus, but not syrup of violets. It has a peculiar aromatic smell, but not strong unless heated. This, however, appears not to belong to the acid; for Mr. Giese informs us, that on dissolving the benzoic acid in as little alkohol as possible, filtering the solution, and precipitating by water, the acid will be obtained pure and void of smell, the odorous oil remaining dissolved in the spirit. Its specific gravity is 0·667. It is not perceptibly altered by the air, and has been kept in an open vessel twenty years without losing any of its weight. None of the combustible substances have any effect on it; but it may be refined by mixing it with charcoal powder and subliming, being thus rendered much whiter and better crystallised. It is not very soluble in water. Wenzel and Lichtenstein say four hundred parts of cold water dissolve but one, though the same quantity of boiling water dissolves twenty parts, nineteen of which separate on cooling.

This acid was first described in 1608, by Blaise de Vigenère, in his Treatise on Fire and Salt, and has been generally known since by the name of flowers of benjamin or benzoin, because it was obtained by sublimation from the resin of this name. As it is still most commonly procured from this substance, it has preserved the epithet of benzoic, though known to be a peculiar acid, obtainable not from benzoin alone, but from different vegetable balsams, vanello, cinnamon, ambergris, the urine of children, frequently that of adults, and always, according to Fourcroy and Vauquelin, though Giese denies this, from that of quadrupeds living on grass and hay, particularly the camel, the horse, and the cow. There is reason to conjecture that many vegetables, among them some of the grasses, contain it, and that it passes from them into the urine. Fourcroy and Vauquelin found it combined with potash and lime in the liquor of dunghills, as well as in the urine of the quadrupeds above mentioned; and they strongly suspect it to exist in the *Anthoxanthum odoratum*, or sweet-scented vernal grass, from which hay principally derives it fragrant smell. Giese, however, could find none either in this grass or in oats.

Benzoic acid is very seldom used in the cure of diseases; but now and then it is ordered as a stimulant against convulsive coughs and difficulty of breathing. The dose is from one grain to five.

BENZOI'FERA. See *Styrax benzoin.*

Benzoini magisterium. Magistery, or precipitate of gum-benjamin.

Benzoini oleum. Oil of benjamin.

BENZO'INUM. (*um, i.* n.; from the Arabic term *benzoah.*) See *Styrax benzoin.*

BERBERIA. (*a, æ.* f.) See *Beriberia.*

BE'RBERIS. (*is, is.* f; *Berberi,* wild, Arab. used by Averrhoes, and officinal writers.) 1. The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia.* The barberry, or pepperidge bush.

2. The pharmacopœial name for the barberry. See *Berberis vulgaris.*

Berberis gelatina. Barberry jelly. Barberries boiled in sugar.

Berberis vulgaris. The systematic name for the barberry of the pharmacopœias; called also, *Oxycantha Galeni, Spina acida,* and *Crespinus.* This tree, *Berberis —pedunculis racemosis, spinis triplicibus,* of

Linnæus, is a native of England. The fruit, or berries, which are gratefully acid, and moderately astringent, are said to be of great use in biliary fluxes, and in all cases where heat, acrimony, and putridity of the humours prevail. The filaments of this shrub possess a remarkable degree of irritability; for on being touched near the base with the point of a pin, a sudden contraction is produced, which may be repeated several times.

Bere'drias. An ointment.

BERENGA'RIUS, James, born about the end of the 15th century at Carpi, in Modena, whence he is often called *Carpus*. He was one of the restorers of anatomy, and was accused of having opened the bodies of two Spaniards alive. By his numerous dissections, he corrected many previous errors concerning the structure of the human body, and paved the way for his successor Vesalius. He died in 1527. His principal works are an enlarged Commentary on Mundinus, and a Treatise on Fracture of the Cranium.

Bereni secum. See *Artemisia vulgaris*.

Bereni'ce. (The city from whence it was formerly brought.) Amber.

Bereni'cium. (From φερω, to bring, and νικη, victory.) A term applied by the old Greek writers to nitre, from its supposed power in healing wounds.

BERGAMO'TE. See *Citrus medica*.

BERGMANITE. A massive mineral of a greenish, greyish-white, or reddish colour, which fuses into a transparent glass, of a semitransparent enamel. It is found in Fredeickswam, in Norway, in quartz and in felspar.

BERIBE'RI. (Indian. An oriental word signifying tillage, the production of which is grain or pasturage, and its production which is *sheep* or other cattle.) *Berberia*. A species of palsy, common in some parts of the East Indies, according to Bontius. The English call it beribery and barbiers. In this disease, the patients lift up their legs very much in the same manner as is usual with sheep. Bontius adds, that this palsy is a kind of trembling, in which there is deprivation of the motion and sensation of the hands and feet, and sometimes of the body.

BERKENHOUT, John, born in 1730. His "Pharmacopœia Medica," was very much approved: his other medical publications are of little importance. He died in 1791.

Bermuda berry. See *Sapindus saponaria*.

Berna'rvi. An electuary.

Berrio'nis. A name of black rosin.

BERRY. See *Bacca*.

Bers. Formerly the name of an exhilarating electuary.

Be'rula. See *Veronica beccabunga*.

Berula gallica. Most probably the *Sium nodiflorum*.

BERYL. Aqua-marine. A precious mineral, harder than the emerald, of a green, or greenish-yellow colour, found in Siberia, France, Saxony, Brazil, Scotland, and Ireland.

Bery'tion. (From *Berytius*, its inventor.) A collyrium described by Galen.

Bes. An eight-ounce measure.

Be'sachar. A sponge.

Be'sasa. The wild rue.

Besease. An old name for mace.

Bese'nna. (An Arabian word.) *Muscarum fungus*. Probably a sponge, which is the nidus of some sorts of flies.

Bessa'nen. (An Arabian word.) A redness of the external parts, resembling that which precedes the leprosy; it occupies the face and extremities.—*Avicenna*.

Be'sto. A name in Oribasius for a species of saxifrage.

BE'TA. (*a*, *æ*. f.; so called from the river *Bœtis*, in Spain, where it grows naturally; or, according to Blanchard, from the Greek letter βητα, which it is said to resemble when turgid with seed.) The beet.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*. The beet.

2. The pharmacopœial name of the common beet. See *Beta vulgaris*.

Beta alba. The white beet, a variety only of the *Beta rubra* of Linnæus. The juice and powder of the root are said to be good to excite sneezing, and will bring away a considerable quantity of mucus.

Beta hybrida. The plant which affords the root of scarcity. *Mangel wurzel* of the Germans; the root is very large, and consequently of great importance in times of scarcity, as a substitute for bread. In some parts of England the plant is cultivated to supply green and good food to cattle, especially milch cows: it contains much of the saccharine principle, and is very nourishing. Applied externally, it is useful in cleaning foul ulcers, and is a better application than the carrot.

Beta rubra. The systematic name of the red beet, the root of which is used indifferently with that of the *beta vulgaris*. The French are said to improve the colour of their claret with it.

Beta vulgaris. The systematic name for the beet of the pharmacopœias. *Beta—floribus congestis*, of Linnæus. The root of this plant is frequently eaten by the French; it may be considered as nutritious and antiscorbutic, and forms a very elegant pickle with vinegar. The root and leaves, although formerly employed as laxatives and emollients, are now forgotten. A considerable quantity of sugar may be obtained from the root of the beet. It is likewise said, that if beet roots be dried in the same manner as malt, after the greater part of their juice is pressed out, very good beer may be made from them.

BETACEOUS. *Betáceus.* Beet-like: belonging to the beet.

Betele. *Bethle.* *Betle.* *Betelle.* An oriental plant, like the tail of a lizard. It is chewed by the Indians, and makes the teeth black; is cordial and exhilarating, and in very general use throughout the East. It is supposed to be the long pepper.

BETO'NICA. (*a, æ.* f.; corrupted from *Vettonica*, which is derived from the *Vectones*, an ancient people of Spain.) Betony. 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia.*

2. The pharmacopœial name for the wood betony. See *Betonica officinalis.*

Betonica aquatica. See *Scrophularia aquatica.*

Betonica officinalis. The wood betony of the pharmacopœias; called also *Betonica purpurea*, *Betonica vulgaris*, *Cestrum*, and *Velonica cordi.*

Betonica—spica interrupta, corollarum labii lacinia intermedia emarginata of Linnæus. The leaves and tops of this plant have an agreeable, but weak smell; and to the taste they discover a slight warmth, accompanied with some degree of adstringency and bitterness. The powder of the leaves of betony, snuffed up the nose, provokes sneezing; and hence it is sometimes made an ingredient in sternutatory powders. Its leaves are sometimes smoked like tobacco. The roots differ greatly, in their quality, from the other parts; their taste is very bitter and nauseous; taken in a small dose, they vomit and purge violently, and are supposed to have somewhat in common with the roots of hellebore. Like many other plants, formerly in high medical estimation, betony is now almost entirely neglected. Antonius Musa, physician to the Emperor Augustus, filled a whole volume with enumerating its virtues, stating it as a remedy for no less than forty-seven disorders; and hence in Italy the proverbial compliment, *You have more virtues than betony.*

Betonica pauli. A species of veronica.

Betonica vulgaris. See *Betonica officinalis.*

BETONY. See *Betonica.*

Betony, water. See *Scrophularia aquatica.*

BE'TULA. (*a, æ.* f.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Tetrandria.* Alder and birch.

2. The pharmacopœial name of the white birch. See *Betula alba.*

Betula alba. The systematic name of the *betula* of the pharmacopœias, or white birch. *Betula:—foliis ovatis, acuminatis, serratis*, of Linnæus. The juice, leaves, and bark have been employed medicinally. If the tree be bored early in the spring, there issues, by degrees, a large quantity of limpid, watery, sweetish juice: it is said that one tree will afford from one to two gallons a day. This juice is esteemed as an antiscorbutic, deobstruent, and diuretic. When well fermented, and having a proper addition of raisins in its composition, it is frequently a rich and strong liquor; it keeps better that many of the other made wines, often for a number of years, and was formerly supposed to possess many medical virtues; but these experience does not seem to sanction; and the virtues of the alder, like those of many other simples formerly prized, have sunk into oblivion. The leaves and bark were used externally as resolvents, detergents, and antiseptics.

Betula alnus. The systematic name for the *alnus* of the pharmacopœias. The common alder.

BEX. (Βηξ, *bex*, *bechos*, f.; from βησσω, to cough.) A cough. See *Cough.*

Bexagui'llo. A name given to the white ipecacuanha, which the Spaniards bring from Peru, as the Portuguese do the brown from Brazil.

Bexu'go. The root of the *Æmatitis peruviana* of Caspar Bauhin; one drachm of which is sufficient for a purge.

Be'zahan. The fossil bezoar.

Beze'tta cœrulea. See *Croton tinctorium.*

BE'ZOAR. (Indeclinable; from *pazahar*, Persian, a destroyer of poison.) *Lapis bezoardicus.* Bezoard. A preternatural or morbid concretion formed in the bodies of land-animals. Several of these kinds of substances were formerly celebrated for their medicinal virtues, and distinguished by the names of the countries from whence they came, or the animal in which they were found. There are eight kinds, according to Fourcroy, Vauquelin, and Berthollet.

1. *Superphosphate of lime*, which forms concretions in the intestines of many mammalia.

2. *Phosphate of magnesia*, semitransparent and yellowish, and of sp. grav. 2·160.

3. *Phosphate of ammonia* and *magnesia.* A concretion of a grey or brown colour, composed of radiations from a centre. It is found in the intestines of herbiverous animals, the elephant, horse, &c.

4. *Biliary*, colour reddish-brown, found frequently in the intestines and gall-bladder of oxen, and used by painters for an orange-yellow pigment. It is inspissated bile.

5. *Resinous.* The oriental bezoars, procured from unknown animals, belong to this class of concretions. They consist of concentric layers, are fusible, combustible, smooth, soft, and finely polished. They are composed of bile and resin.

6. *Fungous*, consisting of pieces of the *boletus igniarius* swallowed by the animal.

7. *Hairy.*

8. *Ligniform.* Three bezoars sent to Bonaparte by the King of Persia, were found by Berthollet to be nothing but woody fibre agglomerated.

Bezoars were formerly considered as very powerful alexipharmics, so much so, indeed, that other medicines, possessed, or supposed to be possessed, of alexipharmic powers, were called *bezoardics;* and so efficacious were they once thought, that they were worn by the superstitious, who have purchased a single one from the East at six thousand livres, when very fine, and hired them, in Holland and Portugal, on particular occasions, at a ducat a day. These virtues, however, are in the present day justly denied them, as they produce no other effects than those common to the saline particles which they contain, and which may be given to greater advantage from other sources. A composition of bezoar with absorbent powders, has been much in repute, as a popular remedy for disorders in children, by the name of Gascoigne's powder and Gascoigne's ball; but the real bezoar was rarely, if ever, used for these, its price offering such a temptation to counterfeit it. Some have employed for this purpose a resinous composition, capable of melting in the fire, and soluble in alkohol; but Newmann supposed that those nearest resembling it were made of gypsum, chalk, or some other earth, to which the proper colour was imparted by some vegetable juice. We understand, however, that tobacco-pipe clay, tinged with ox-gall, is commonly employed, at least for the Gascoigne's powder; this giving a yellow tint to paper, rubbed with chalk, and a green to paper rubbed over with quick-lime; which are considered as proofs of genuine bezoar, and which a vegetable juice would not effect.

Bezoar bovinum. Bezoar of the ox.

Bezoar germanicum. The bezoar from the alpine goat.

Bezoar hominis. It is not accurately ascertained that a bezoar has ever been found in the human stomach. Assertions to this effect, however, are to be met with in various foreign miscellanies; and, on this authority, Dr. Good has admitted a species of his genus *Enterolithus,* by the trivial name of *bezoardus.*

Bezoar hystricis. The bezoar of the Indian porcupine; called also *Lapis porcinus, Lapis malacensis, Petro del porco:* said to be found in the gall-bladder of an Indian porcupine, particularly in the province of Malacca. This concrete differs from others: it has an intensely bitter taste; and, on being steeped in water for a very little time, impregnates the fluid with its bitterness, and with aperient, stomachic, and, as it is supposed, with alexipharmic virtues. How far it differs in virtue from the similar concretions found in the gall-bladder of the ox, and other animals, does not appear.

Bezoar microcosmicum. The calculus found in the human bladder.

Bezoar occidentale. Occidental bezoar. This concretion is said to be found in the stomach of an animal of the stag or goat kind, a native of Peru, &c. It is of a farger size than the oriental bezoar, and sometimes as large as a hen's egg: its surface is rough, and the colour green, greyish, brown.

Bezoar orientale. *Lapis bezoar orientalis.* Oriental bezoar stone. This concretion is said to be found in the pylorus, or fourth stomach of an animal of the goat kind, which inhabits the mountains of Persia. It is generally about the size of a kidney-bean, of a roundish or oblong figure, smooth, and of a shining olive or dark greenish colour.

Bezoar porcinum. See *Bezoar hystricis.*

Bezoar simiæ. The bezoar from the monkey.

BEZO'ARDIC. *Bezoardicus.* Of or belonging to the bezoar.

Bezoardica radix. See *Dorstenia contrayerva.*

Bezoardicum joviale. Bezoar with tin. It differed very little from the *Antihecticum Poterii.*

Bezoardicum lunale. A preparation of antimony and silver.

Bezoardicum martiale. A preparation of iron and antimony.

Bezoardicum minerale. A preparation of antimony, made by adding nitrous acid to butter of antimony.

Bezoardicum saturni. A preparation of antimony and lead.

Bezoardicus lapis. See *Bezoar.*

Bezoardicus pulvis. The powder of the oriental bezoar.

Bezoarticum minerale. A calx of antimony.

Bezoas. An obsolete chemical epithet.

BI. (From *bis,* twice.) In composition signifies twice or double, and is frequently attached to other words in anatomy, chemistry, and botany; as *biceps,* having two heads; *bicuspides,* two points, or fangs; *bicarbonate,* a carbonate with an excess of acid; *bilocular,* with two cells; *bivalve,* with two valves, &c.

Biæon. Wine made from sun-raisins, fermented in sea-water.

Bibine'lla. See *Pimpinella.*

BIBITO'RIUS. (From *bibo,* to drink; because, by drawing the eye inwards towards the nose, it causes those who drink to look into the cup.) See *Rectus internus oculi.*

BIBULOUS. *Bibulus.* Attracting moisture: *charta bibula,* blotting paper.

BICAPSULARIS. Bicapsular: having two capsules; hence *Pericarpium bicapsulare.* See *Capsula.*

BICAUDALIS. (From *bis,* two, and *cauda,* a tail.) *See Posterior auris.*

BI'CEPS. (*Biceps, bicipitis,* adjective; from *bis,* twice, and *caput,* a head.) Two heads: applied to muscles from their having two distinct origins or heads.

Biceps brachii. See *Biceps flexor cubiti.*

Biceps cruris. See *Biceps flexor cruris.*

Biceps cubiti. See *Biceps flexor cubiti.*

Biceps externus. See *Triceps extensor cubiti.*

Biceps flexor cruris. *Biceps cruris* of Albinus. *Biceps* of Winslow, Douglas, and Cowper. A muscle of the leg, situated on the hind part of the thigh. It arises by two distinct heads; the first, called *longus,* arises in common with the semitendinosus, from the upper and posterior part of the tuberosity of the os ischium. The second, called *brevis,* arises from the linea aspera, a little below the termination of the glutæus maximus, by a fleshy acute beginning, which soon grows broader, as it descends to join with the first head, a little above the external condyle of the os femoris. It is inserted, by a strong tendon, into the upper part of the head of the fibula. Its use is to bend the leg. This muscle forms what is called the outer ham-string; and, between it and the inner, the nervus popliteus, arteria and vena poplitea, are situated.

Biceps flexor cubiti. *Biceps brachii* of Albinus. *Coraco-radialis, seu biceps* of Winslow. *Biceps internus* of Douglas. *Biceps internus humeri* of Cowper. A muscle of the fore-arm, situated on the forepart of the *os humeri.* It arises by two heads. The first and outermost, called *longus,* begins tendinous from the upper edge of the glenoid cavity of the scapula, passes over the head of the os humeri within the joint, and in its descent without the joint, is inclosed in a groove near the head of the os humeri, by a membraneous ligament that proceeds from the capsular ligament and adjacent tendons. The second, or innermost head, called *brevis,* arises, tendinous and fleshy, from the coracoid process of the scapula, in common with the coracobrachialis muscle. A little below the middle of the fore-part of the os humeri, these heads unite. It is inserted by a strong roundish tendon into the tubercle on the upper end of the radius internally. Its use is to turn the hand supine, and to bend the fore-arm. At the bending of the elbow, where it begins to grow tendinous, it sends off an aponeurosis, which covers all the muscles on the inside of the fore-arm, and joins with another tendinous membrane, which is sent off from the triceps extensor cubiti, and covers all the muscles on the outside of the fore-arm, and a number of the fibres, from opposite sides, decussate each other. It serves to strengthen the muscles, by keeping them from swelling too much outwardly when in action, and a number of their fleshy fibres take their origin from it.

Biceps internus. See *Biceps flexor cubiti.*

Bichi'chia. An epithet of a troch, described by Rhazes, made of liquorice, &c.

Bi'chos. A Portuguese name for the worms that get under the toe of the people in the Indies, which are destroyed by the oil of cashew-nut.

Bici. The Indian name of an intoxicating liquor, made from Turkey wheat in South America. See *Wheat, Turkey,*

BICONJUGATUS. Twice conjugate. See *Conjugatus.*

Bicornes plantæ. The name of an order of plants in the natural method of Linnæus and Gerard.

BI'CORNIS. (From *bis,* twice, and *cornu,* a horn.) 1. Two horned: sometimes applied to the os hyoides, which has two processes, like horns.

2. In former times applied to muscles that had two terminations.

3. A plant, the antheræ of which have the appearance of two horns.

BICUSPIDATUS. Bicuspidate: having two points. See *Bicuspis.*

BICU'SPIS. (*is, idis.* f.; from *bis,* twice, and *cuspis,* a spear.) 1. Two pointed; applied to a tooth which has double points.

2. A leaf which terminates by two points; hence *folia bicuspida,* or *bicuspidata.*

BI'DENS. (*ens, entis.* f.; from *bis,* twice, and *dens,* a tooth; so called from its being deeply serrated, or indented.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

Bidens tripartita. The systematic name of the hemp agrimony, formerly used as a bitter and aperient, but not in the practice of the present day.

BIDLOO, Godfrey, a celebrated anatomist, born at Amsterdam, in 1649. He published 105 very splendid, though rather inaccurate anatomical tables, with explanations; and several minor works.

BIENNIS. Biennial. Applied to plants, as the term imports, of two years' duration. Of this tribe there are numerous plants, which being raised one year from the seed, generally attain perfection the same year, or within about twelve months, shooting up stalks, producing flowers, and perfecting seeds in the following spring or summer, and soon after commonly perish.

Bifariam. In two parts.

BIFA'RIUS. Pointing two ways, or from opposite sides.

BIFER. (From *bis,* twice, and *fero,* to bear.) *Biferus.* A plant, which bears twice in the year, in spring and autumn, as is common between the tropics.

BI'FIDUS. Bifid: forked: divided into two; as a bifid seed-vessel in *Adoxa moschatellina,* a bifid petal in the *Silene nocturna* and *Alyssum incanum.*

BIFLORUS. Bearing two flowers; hence *pedunculus biflorus.*

BIFORIUM. Applied to a leaf which points two ways.

BIFORUS. (From twice, and *forus,* a door.) Two-doored, or bivalved. A class of plants is so denominated in some natural arrangements, constituted by those which have a pericarp, or seed-vessel, furnished with two valves.

BIFURCATIO. Bifurcation.

BIFURCATUS. (From *bis*, twice, and *furca*, a fork.) Bifurcate. See *Bifurcatus* and *Dichotomus*.

BIFURCUS. (*Bifurcus* and *Bifurcus*: from *bis*, twice, and *furca*, a fork.) Forked. A vessel, or nerve, stem, root, &c. is said to bifurcate when it divides into two branches; thus the bifurcation of the aorta, &c.

BIGA'STER. (*er*, *eros*. f.; from *bis*, twice, and γαστηρ, a belly.) A name given to muscles which have two bellies.

BIGEMINATUS. (From *bis* and *gemini*, twins.) Bigeminate: twice paired. A leaf is so called when near the apex of the common petiole there is a single pair of secondary petioles, each of which support a pair of opposite leaflets; as in *Mimosa unguis cati*.

BIGEMINUM. Twin-forked.

BIH'ERNIUS. (From *bis*, double, and *hernia*, a disease so called.) Having a double hernia, or one on each side.

Bihydroguret of carbon. See *Carburetted hydrogene*.

BIJUGUS. In two pairs: thus a winged leaf is termed *folium bijugum*, which bears two pairs of leaflets.

BILABIATUS. (From *bis*, double, and *labium*, a lip.) Bilabiate: two-lipped, Often used in botany; as *pericarpium bilabiatum*, *corolla bilabiata*, &c.

BILACINIATUS. Doubly laciniate: applied to a leaf, as *folium bilaciniatum*, when the margin is cut into two segments.

Bila'den. A name of iron.

BILAMELLATUS. (*Bilamellatus*, from *bis*, and *lamella*, a little plate.) Bilamellate, or having two layers.

Bilberry bean. See *Arbutus uva ursi*.

BILDSTEIN. See *Figurestone*.

BILIS. (*is*, *is*. f.; Nævius derives it from *bis*, twice, and *lis*, contention: as being supposed to be the cause of anger and dispute.) *Fel*. Bile. A bitter fluid, secreted by the liver; in part flowing into the intestines, and in part regurgitating into the gall-bladder. The secretory organs of this fluid are the penicilli of the liver, which terminate in very minute canals, called biliary ducts. The biliary ducts pour their bile into the *ductus hepaticus*, which conveys it into the *ductus communis choledochus*, from whence it is in part carried into the duodenum. The other part of the bile regurgitates through the cystic duct into the gall-bladder: for hepatic bile, except during digestion, cannot flow into the duodenum, which contracts when empty; hence it necessarily regurgitates into the gall-bladder. The branches of the *vena portæ* contribute most to the secretion of bile; its peculiar blood, returning from the abdominal viscera, is supposed to be, in some respects, different from other venal blood, and to answer exactly to the nature of bile. It is not yet ascertained clearly whether the florid blood, in the hepatic artery, merely nourishes the liver; or whether, at the same time, it contributes a certain principle, necessary for the formation of bile. It has been supposed, by physiologists, that cystic bile was secreted by the arterial vessels of the gall-bladder; but the fallacy of this opinion is proved by making a ligature on the cystic duct of a living animal. From what has been said, it appears that there are, as it were, two kinds of bile in the human body: —

1. *Hepatic bile*, which flows from the liver into the duodenum: this is thin, of a faint yellow colour, inodorous, and very slightly bitter, otherwise the liver of animals would not be eatable.

2. *Cystic bile*, which regurgitates from the hepatic duct into the gall-bladder, and there, from stagnating, becomes thicker, the aqueous part being absorbed by lymphatic vessels, and more acrid from concentration. Healthy bile is of a yellow, green colour; of a consistence like that of thin oil, and when very much agitated, it froths like soap and water: its smell is fatuous, somewhat like musk, especially the putrefying or evaporating bile of animals: its taste is bitter.

Exposed for some time in an open vessel, the bile gradually corrupts, and lets fall a small quantity of a yellowish matter; then its mucilage decomposes. Thus the putrefactive process is very inactive, and the odour it exhales is not insupportable, but in some cases has been thought to resemble that of musk.

Water and alkohol combine in all proportions with bile.

When a very little acid is poured into bile, it becomes slightly turbid, and reddens litmus; when more is added, the precipitate augments, particularly if sulphuric acid be employed. It is formed of a yellow animal matter, with very little resin.

Potash and soda increase the thinness and transparency of bile.

Acetate of lead precipitates the yellow matter, and the sulphuric and phosphoric acids of the bile. The solution of the acetate precipitates not only these bodies, but also the picromel and the muriatic acid, all combined with the oxide of lead. The acetic acid remains in the liquid united to the soda.

The greater number of fatty substances are capable of being dissolved by bile. This property, which made it be considered a soap, is owing to the soda, and to the triple compound of soda, resin, and picromel. Scourers sometimes prefer the gall of oxen and calves, sheep, &c. to soap for cleansing woollen.

Human bile is peculiar. It varies in colour, sometimes being green, generally yellowish-brown, occasionally almost colourless. Its taste is not very bitter. In the gall-bladder it is seldom limpid, containing often, like that of the ox, a certain quantity of yellow matter in suspension. At times

this is in such quantity, as to render the bile somewhat grumous. Filtered and boiled, it becomes very turbid, and diffuses the odour of white of egg. When evaporated to dryness, there results a brown extract, equal in weight to 1-11th of the bile. By calcination we obtain uncombined soda, phosphate of lime, and oxide of iron.

The chemical analysis of bile has been principally illustrated by Mons. Thénard. "Ox bile is usually of a greenish-yellow colour, rarely a deep green. By its colour it changes the blue of turnsole and violet to a reddish-yellow. At once very bitter, and slightly sweet, its taste is scarcely supportable. Its smell, though feeble, is easy to recognise, and approaches somewhat to the nauseous odour of certain fatty matters, when they are heated. Its specific gravity varies very little. It is about 1·026 at 43° F. It is sometimes limpid, and at others disturbed with a yellow matter, from which it may be easily separated by water: its consistence varies from that of a thin mucilage, to viscidity. Cadet regarded it as a kind of soap. According to this able chemist, 800 parts of ox bile, are composed of

700 parts of water,
15 .... resinous matter,
69 .... picromel,
4 .... yellow matter,
4 .... soda,
2 .... phosphate of soda,
3·5 ...... muriates of soda and potash,
0·8 ...... sulphate of soda,
1·2 ...... phosphate of lime,
a trace of oxide of iron.

When distilled to dryness, it leaves from 1-8th to 1-9th of solid matter, which, urged with a higher heat, is resolved into the usual igneous products of animal analysis; only with more oil and less carbonate of ammonia.

All the acids decompose human bile, and occasion an abundant precipitate of albumen and resin, which are easily separable by alkohol. One part of nitric acid, sp. grav. 1·210, saturates 100 of bile. On pouring into it a solution of sugar of lead, it is changed into a liquid of a light yellow colour, in which no picromel can be found, and which contains only acetate of soda and some traces of animal matter.

Human bile appears hence to be formed, according to Thénard, in 1100 parts: —

Of 1000 water,
From 2 to 10 yellow insoluble matter,
42 albumen,
41 resin,
5·6 soda, and
45 phosphates of soda of lime, sulphate of soda, muriate of soda, and oxide of iron.

But by Berzelius, its constituents are in 1000 parts:

908·4 water,
80 picromel,
3 albumen,
4·1 soda,
0·1 phosphate of lime,
3·4 common salt, and
1 phosphate of soda, with some phosphate of lime." See *Picromel.*

The primary uses of this fluid, so important to the animal economy, are,

1. *To separate the chyle from the chyme:* thus chyle is never observed in the duodenum before the chyme has been mixed with the bile; and thus it is that oil is extricated from linen by the bile of animals.

2. By its *acridity* it excites the peristaltic motion of the intestines: hence the bowels are so inactive in people with jaundice.

3. It imparts a *yellow colour* to the excrements: thus we observe the white colour of the fæces in jaundice, in which disease the flow of bile into the duodenum is entirely prevented.

4. It prevents the *abundance of mucus and acidity* in the primæ viæ: hence acid, pituitous, and verminous saburra are common from deficient or inert bile.

BILGUER, John Ulrick, was born in Swisserland. He published as a thesis, on graduating at Halle, in 1761, a pretty general condemnation of amputation. This work attracted much notice throughout Europe, and materially checked the unnecessary use of the knife. In his "Instructions for Hospital Surgeons," which appeared soon after, he insisted farther on the same subject.

BI'LIARY. (*Biliaris:* from *bilis,* the bile.) Of or belonging to the bile.

Biliary duct. *Ductus biliosus.* The very vascular *glandules,* which compose almost the whole substance of the liver terminate in very small canals, called *biliary ducts,* which at length form one trunk the *ductus hepaticus.* Their use is to convey the bile, secreted by the liver, into the hepatic duct; this uniting with a duct from the gall-bladder, forms one common canal, called the *ductus communis choledochus,* which conveys the bile into the intestinal canal.

Bili'mbi. See *Malus Indica.*

BI'LIOUS. (*Biliosus;* from *bilis,* bile.) Of or belonging to the bile: very generally made use of, to express diseases which arise from too copious a secretion of bile: thus bilious cholic, bilious diarrhœa, bilious fever, &c.

Bilis atra. Black bile.

Bilis cystica. Cystic bile. The bile when in the gall-bladder is so called, to distinguish it from that which is found in the liver. See *Bilis.*

Bilis hepatica. Hepatic bile. Bile that has not entered the gall-bladder. See *Bilis.*

BILL. *Rostrum.* A long awl-shaped substance attached to a seed, resembling the bill of a woodcock; as in *Scandix anthriscus* and *Geranium.*

BILO'BUS. (From *bis,* double, and

lobus, the end of the ear.) Bilobed: having two lobes, resembling the tips of ears; applied to a leaf, *folium bilobum*, when it is deeply divided into rounded segments, as the petals of the *Geranium pyrenaicum* and *striatum*.

BILOCULA'RIS. (From *bis*, twice, and *loculus*, a little cell.) Bilocular: two-celled; applied to a capsule which has two cells.

BILOCULARES. The name of a natural order of plants.

BIME'STRIS. (From *bis*, twice, and *mensis*, month.) Two months old.

BINATUS. Binate: in pairs; applied to compound leaves, when consisting of a pair of leaflets only, on one foot-stalk, as in the great everlasting pea and other species of *lathyrus*.

BINDWEED. See *Convolvulus sepium*.

BINERVIUS. Two-nerved: having two ribs or nerves very apparent. Hence, *folium binervium*.

BINGA'LLE. See *Casumuniar*.

BINO'CULUS. (From *binus*, double, and *oculus*, the eye.) A bandage for securing the dressings on both eyes.

BINOXALATE. See *Superoxalate*.

BI'NSICA. A disordered mind.—*Helmont*.

BINSICA MORS. The binsical, or that death which follows a disordered mind.

BINUS. (From *bis*, twice.) Two by two; by couplets: applied to leaves when there are only two upon a plant, *folia bina*; as in *Convallaria majalis*, &c.

BIOLOGY. (*Biologia*, *æ*. f.; from βιος, life, and λογος, a discourse.) The science or doctrine of life.

BIOLY'CHNIUM. (From βιος, life, and λυχνιον, a lamp.) 1. Vital heat.

2. The name of a nostrum.

BIOS. (Βιος, life.) 1. Life and its course.

2. Sometimes applied only to food.

BI'OTE. (From βιος, life.) 1. Life.

2. Light food.

BIOTHA'NATUS. (From βια, violence, or βιος, life, and θανατος, death.) One who dies a violent death, or suddenly, as if there were no space between health and death.

BIPARTI'TUS. Bipartite: deeply divided almost to the basis: applied to many parts of plants, as *calyx bipartitus*; *folium bipartitum*; *perianthium bipartitum*; and *petala bipartita*.

BIPEMU'LLA. See *Pimpinella*.

BIPENE'LLA. See *Pimpinella*.

BIPINNATIFIDUS. Doubly pinnatifid: applied to a leaf; as in the long rough-headed poppy, *Papaver argemone*. See *Leaf*.

BIPINNA'TUS. Bipinnate, or doubly pinnate. A compound leaf is so termed when the secondary petioles are arranged in pairs on the common petiole, and each secondary petiole is pinnate.

BI'RA. Malt liquor or beer.

BIRA'O. Stone parsley.

BIRCH. See *Betula alba*.

Bird-footed. See *Pedatus*.

BIRDLIME. A peculiar vegetable substance, of great tenacity, with which birds are caught. The best is made of the middle bark of the holly, boiled seven or eight hours in water, till it is soft and tender; then laid in heaps in pits in the ground, and covered with stones, the water being previously drained from it; and in this state left for two or three weeks to ferment, till it is reduced to a kind of mucilage. This being taken from the pit, is pounded in a mortar to a paste, washed in river water, and kneaded, till it is freed from extraneous matters. In this state it is left four or five days in earthen vessels, to ferment and purify itself, when it is fit for use.

It may likewise be obtained from the misletoe, the *Viburnum lantana*, young shoots of elder, and other vegetable substances.

It is sometimes adulterated with turpentine, oil, vinegar, and other matters.

Good birdlime is of a greenish colour, and sour flavour; gluey, stringy, and tenacious; and in smell resembling linseed-oil. By exposure to the air it becomes dry and brittle, so that it may be powdered; but its viscidity is restored by wetting it. It reddens tincture of litmus. Exposed to a gentle heat it liquefies slightly, swells in bubbles, becomes grumous, emits a smell resembling that of animal oils, grows brown, but recovers its properties on cooling, if not heated too much. With a greater heat it burns, giving out a brisk flame and much smoke. The residuum contains sulphate and muriate of potash, carbonate of lime, and alumina, with a small portion of iron.

BIRD'S TONGUE. The seeds of the *Fraxinus excelsior*, or ash, so called from their resemblance.

BI'RSEN. (Hebrew for an aperture.) A deep ulcer, or imposthume in the breast.

BIRTHWORT. See *Aristolochia*.

Birthwort, climbing. See *Aristolochia clematitis*.

Birthwort, long-rooted. See *Aristolochia longa*.

Birthwort, snake-killing. See *Aristolochia anguicida*.

Birthwort, three-lobed. See *Aristolochia trilobata*.

BISCO'CTUS. (From *bis* twice, and *coquo*, to boil.) Twice dressed. It chiefly applied to bread much baked, as biscuit.

BISCUTE'LLA. Mustard.

BISE'RMAS. See *Salvia sclarea*.

BISHOP'S WEED. See *Ammi*.

BISLI'NGUA. (*Bislingua*, *æ*. f.; from *bis*, twice, and *lingua*, a tongue: so called from its appearance of being double-tongued; that is, of having upon each leaf a less leaf.) The Alexandrian laurel.

BISMA'LVA. (From *vismalva*, *quasi viscum*

malva, from its superior viscidity.) The water, or marsh-mallow.

BI'SMUTH. (*Bismuthum, i.* n.; from *Bismut*, Germ.) A metal which is found in the earth in very few different states, more generally native or in the metallic state. *Native bismuth* is met with in solid masses, and also in small particles dispersed in and frequently deposited on different stones, at Schreeberg in Saxony, Sweden, &c. Sometimes it is crystallised in four-sided tables, or indistinct cubes. It exists combined with oxygene in the *oxide of bismuth*, found in small particles, dispersed, of a bluish or yellowish grey colour, needle-shaped and capillary; sometimes laminated, forming small cells. It is also, though more seldom, united to sulphur and iron in the form of a sulphuret in the *martial sulphuretted bismuth ore*. This ore has a yellowish-grey appearance, resembling somewhat the martial pyrites. And, it is sometimes combined with arsenic.

Bismuth is a metal of a yellowish or reddish white colour, little subject to change in the air. It is somewhat harder than lead, and is scarcely, if at all, malleable; being easily broken, and even reduced to powder, by the hammer. The internal face, or place of fracture, exhibits large shining plates, disposed in a variety of positions; thin pieces are considerably sonorous. At a temperature of 480° Fahrenheit, it melts, and its surface becomes covered with a greenish-grey or brown oxide. A stronger heat ignites it, and causes it to burn with a small blue flame; at the same time that a yellowish oxide, known by the name of flowers of bismuth, is driven up. This oxide appears to rise in consequence of the combustion; for it is very fixed, and runs into a greenish glass when exposed to heat alone.

Bismuth, urged by a strong heat, in a closed vessel, sublimes entire, and crystallises very distinctly when gradually cooled.

Bismuth unites with several of the acids.

When bismuth is exposed to *chlorine* gas it takes fire, and is converted into a chloride, which, formerly prepared by heating the metal with corrosive sublimate, was called butter of bismuth.

There appears to be two *sulphurets*, the first a compound of 100 bismuth to 22·34 sulphur; the second of 100 to 46·5: the second is a bisulphuret.

This metal unites with most metallic substances, and renders them in general more fusible.

Eight parts of bismuth, five of lead, and three of tin, constitute the fusible metal, sometimes called Newton's, from its discoverer, which melts at the heat of boiling water, and may be fused over a candle in a piece of stiff paper without burning the paper. One part of bismuth, with five of lead, and three of tin, forms plumbers' solder. It forms the basis of a sympathetic ink. The oxide of bismuth precipitated by potash from nitric acid, has been recommended in spasmodic disorders of the stomach, and given in doses of four grains, four times a-day. A writer in the Jena Journal says he has known the dose carried gradually to one scruple without injury.

BISSET, Charles, was born about the year 1716, and studied at Edinburgh. In 1755, he published a Treatise on the Scurvy; but his most celebrated work is an "Essay on the Medical Constitution of Great Britain," in 1762.

BISTORT. See *Bistorta*.

BISTO'RTA. (*a, æ.* f.; from *bis*, twice, and *torqueo*, to bend: so called from the contortions of its roots.) See *Polygonum bistorta*.

BISTOURY. (*Bistoire*, French.) Any small knife for surgical purposes.

BISTRE. A brown pigment, consisting of the finer parts of wood soot, separated from the grosser by washing. The soot of the beech is said to make the best.

BISULPHAS. Bisulphate. A sulphate with an additional quantity of sulphuric acid.

BIT NOBEN. Salt of bitumen. A white saline substance imported from India, which is not a natural production, but a Hindoo preparation of great antiquity. It is called in the country, *bit noben, padanoon*, and *soucherloon*, and popularly *khala mimuc*, or black salt. Mr. Henderson, of Bengal, conjectures it to be the *sal asphaltites* and *sal sodomenus* of Pliny and Galen. This salt is far more extensively used in Hindostan than any other medicine whatever. The Hindoos use it to improve their appetite and digestion. They consider it as a specific for obstructions of the liver and spleen; and it is in high estimation with them in paralytic disorders, particularly those that affect the organs of speech, cutaneous affections, worms, old rheumatisms, and indeed all chronic disorders of man and beast.

BITERNATE. See *Biternatus*.

BITERNA'TUS. (From *bis*, twice, and *ternus*, three.) Biternate: twice-ternate; doubly threefold: applied to compound leaves, when the common footstalk supports three secondary petioles on its apex, and each of these support three leaflets; as in *Ægopodium*.

Bi'thinos. (Βιθυνος, *Bithinus*.) A plaster described by Galen as efficacious against dropsy.

BITTER. See *Amarus*.

BITTER-APPLE. See *Cucumis Colocynthis*.

BITTER PRINCIPLE. The bitter principle of certain vegetables appears to be owing to the presence of a peculiar principle, differing from every other substance in its chemical properties. It may be extracted from the wood of quassia, the root of gentian, the leaves of the hop, the fruit of the colocynth, and several other plants, by

infusing them for some time in cold water. The characters of this bitter principle have been attentively examined, and published by Dr. Thompson, in his System of Chemistry, and are as follows: —

1. When water, thus impregnated, is evaporated to dryness by a very gentle heat, it leaves a brownish yellow substance, which retains a certain degree of transparency. For some time it continues ductile, but at last becomes brittle. Its taste is intensely bitter.

2. When heated, it softens, swells, and blackens; then burns away without swelling much, and leaves a small quantity of ashes.

3. It is very soluble in water and in alkohol.

4. It does not alter blue vegetable colours.

5. It is not precipitated by the watery solution of lime, baryta, or strontia; nor is it changed by alkalies.

6. Tincture of galls, infusion of gall-nuts, and gallic acid, produce no effect.

7. Of the metallic salts, nitrate of silver, and acetate of lead, are the only ones that throw it down.

BITTERN. The mother water which remains after the crystallisation of common salt in sea-water, or the water of salt springs. It abounds with sulphate and muriate of magnesia, to which its bitterness is owing.

BITTERSPAR. A mineral of a greyish or yellowish colour, and somewhat pearly lustre, usually found embedded in serpentine, chlorite, or steatite, and found in the Tyrol, Salsburg, Dauphiny, Scotland, and the Isle of Man.

BITU'MEN. (*en, inis.* n.; πιλυμα, πιλυς, pine: because it flows from the pine tree; or, *quòd vi tumeat è terrâ*, from its bursting forth from the earth.) This term includes a considerable range of inflammable mineral substances, burning with flame in the open air. They are of different consistency, from a thin fluid to a solid; but the solids are for the most part liquefiable at a moderate heat. The fluid are,

1. *Naphtha;* a fine, white, thin, fragrant, colourless oil, which issues out of white, yellow, or black clays in Persia and Media. This is highly inflammable, and is decomposed by distillation. It dissolves resins, and the essential oils of thyme and lavender; but is not itself soluble either in alkohol or æther. It is the lightest of all the dense fluids, its specific gravity being 0·708. See *Naphtha*.

2. *Petroleum*, which is a yellow, reddish, brown, greenish, or blackish oil, found dropping from rocks, or issuing from the earth, in the Duchy of Modena, and in various other parts of Europe and Asia. This likewise is insoluble in alkohol, and seems to consist of naphtha, thickened by exposure to the atmosphere. It contains a portion of the succinic acid. See *Petroleum*.

3. *Barbadoes tar*, which is a viscid, brown, or black inflammable substance, insoluble in alkohol, and containing the succinic acid. This appears to be the mineral oil in its third state of alteration.

The solid are,

1. *Asphaltum*, mineral pitch, of which there are three varieties: the cohesive; the semi-compact, maltha; the compact, or asphaltum. These are smooth, more or less hard or brittle, inflammable substances, which melt easily, and burn without leaving any or but little ashes, if they be pure. They are slightly and partially acted on by alkohol and æther. See *Asphaltum*.

2. *Mineral tallow*, which is a white substance of the consistence of tallow, and as greasy, although more brittle. It was found in the sea on the coasts of Finland, in the year 1736; and is also met with in some rocky parts of Persia. It is near one fifth lighter than tallow: burns with a blue flame, and a smell of grease, leaving a black viscid matter behind, which is more difficultly consumed.

3. *Elastic bitumen*, or mineral caoutchouc, of which there are two varieties. Beside these, there are other bituminous substances, as jet and amber, which approach the harder bitumens in their nature; and all the varieties of pit-coal, and the bituminous schistus or shale, which contain more or less of bitumen in their composition.

Bitumen barbadense. See *Petroleum barbadense*.

Bitumen judaicum. See *Asphaltum*.

Bitumen liquidum. See *Petroleum*.

BITUMINO'US. *Bituminus*. Of the nature of bitumen.

Bituminous limestone. Found near Bristol, and in Galway, in Ireland. The Dalmatian is so charged with bitumen, that it may be cut like soap, and is used for building houses. When the walls are reared, fire is applied to them, and they burn white.

BIVALVIS. Bivalve: two-valved. Applied to the valves of the absorbents in anatomy, and in botany to capsules.—*Capsula bivalvis*.

BIVASCULARIS. (From *bis*, twice, and *vasculum*, a little vessel.) Bivascular: having two cells.

BIVE'NTER. (*er, ris.* m.; from *bis*, twice, and *venter*, a belly.) A muscle is so termed which has two bellies.

Biventer cervicis. A muscle of the lower jaw.

Biventer maxillæ inferioris. See *Digastricus*.

BI'XA. (*a, æ.* f.) The name of a genus of plants. Class, *Polyandria;* Order, *Monogynia*.

Bixa orleana. The systematic name for the plant which affords the *terra orleana* or *annotto* of the shops and pharmacopœias. The substance so called is a ceraceous mass

obtained from the pellicles of the seeds. In Jamaica and other warm climates, it is considered as a useful remedy in dysentery, possessing adstringent and stomachic qualities; but here it is only used to colour cheese, and some other articles.

Bla'cciæ. The Measles. — *Rhazes.*

BLACK. See *Niger* and *Colour.*

Black-chalk. A mineral of a bluish-black colour, and slaty texture, which soils the fingers. It is found in primitive mountains, and occurs in Caernarvonshire, and the island of Isla.

Black disease. See *Melæna.*

Black-jack. Blende, or mock lead; an ore of zinc.

Black jaundice. See *Icterus.*

Black lead. See *Plumbago.*

Black leprosy. See *Lepra.*

Black vomit. See *Melæna.*

Black wadd. One of the ores of manganese.

Black water. 1. The water-brash, a species of heartburn, is sometimes so called. See *Cardialgia.*

2. A lotion composed of submuriate of mercury and lime-water, in the proportion of a drachm to eight ounces.

BLA'CKBERRY. See *Rubus fruticosus.*

BLACKMORE, Sir Richard, was born in Wiltshire about the year 1650; was physician to William III., and retained the same office under Queen Anne. He wrote several medical tracts, which are little known at present.

BLADDER. See *Urinary bladder,* and *Gall-bladder.*

Bladder, inflamed. See *Cystitis.*

Bladder-shaped. See *Inflatus.*

Bladder-wrack. See *Fucus vesiculosus.*

BLADE-BONE. See *Scapula.*

BLÆ'SITAS. (*as, atis.* f.; from *blæsus,* a stammerer.) A defect in speech, called stammering.

BLÆ'SUS. (From βλαπτω, to injure.) A stammerer.

BLAIN. A small watery vesicle of the skin.

BLAIR, William, was born in 1768; educated in London, where he practised until his death in 1815. He was surgeon to the Lock Hospital, and a great advocate for the antivenereal power of nitric acid in the cure of syphilis, on which he published two volumes.

Bla'nca. (*Blanc,* French.) 1. A purging mixture; so called because it was supposed to evacuate the white phlegmatic humours.

2. White lead.

Blanca mulierum. See *Leucorrhœa.*

BLANCARD, Stephen, born at Leyden, and graduated at Franeker, in 1678. He published many anatomical and medical works; especially one on morbid anatomy, containing 200 cases, and a "Lexicon Medicum," which passed through numerous editions.

Bla'sa. (Indian.) A tree, the fruit of which the Indians powder, and use to destroy worms.

BLASIUS, Gerard, son of a physician at Amsterdam, from whom he derived a great predilection for comparative anatomy. After graduating at Leyden about the year 1646, he returned to his native city, and acquired so much reputation, that he was made professor of medicine in 1660, and soon after physician to the hospital. Besides publishing new editions of several useful works, with notes comprehending subsequent improvements, he was author of various original ones, especially relating to comparative and morbid anatomy. He claimed the discovery of the ductus salivaris, asserting he had pointed it out to Steno; to whom it has been commonly ascribed.

BLAST. *Adflatus.* Erysipelas is so called when it appears on the face, in consequence of exposure to cold wind or a blast. See *Erysipelas.*

BLASTE'MA. (From βλαςανω, to germinate.) 1. A bud or shoot.

2. A cutaneous pimple like a bud. — *Hippocrates.*

Bla'stum mosylitum. Cassia bark kept with the wood.

BLA'TTA. (*a, æ.* f.; from βλαττω, to hurt: so called from its injuring books and clothes.) A sort of beetle, or bookworm: the kermes insect.

BLATTA'RIA. (From *blatta:* so called because, according to Pliny, it engenders the blatta.) The *Verbascum blattaria,* or herb yellow moth-mullein.

Blattaria lutea. See *Verbascum blattaria.*

BLEACHING. The chemical art by which the various articles used for clothing are deprived of their natural dark colour, and rendered white.

Bleaching Powder. The chloride of lime.

BLEAR-EYE. A weak and weeping eye, with a chronic inflammation of the eyelids. See *Lippitudo.*

BLECHNUM. (*um, i.*; n.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia*; Order, *Filices.*

Blechnum linguifolium. See *Scolopendrium vulgare.*

Blechnum squamosum. See *Ceterach officinalis.*

BLE'CHON. (From βληχαομαι, to bleat: so called, according to Pliny, because if sheep taste it they bleat.) See *Mentha pulegium.*

BLEEDING. See *Blood-letting* and *Hæmorrhage.*

BLE'MA. (From βαλλω, to inflict.) 1. A wound.

2. According to Atheneus, the Greeks called their *panis intritus,* or bread broken into crumbs, by this name.

BLE'NDE. A species of zinc ore, formed of zinc in combination with sulphur.

BLE'NNA. (Βλεννα, *Blenna, æ.* f.) *Blena.* Mucus.

BLENNORRHA'GIA. (From βλεννα, mucus, and ῥεω, to flow. A discharge of mucus

BLENNORRHŒ'A. (From βλεννα, mucus, and ῥεω, to flow.) A discharge of mucus: applied mostly to a discharge of mucus from the urethra and vagina, though equally applicable to a discharge of mucus from the nose, throat, bronchiæ, or bowels. There are three distinct species, blennorrhœa simplex, chronica, and venerea.

1. The *Blennorrhœa simplex* is a simple increased secretion of mucus from the urethra, and proceeds generally from mere local irritation, unaccompanied by contagion, or virulence of any kind, and is chiefly found in persons in whom the affected organ is in a state of debility: the occasional causes of irritation being excess of venery, too large an indulgence in spirituous liquors, cold, violent exercise, rheumatism and gout, &c. The discharge is mild, like pure mucus, ropy, produces no excoriation, pain in micturition, or other disquiet. It is cured by rest, mild aperients, cold to the parts, sea-bathing, and tonic medicines.

2. *Blennorrhœa chronica* is usually denominated gleet. It is a slimy discharge from the mucous glands of the urethra, without any specific venom or infection, and continues a long time. It is the common sequel of a clap or venereal blennorrhœa, which has either been badly treated, or has lasted long and produced great local weakness; but exists also independently of any clap or venereal infection, and is occasioned by excess of venereal indulgence, and most causes of weakness. The discharge is yellowish, slimy, and stiffens the linen. The quantity varies, depending on the state of relaxation of the parts. I knew an instance in a phlegmatic man, who had been long subject to it, in which it was more than a fluid ounce daily; but this is unusual. Gleet is seldom accompanied by any other irritation of the part. Another cause of a gleet, besides those already mentioned, is a stricture of the urethra, which is known by the difficult micturition, and the smallness, forked, or curled stream of the urine. In common cases this disease yields to terebinthinate medicines, which seem to act by imparting a stimulating material to the urine: the copaiba and terebinthina de chia are most esteemed, Warm stimulants are also serviceable; as cubebs, and other peppers. When these are ineffectual in stopping the discharge, tonics should be resorted to, of cinchona, myrrh, kino, chalybeates, and cold bathing, and more especially when the disease appears to be connected with a leucophlegmatic habit and general weakness. Passing a bougie occasionally, often so stimulates the relaxed urethra as to remove the disease. When the result of rheumatism or gout, the proper medicines for those disorders should be given. Weak astringent injections seldom fail of stopping the discharge. Solutions of acetate of lead, sulphate of zinc, acetate of zinc, are mostly used in the proportion of one grain to two fluid ounces.

3. *Blennorrhœa venerea.* See *Clap.*

Blepha'rides. (From βλεφαρον.) The hair upon the eyelids; also the part of the eyelids where the hair grows.

BLEPHARI'TIS. (From βλεφαρον, the eyelid.) An inflammation of the eyelid.

BLEPHAROPHTHA'LMIA. (*a, æ.* f.; from βλεφαρον, the eyelid, and οφθαλμια, a disease of the eye.) An inflammation of the eyelid.

BLEPHAROPTO'SIS. (*is, is.* f.; from βλεφαρον, the eyelid, and πτωσις, from πιπτω, to fall.) A prolapse, or falling down of the upper eyelid, so as to cover the cornea. See *Ptosis.*

Blepharo'xysis. (From βλεφαρον, the eyelid, and ξεω, to scrape off.) 1. The cleansing of the eyelids.

2. Inflammation of the eyelids.

Blepharoxy'ston. (*tum, i.* n.; from βλεφαρον, the eyelid, and ξεω, to scrape off.) A brush for the eyes. An instrument for cleansing or scraping off foul substances from the eyelids.

BLE'PHARUM. (*um, i.* n.; *quasi* βλεπους φαρος, as being the cover and defence of the sight.) The eyelid.

BLESSED. See *Benedictus.*

Blessed Thistle. See *Centaurea benedicta.*

Blestri'smus. (From βαλλω, to throw about.) Phrenetic jactation, or restlessness.

Ble'ta. A word used by Paracelsus to signify white, and applied to urine when it is milky, and proceeds from a disease of the kidneys.

Ble'tus. (From βαλλω, to strike.) One seized with dyspnœa or suffocation.

BLINDNESS. The privation or want of sight. See *Caligo, Amaurosis, Cataract,* &c.

Blindness, nocturnal. See *Hemeralopia.*

BLISTER. 1. The name of a topical application, *Emplastrum vesicatorium,* which when put on the skin raises the cuticle in the form of a vesicle, filled with a serous fluid. See *Vesicatorium.*

2. The name of a vesicle on the skin, whether formed by a blistering application, or arising from any other cause.

Blister-fly. See *Cantharis.*

Blistered leaf. See *Bullatus.*

BLI'TUM. (*um, i.* n.; from βλητον, fit only to be thrown away.) The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Digynia.*

Blitum fœtidum. See *Chenopodium vulvaria.*

BLOOD. *Sanguis.* A red homogeneous fluid, of a saltish taste, and somewhat urinous smell, and glutinous consistence, which circulates in the cavities of the heart, arteries, and veins. The quantity is estimated to be about twenty-eight pounds in an adult: of this, four parts are contained in the veins, and a fifth in the arteries. The colour of

the blood is red; in the arteries it is of a florid hue, in the veins darker; except only the pulmonary vessels, in which the colour is reversed. The blood is the most important fluid of our body. Some physicians and anatomists have considered it as alive, and have formed many ingenious hypotheses in support of its vitality. The temperature of this fluid is of considerable importance, and appears to depend upon the circulation and respiration. The blood of man, quadrupeds, and birds, is hotter than the medium they inhabit: hence they are termed animals of *warm blood;* whilst in fishes and reptiles, animals with *cold blood,* it is nearly of the temperature of the medium they inhabit. The blood possesses remarkable physical properties. Its colour is of a dark red, it is less deep in certain cases, and perhaps even scarlet. Its odour is insipid, and *sui generis;* its taste is also peculiar; however, it is known to contain salts, and principally the muriate of soda. Its specific gravity is a little more than that of water. Haller found its *medium* as 1·0527 : 1·0000. Its capacity for caloric may be expressed by 934, that of arterial blood being 921. Its mean temperature is 31 degrees of Reaumur, = 102 F.

Venous blood, being extracted from its proper vessels, and left to itself, in a short time forms a soft mass; this mass *separates spontaneously* into two parts, the one liquid, yellowish, transparent, called *serum:* the other soft, almost solid, of a deep brown red, entirely opake: this is the *cruor,* or *clot.* This occupies the bottom of the vessel; the serum is placed above. Sometimes a thin layer forms at the top of the serum, which is soft and reddish, and to which has been very improperly given the name of *rind, buff,* or *crust* of the blood.

This *spontaneous separation* of the elements of the blood does not take place quickly, except when it is in repose. If it is agitated it remains liquid, and preserve its homogeneity much longer.

If the venous blood is placed in contact with the atmosphere, or with oxygene gas, it takes a vermilion red colour; with ammonia it becomes cherry red; with azote a deeper brown red, &c. In changing colour it absorbs a considerable quantity of these different gases; it exhales a considerable quantity of carbonic acid, when kept some time under a bell upon mercury.

The serum sometimes presents a whitish tint, as if milky, which has made it be supposed that it contained chyle: it appears to be a fatty matter which gives it this appearance.

The cruor, or clot of the blood is essentially formed of fibrin, and colouring matter.

The fibrin, separated from the colouring matter, is whitish, insipid, and inodorous; heavier than water, without action upon vegetable colours, elastic when humid, it becomes brittle by being dried.

In distillation it gives out a great deal of carbonate of ammonia, and a vast quantity of carbon, the ashes of which contain much phosphate of lime, a little phosphate of magnesia, carbonate of lime, and carbonate of soda. A hundred parts of fibrin are composed of,

Carbon	53·360
Oxygene	19·685
Hydrogene	7·021
Azote	19·934
Total	100 000

The colouring matter is soluble in water and in the serum of the blood. Examined with the microscope, in solution with these liquids, it appears like most fluids of the animal economy, formed of small globules; dried and calcined in contact with the air, it melts and swells up, burns with flame, and yields a coal that is difficultly reduced to ashes.

It is of importance to remark, that in none of the parts of the blood are any gelatine or phosphate of iron found, as was at first supposed.

The respective relations in quantity of the serum to the coagulum, and those of the colouring matter to the fibrin, have not yet been carefully examined. It is to be presumed, as we shall see afterwards, that they are variable according to an infinity of circumstances.

The coagulation of the blood has been, by turns, attributed to refrigeration, to the contact of the air, to the state of repose, &c.; but J. Hunter and Hewson have demonstrated by experiments, that this phenomenon cannot be attributed to any of these causes. Hewson took fresh blood, and froze it, by exposing it to a low temperature. He afterwards thawed it: the blood appeared fluid at first, and shortly afterwards it coagulated as usual. An experiment of the same kind was made by J. Hunter, with a similar result. Thus, blood does not coagulate because it is cooled. It even appears that a temperature a little elevated is favourable to its coagulation. We also know by experience that the blood thickens when it is deprived of the contact of the air, and agitated; its coagulation is, however, generally favoured by repose and the contact of the air.

The elements of venous blood, such as we have noticed, are known by its analysis; but as all the matters absorbed from the intestinal canals, the serous membranes, the cellular tissue, &c., are immediately mixed with the venous blood, the composition of this liquid must vary in proportion to the matter absorbed. There will be found in it, in different circumstances, alkohol, æther, camphire, and salts, which it does not usually contain, &c., when these substances have been submitted to absorption in any part of the body.

When, by the aid of a strong lens, or a microscope, we observe the transparent parts of cold-blooded animals, we see in the blood-vessels an immense multitude of small, rounded molecules, which swim in the serum, and roll upon each other, whilst they flow through the arteries and the veins.

Similar observations have never been made upon the hot-blooded animals ; the membranes and sides of the vessels being opake. But as, in separating a drop of blood in water, rounded particles are often seen with the microscope, the existence of globules has been admitted for the blood of animals, and consequently for that of man.

Authors have related marvellous things of these globules. According to *Leuwenhoeck*, a thousand millions of those globules are not larger than a grain of sand. Haller, in speaking of cold-blooded animals, for he never could see those of hot-blooded animals, says, that they are to an inch as one inch is to five thousand. Some will have them of the same form and diameter in all animals: others, on the contrary, assert, that they have a particular form and size for each animal; some declare that they are spherical and solid, others that they are flattened, and pierced with a small hole in the centre; lastly, many believe that a globule is a species of small bladder, which contains a certain number of smaller globules.

Probably many errors of imagination, and optical illusions, have slid into these different opinions. Dr. Magendie made a great number of microscopic experiments, in order to satisfy himself in this respect.

He has never seen in the blood of man diluted in water, any thing but particles of colouring matter, generally rounded, of different sizes, which, according as they are placed exactly or not in the focus of the microscope, appear sometimes spherical, sometimes flat, and, at other times, of the figure of a disc, pierced in the centre. All these appearances, he says, can be produced at pleasure, by varying the position of the particles relatively to the instrument, and he believes that bubbles of air have often been described and drawn for globules of blood; at least, nothing has more resemblance to certain figures of Hewson, than very small bubbles of air that are produced by slightly agitating the liquid submitted to the microscope.

The latest and most accurate chemical analysis of blood is as follows :

The specific gravity of the serum is about 1·029, while that of blood itself is 1·058. It changes syrup of violets to a green, from its containing free soda. At 156° serum coagulates, and resembles boiled white of egg. When this coagulated albumen is squeezed, a muddy fluid exudes, which has been called the serosity. According to Berzelius, 1000 parts of the serum of bullock's blood consist of 905 water, 79·99 albumen, 6·175 lactate of soda and extractive matter, 2·565 muriates of soda and potash, 1·52 soda and animal matter, and 4·75 loss. 1000 parts of serum of human blood consist, by the same chemist, of 905 water, 80 albumen, 6 muriates of potash and soda, 4 lactate of soda with animal matter, and 4·1 of soda, and phosphate of soda with animal matter. There is no gelatine in serum.

The cruor has a specific gravity of about 1·245. By making a stream of water flow upon it till the water runs off colourless, it is separated into insoluble fibrin, and the soluble colouring matter. A little albumen has also been found in cruor. The proportions of the former two are, 64 colouring matter, and 36 fibrin, in 100. To obtain the colouring matter pure, we mix the cruor with 4 parts of oil of vitriol previously diluted with 8 parts of water, and expose the mixture to a heat of about 160° for 5 or 6 hours. Filter the liquid while hot, and wash the residue with a few ounces of hot water. Evaporate the liquid to one half, and add ammonia, till the acid be almost, but not entirely saturated. The colouring matter falls. Decant the supernatant liquid, filter and wash the residuum from the whole of the sulphate of ammonia. When it is well drained, remove it with a platina blade, and dry it in a capsule.

When solid, it appears of a black colour, but becomes wine-red by diffusion through water, in which, however, it is not soluble. It has neither taste nor smell. Alkohol and æther convert it into an unpleasant smelling kind of adipocire. It is soluble both in alkalies and acids. It approaches to fibrin in its constitution, and contains iron in a peculiar state, $\frac{1}{2}$ of a per cent. of the oxide of which may be extracted from it by calcination. The incinerated colouring matter weighs 1-80th of the whole; and these ashes consist of 50 oxide of iron, 7·5 subphosphate of iron, 6 phosphate of lime, with traces of magnesia, 20 pure lime, 16·5 carbonic acid and loss; or the two latter ingredients may be reckoned 32 carbonate of lime. Berzelius imagines that none of these bodies existed in the colouring matter, but only their bases, iron, phosphorus, calcium, carbon, &c. and that they were formed during the incineration. From the albumen of blood, the same proportion of ashes may be obtained, but no iron.

The importance of the blood is very considerable: it distends the cavities of the heart and blood-vessels, and prevents them from collapsing; it stimulates to contraction the cavities of the heart and vessels, by which means the circulation of the blood is performed; it generates within itself animal heat, which it propagates throughout the body; it nourishes the whole body; and, lastly, it is that source from which every secretion of the body is separated.

Blood, dragon's. See *Calamus rotang.*
Blood, spitting of. See *Hæmoptysis.*
Blood, vomiting of. See *Hæmatemesis.*

BLOOD-LETTING. Under this term is comprehended every artificial discharge of blood made with a view to cure or prevent a disease. Blood-letting is divided into *general* and *topical.* As examples of the former, *venæsection* and *arteriotomy* may be mentioned; and of the latter, the *application* of *leeches, cupping-glasses,* and *scarification.*

Blood-stone. See *Hæmatites,* and *Calcedony.*

Bloody flux. See *Dysenteria.*

BLOSSOM. See *Corolla.*

BLOWPIPE. A very simple and useful instrument. That used by the anatomist is made of silver or brass, of the size of a common probe, or larger, to inflate vessels and other parts.

The chemical blowpipe is made of brass, is of about one eighth of an inch diameter at one end, and the other tapering to a much less size, with a very small perforation for the wind to escape. The smaller end is beveled on one side.

BLUE. *Cæruleus.* See *Colour.*

Blue disease. See *Cyanosis.*

BLUE, PRUSSIAN. A combination of oxide of iron with the ferro-prussic acid.

BLUE, SAXON. Made by digesting sulphuric acid and water, on powdered indigo.

BLUNT. See *Obtusus.*

BO'A. (*a, æ.* f.; from *βους*, an ox.)

1. A pustulous eruption like the small-pox, so called because it was cured, according to Pliny, by anointing it with hot ox-dung.

2. The name of a genus of serpents.

BOAR. See *Sus scrofa.*

Boat-shaped. See *Navicularis.*

BOCHE'TUM. A decoction of the woods prepared by a second boiling with fresh water.

BO'CHIA. A subliming vessel.

BO'CHIUM. A swelling of the bronchial glands.

BODY. A body or substance. Whatever is capable of acting on our senses may be so denominated. The term is applied very generally and variously in the different departments of nature.

A. In *Natural Philosophy.*

Bodies are divided into *Ponderable* and *Imponderable.*

The first are those which may act upon several of our senses, and of which the existence is sufficiently established; of this kind are solids, fluids, and gases. The second are those which, in general, only act on one of our senses, the existence of which is by no means demonstrated, and which, perhaps, are only forces, or a modification of other bodies; such are caloric, light, the electric and magnetic fluids.

Ponderable bodies are endowed with common or general properties, and likewise with particular or secondary properties.

The general properties of bodies are,—extent, divisibility, impenetrability, mobility. A ponderable body, of whatever kind, always presents these four properties combined. Secondary properties are variously distributed amongst different bodies; as, hardness, porosity, elasticity, fluidity, &c. They constitute, by their combination with the general properties, the condition or state of bodies. It is by gaining or losing some of these secondary properties that bodies change their state: for instance, water may appear under the form of ice, of a fluid, or of vapour, although it is always the same body. To present itself successively under these three forms, nothing more is necessary than the addition or abstraction of some of its secondary qualities.

Bodies are *simple,* or *compound.*

1. *Simple* bodies are rarely met with in nature; they are almost always the product of art, and we even name them simple, only because art has not arrived at their decomposition. At present, the bodies regarded as simple are the following:—Oxygene, chlorine, iodine, fluorine, sulphur, hydrogene, boracium, carbon, phosphorus, azote, silicium, zirconium, aluminum, yttrium, glucinum, magnesium, calcium, strontium, barium, sodium, potassium, manganese, zinc, iron, tin, arsenic, molybdenum, chromium, tungsten, columbium, antimony, uranium, cerium, cobalt, titanium, bismuth, copper, tellurium, nickel, lead, mercury, osmium, silver, rhodium, palladium, gold, platinum, iridium, selenium, lithium, thorinum, wood, and cadmium.

2. *Compound* bodies occur every where; they form the mass of the globe, and that of all the beings which are seen on its surface. Certain bodies have a constant composition; that is to say, a composition that never is changed, at least from accidental circumstances: there are, on the contrary, bodies the composition of which is changed at every instant.

This diversity of bodies is extremely important; it divides them naturally into two classes: bodies, the composition of which is constant, are named brute, or gross, inert, inorganic; but those the elements of which continually vary, are called living, organised bodies.

Brute, and organised bodies, differ from each other in respect, 1st, of form; 2d, of composition; 3d, of the laws which regulate their changes of state. The following table presents the differences which are best marked.

TABLE I.

DIFFERENCES BETWEEN INORGANIC AND LIVING BODIES.

1. *Form.*

Inorganic Bodies.	Living Bodies.
Angular Form.	Rounded Form.
Indeterminate Volume.	Determinate Volume.

2. *Composition.*

Inorganic Bodies.	Living Bodies.
Sometimes simple.	Never simple.
Seldom of more than 3 elements.	At least 4 elements, often 8 or 10.
Constant.	Variable.
Each part capable of existing independent of the others.	Each part more or less depending on the whole.
Capable of being decomposed and recomposed.	Capable of decomposition, but totally incapable of recomposition.

3. *Regulating Laws.*

Inorganic Bodies.	Living Bodies.
Entirely subject to attraction, and chemical affinity.	In part subject to attraction and chemical affinity.
	In part subject to a power unknown.

Living bodies are divided into two classes, one of which comprehends *Vegetables*, the other *Animals*.

TABLE II.

DIFFERENCES BETWEEN VEGETABLES AND ANIMALS.

Vegetables.	*Animals.*
Are fixed to the ground.	Move on the surface of the ground.
Have carbon for the principal base of their composition.	Have azote for the base of their composition.
Composed of four or five elements.	Often composed of eight or ten elements.
Find and assume in their vicinity their nourishment in a state of preparation.	Must act on their aliments, in order to render them fit for nourishment.
Are nourished by tubes opening externally.	Are nourished by an internal canal.

B. In *Anatomy*.

The human body is divided by anatomists into the trunk and extremities: *i. e.* the head, and inferior and superior extremities, each of which have certain regions before any part is removed, by which the physician is enabled to direct the application of blisters and the like, and the situation of diseases is better described.

The head is distinguished into the hairy part and the face. The former has five regions, viz. the crown of the head or *vertex*, the fore-part of the head or *sinciput*, the hind-part or *occiput*, and the sides, *partes laterales capitis*. In the latter are distinguished, the region of the forehead, *frons*; temples, or *tempora*; the nose, or *nasus*; the eyes, or *oculi*; the mouth, or *os*; the cheeks, *buccæ*; the chin, or *mentum*; and the ears, or *aures*.

The trunk is distinguished into three principal parts, the neck, thorax, and abdomen. The neck is divided into the anterior region or *pars antica*, in which, in men, is an eminence called *pomum Adami*; the posterior region is called *nucha colli*; and the lateral regions, *partes laterales colli*.

The thorax is distinguished into the anterior region, in which are the *sternum* and *mammæ*, and at the inferior part of which is a pit or hollow, called *scrobiculus cordis*; a posterior region, called *dorsum*; and the sides, or *latera thoracis*.

The abdomen is distinguished into an anterior region, properly the *abdomen*; a posterior region, called the loins, or *lumbi*; and lateral regions or flanks, called *latera abdominis*. The anterior region of the abdomen being very extensive, is subdivided into the *epigastric*, *hypochondriac*, *umbilical*, and *hypogastric* regions, which are described under their respective names. Immediately below the abdomen is the *mons veneris*, and at its sides the groins or *inguina*. The space between the organs of generation and the *anus*, or fundament, is called the *perinæum*.

The superior extremity is distinguished into the shoulder, *summitas humeri*, under which is the arm-pit, called *axilla* or *fovea axillaris*; the *brachium*, or arm; the *antibrachium*, or fore-arm, in which anteriorly is the bend of the arm, where the veins are generally opened, called *flexura antibrachii*; and posteriorly the elbow, called *angulus cubiti*; and the hand, in which are the *carpus* or wrist, the back or *dorsum manûs*, and the palm or *vola*.

The inferior extremity is divided into, 1. the region of the femur, in which is distinguished the *coxa* or *regio-ischiadica*, forming the outer and superior part; 2. the leg, in which are the knee or *genu*, the bend or *cavum poplitis*, and the calf or *sura;* 3. the foot, in which are the outer and inner ankle, or *malleolus externus* and *internus*, the back or *dorsum*, and the sole or *planta*.

c. In *Chemistry*.

Bodies are distinguished into,

1. Combustible.
2. Incombustible.
3. Solid.
4. Fluid.
5. Gaseous.

Body, combustible. A substance which, on account of its affinity for oxygene, is capable of burning.

Body, gaseous. See *Gas*.

Body, human. See *Body*.

Body, inflammable. A body which burns with facility, and flames in an increased temperature, although, strictly speaking, all combustible bodies are inflammable bodies; such are the diamond, sulphur, bitumens, &c.

Body, phosphorescent. A body which produces light, though its temperature be not increased.

Bo'e. (From βοαω, to exclaim.) Clamour, or moaning made by a sick person.

BOERHAAVE, Herman, was born at Voorhout, in Holland, December 31. 1668. His father, the pastor of the village, having nine children, educated them himself, and intending Herman for the church, was careful to ground him well in the learned languages; in which he made such rapid progress, that he was sent at 14 to Leyden. His father dying soon after in slender circumstances, he was fortunately supported by the burgomaster, Daniel Van Alphin; which Boerhaave ever remembered with gratitude. Among other studies, he was very partial to the mathematics, and improved so much, as to be able to give private instructions in them, whereby he partly maintained himself. In 1690, he took his degree in philosophy, and in an inaugural thesis refuted the errors of the materialists. But he soon after turned his mind to the study of medicine, and attended dissections under Nuck; he greatly preferred Hippocrates among the ancient, and Sydenham among the modern physicians. He was made doctor of medicine at Harderwyck, in 1693; and in his dissertation on that occasion, insisted on the utility of observing the excretions in disease, especially the urine. He was then engaged in forming a new theory of medicine, by a judicious selection from all that had been before advanced; which was so well arranged, and so ably supported by him, that it became generally adopted, and prevailed throughout Europe for more than half a century. He gave also lectures on chemistry, with considerable reputation, about the same period. The University of Leyden therefore appointed him, in 1701, professor of the theory of medicine; when he read an oration recommending the study of Hippocrates; and, as he declined some very advantageous offers from other parts, they afterwards augmented his salary. About this time, he published another Latin oration, "On the Use of mechanical Reasoning in Medicine," which contributed to extend his fame. In 1709, he was appointed professor of botany, to which study he was ever after eminently attached. On that occasion, he produced another oration, maintaining that medicine would be best improved by observation, and by simplicity in prescriptions. His "Aphorisms" had appeared the year before, giving a brief account of the history and cure of diseases, a work universally admired; to which his pupil, Van Swieten, afterwards attached a very ample commentary. About the same time he published his "Institutes," treating of physiology. These two works, with successive improvements, passed through numerous editions, and were translated into every European, nay even into the Arabic language. In the year after, he printed a catalogue of the plants in the university garden. In 1714, he was made rector of the university, and, at the end of the year for which he held the office, delivered a discourse "On attaining Certainty in Physics." About this period he was made professor of the practice of medicine, and in 1718, of chemistry also. His lectures on these subjects, and on botany, were delivered with such clearness and precision, that students thronged from every part to hear him; insomuch that Leyden could scarcely afford accommodations for them. He was also often consulted in difficult cases by physicians, even in distant parts of the world. When appointed to the chemical chair, he had published a short work on that subject; but some of his pupils having printed his lectures without authority, and very incorrectly, he was led to prepare them for the press in 1732. In his conversation, Boerhaave was generally familiar, in his demeanour grave, but disposed to occasional pleasantry: he was distinguished for piety, and on his moral character, his disciple Haller has passed a very high eulogium. Having acquired considerable wealth by his exertions, and being plain in his dress, as well as abstemious in his diet, he was by some accused of parsimony: but he spared no reasonable expense in procuring rare books, and foreign plants. Being of a vigorous constitution, and accustomed to much exercise abroad, he met with little interruption from illness; but in 1729, having become corpulent, and incapable of riding, his health began to suffer, and he was induced to resign his botanical and

chemical appointments. In an oration then delivered, he recounted the chief events of his life, expressing himself grateful for the patronage which he had received from individuals; as well as to his own profession, for the little opposition shown to his opinions. It perhaps never happened, that so great a revolution in science was so readily brought about. The great reputation acquired by his extensive abilities, and the moderation of his character, particularly averse from contention, no doubt contributed materially to this result. In the year following, he was again made rector of the University of Leyden; and also elected a fellow of the Royal Society in London, having been previously admitted to the Royal Academy of Sciences in Paris. The remainder of his life was chiefly occupied in revising his own numerous productions, in publishing more correct editions of several esteemed authors, and in domestic recreations at his seat near Leyden, with his wife aud daughter. Towards the end of 1737, he was attacked with symptoms of disease in the chest, which terminated his existence in the September following. His fellow-citizens erected an elegant monument to his memory.

Boethe'ma. (From βοηθεω, to assist.) A remedy.

Boethema'ticus. (From βοηθεω, to assist.) Favourably applied to a symptom or change in a disease.

Boetum. Bronchocele.

Bog-bean. See *Menyanthes trifoliata.*

Bo'gia gummi. Gamboge.

BOHEA. See *Thea.*

BOHN, John, was born at Leipsic, in 1640. Among numerous publications, he chiefly distinguished himself by his "Circulus anatomico physiologicus," and a treatise "De officio medici clinico et forensi," which latter particularly has great merit. He died in 1718.

BOIL. See *Furunculus.*

Bois de coissi. See *Quassia.*

Bolar earth. See *Bole.*

BOLE. (Βωλυς, a mass.; *us, i.* m.) A massive mineral, having a perfectly conchoidal fracture, a glimmering internal lustre, and a shining streak. Its colours are yellow-red, and brownish-black, when it is called mountain soap. It is translucent or opake. Soft, so as to be easily cut, and to yield to the nail. It adheres to the tongue, has a greasy feel, and falls to pieces in water. Sp. grav. 1·4 to 2. It may be polished. If it be immersed in water after it is dried, it falls asunder with a crackling noise. It occurs in wacke and basalt, in Silesia, Hessia, and Sienna in Italy, and also in the cliffs of the Giant's Causeway, Ireland. The black variety is found in the trap rocks of the isle of Sky. Several compounds were formerly used in medicine, particularly the Armenian and French; and in old pharmacopœias mention is made of red boles from Armenia, Lemnos, Strigonium, Portugal, Tuscany, and Livonia; yellow boles from Armenia, Tockay, Silesia, Bohemia, and Blois; white boles from Armenia, Lemnos, Nocera, Eretria, Lamos, Chio, Malta, Tuscany, and Goltberg. Several of these earths have been commonly made into little cakes or flat masses, and stamped with certain impressions; from which circumstance they received the name of *terræ sagillatæ*, or sealed earths. See *Bolus.*

Bole, Armenian. Bolus Armeniæ. A pale but bright red-coloured earth, which is occasionally mixed with honey, and applied to children's mouths when afflicted with aphthæ. It forms, like all argillaceous earths, a good tooth-powder, when mixed with some aromatic.

BOLETIC. (*Boleticus;* from *Boletus*, the name of a fungus.) Appertaining to the boletus.

Boletic acid. (*Acidum boleticum.*) An acid extracted, by M. Braconnot, from the expressed juice of the *Boletus pseudo-igniarius.* The juice, concentrated to a syrup by a very gentle heat, was acted on by strong alkohol. What remained was dissolved in water. When nitrate of lead was dropped into this solution, a white precipitate fell, which, after being well washed with water, was decomposed by a current of sulphuretted hydrogene gas. Two different acids were found in the liquid after filtration and evaporation. One in permanent crystals was boletic acid; the other was a small proportion of phosphoric acid. The former was purified by solution in alkohol, and subsequent evaporation.

It consists of irregular four-sided prisms, of a white colour, and permanent in the air. Its taste resembles cream of tartar; at the temperature of 68° it dissolves in 180 times its weight of water, and in 45 of alkohol. Vegetable blues are reddened by it. Red oxide of iron, and the oxides of silver and mercury, are precipitated by it from their solutions in nitric acid: but lime and barytes waters are not affected. It sublimes when heated, in white vapours, and is condensed in a white powder.—*Ann. de Chimie*, lxxx.

BOLE'TUS. (*us, i.* m.; from βωλος, a mass, or βωλιτης, from its globular form.)

1. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Fungi.* The leathern, corky, or woody species of this genus; also those which have a collar on their footstalk, or which have a pepper-like acrid taste, or which become blue or green when cut, are all either poisonous, or at least suspicious. They differ from the agarics, in having tubes under their caps instead of gills.

2. See *Lycoperdon Cervinum.*

Boletus cervi. The mushroom.

Boletus igniarius. Agaric of the oak; touchwood boletus; female agaric. The sys-

tematic name for the *agaricus* of the pharmacopœias: called also, *Agaricus chirurgorum, Agaricus quercûs, Fungus igniarius.* This fungus *Boletus—acaulis pulvinatus levis, poris tenuissimis* of Linnæus, has been much used by surgeons as an external styptic, when softened by beating. Though still employed on the Continent, the surgeons in this country have not much confidence in it. Soaked in a ley of nitrate of potash, and dried, it is used as tinder. The Laplanders burn it about their habitations to keep off a species of gad-fly, which is fatal to their young rein-deer.

Boletus laricis. Larch agaric. The systematic name for the officinal *agaricus albus,* which is met with on old larch trees, in different parts of Europe. Several preparations, as troches, an extract, and pills, are ordered to be made with it in foreign pharmacopœias, which are administered against phthisical complaints.

Boletus suaveolens. The systematic name for the *fungus salicis* of the pharmacopœias. This species of fungus, *Boletus—acaulis superne lævis, salicibus,* of Linnæus, and the *Boletus albus* of Hudson, when fresh, has a suburinous smell, and at first an acid taste, followed by a bitter. It is seldom used at present, but was formerly given in phthisical complaints.

Boletus sulphureus. On drying, this evolves needle-like crystals of oxalic acid, nearly pure.

Boli'smus. A voracious appetite, according to Avicenna; but most probably meant for bulimus.

BOLOGNIAN STONE. A mixture of mucilage and powdered sulphate of barytes.

BO'LUS. (Βωλος. *Bolus, i.* m.; a mass, bole, or bolus.) Any medicine, rolled round, that is larger than an ordinary sized pea, and yet not too large to be swallowed.

Bolus armeniæ. See *Bole, Armenian.*

Bolus armeniæ albus. The white Armenian bole.

Bolus blessensis. Bole of Blois. See *Bole.*

Bolus gallicus. French bole. A pale red-coloured bolar earth, variegated with irregular specks and veins of white and yellow. It is occasionally administered as an absorbent and antacid.

BOMBAX. (*ax, acis.* f.; *βομβαξ.*) The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.* The cotton-tree. See *Gossypium.*

BOMBIATE. *Bombias.* A salt formed by the union of the bombic acid with salifiable bases; thus, *bombiate of alumine,* &c.

BO'MBIC. (From *βομβυξ,* the silkworm.) Of or belonging to the silk-worm.

Bombic acid. *Acidum bombicum.* Acid of the silk-worm. Silk-worms contain, especially when in the state of chrysalis, an acid liquor in a reservoir placed near the anus. It is obtained by expressing their juice in a cloth, and precipitating the mucilage by spirit of wine, and likewise by infusing the chrysalides in that liquor. This acid is very penetrating, of a yellow amber colour, but its nature and combinations are not yet well known.

BO'MBUS. (Βομβος. *Bombus, i.* n.) 1. A beating, resounding noise, or ringing of the ears.

2. A sonorous expulsion of flatus from the intestines.

Bon arbor. The coffee-tree.

Bo'nduch indorum. See *Guilandina.*

BONE. See *Os.*

Bone, doctrine of. See *Osteologia.*

Bone, growth of. See *Osteogeny.*

BONE-BINDER. See *Osteocolla.*

BONET, Theophilus, was born at Geneva in 1620. His principal work, entitled "Sepulchretum," published 1679, was highly approved, and laid the foundation of Morgagni's excellent treatise, "De Sedibus et Causis Morborum." Another publication of his, "Mercurius compilatitius," is an index of medical literature to the time of its appearance, 1682. His death occurred seven years after.

Bononie'nsis lapis. The Bononian-stone: called also *phosphorus bononiensis,* and *phosphorus kircheri.* The light carrier, or Bononian phosphorus. As a medicine, the stone is caustic and emetic.

BONTIUS, James, was born at Leyden, where he studied medicine, and then went to practice in India. After his return, he wrote several valuable works on the diseases and practice of that country, as well as on its natural productions, animal and vegetable. The most esteemed is entitled "De Medicinâ Indorum," and appeared in 1642.

BO'NUS. Good: applied to plants and remedies, from their supposed efficacy.

Bonus henricus. See *Chenopodium bonus Henricus.*

BONY. *Osseus.* Of, or belonging to, or resembling bone.

Boona. The kidney-bean.

BORACIC. (*Boracicus,* from *borax.*) Appertaining to borax.

Boracic acid. (*Acidum boracicum:* so called because obtained from borax.) This acid is the *sedative salt of Homberg;* also termed *acidum boracis,* and *boracine acid.*

To procure it, dissolve borax in hot water, and filter the solution; then add sulphuric acid by little and little, till the liquid has a sensibly acid taste. Lay it aside to cool, and a great number of small shining laminated crystals will form. These are the boracic acid. It is composed of boron, acidified by oxygene.

Boracic acid thus procured is in the form of thin irregular hexagonal scales, of a silvery whiteness, having some resemblance to spermaceti, and the same kind of greasy feel. It has a sourish taste at first, then makes a bit-

terish cooling impression, and at last leaves an agreeable sweetness. Pressed between the teeth, it is not brittle, but ductile. It has no smell; but, when sulphuric acid is poured on it, a transient odour of musk is produced. Its specific gravity in the form of scales is 1·479; after it has been fused, 1·803. It is not altered by light. Exposed to the fire it swells up, from losing its water of crystallisation, and in this state is called calcined boracic acid. It melts a little before it is red-hot, without perceptibly losing any water; but it does not flow freely till it is red, and then less than the borate of soda. After this fusion, it is a hard transparent glass, becoming a little opake on exposure to the air, without abstracting moisture from it, and unaltered in its properties, for on being dissolved in boiling water it crystallises as before. This glass is used in the composition of false gems.

Boiling water scarcely dissolves one fiftieth part, and cold water much less. When this solution is distilled in close vessels, part of the acid rises with the water, and crystallises in the receiver. It is more soluble in alkohol, and alkohol containing it burns with a green flame, as does paper dipped in a solution of boracic acid.

Neither oxygene gas, nor the simple combustibles, nor the common metals, produce any change upon boracic acid, as far as is at present known. If mixed with finely powdered charcoal, it is nevertheless capable of vitrification; and with soot it melts into a black bitumen-like mass, which, however, is soluble in water, and cannot easily be burned to ashes, but sublimes in part. With the assistance of a distilling heat, it dissolves in oils, especially mineral oils; and with these it yields fluid and solid products, which impart a green colour to spirit of wine. When rubbed with phosphorus it does not prevent its inflammation, but an earthy yellow matter is left behind. It is hardly capable of oxiding or dissolving any of the metals, except iron and zinc, and perhaps copper; but it combines with most of the metallic oxides, as it does with the alkalies, and probably with all the earths, though the greater part of its combinations have hitherto been little examined. It is of great use in analysing stones that contain a fixed alkali.

Crystallised boracic acid is a compound of 57 parts of acid and 43 of water. The honour of discovering the *radical* of *boracic acid*, called *boron*, is divided between Sir H. Davy and Gay Lussac and Thénard. The first, on applying his powerful voltaic battery to it, obtained a chocolate-coloured body in small quantity; but the two latter chemists, by acting on it with potassium in equal quantities, at a low red-heat, formed *boron* and sub-borate of potash. For a small experiment, a glass tube will serve, but on a greater scale a copper tube is to be preferred. The potassium and boracic acid, perfectly dry, should be intimately mixed before exposing them to heat. On withdrawing the tube from the fire, allowing it to cool, and removing the cork which loosely closed its mouth, we then pour successive portions of water into it, till we detach or dissolve the whole matter. The water ought to be heated each time. The whole collected liquids are allowed to settle; when, after washing the precipitate till the liquid ceases to affect syrup of violets, we dry the boron in a capsule, and then put it into a phial out of contact of air. *Boron* is solid, tasteless, inodorous, and of a greenish-brown colour. Its specific gravity is somewhat greater than water. The prime equivalent of boracic acid has been inferred from the borate of ammonia, to be about 2·7 or 2·8; oxygene being 1.0; and it probably consists of 2·0 of oxygene + 0.8 of boron. But by Gay Lussac and Thénard, the proportions would be 2 of boron to 1 of oxygene.

The boracic acid has been found in a disengaged state in several lakes of hot mineral waters near Monte Rotondo, Berchiaio, and Castellonuovo, in Tuscany, in the proportion of nearly nine grains in a hundred of water, by Hoeffer. Mascagni also found it adhering to schistus, on the borders of lakes, of an obscure white, yellow, or greenish colour, and crystallised in the form of needles. He has likewise found it in combination with ammonia.

The boracic acid has a more powerful attraction for lime than for any other of the bases, though it does not readily form *borate of lime* by adding a solution of it to lime water, or decomposing by lime-water the soluble alkaline borates. In either case an insipid white powder, nearly insoluble, which is the borate of lime, is, however, precipitated. The borate of barytes is likewise an insoluble, tasteless, white powder.

Bergman has observed that magnesia, thrown by little and little into a solution of boracic acid, dissolved slowly, and the liquor on evaporation afforded granulated crystals, without any regular form: that these crystals were fusible in the fire without being decomposed; but that alkohol was sufficient to separate the boracic acid from the magnesia. If, however, some of the soluble magnesian salts be decomposed by alkaline borates in a state of solution, an insipid and insoluble borate of magnesia is thrown down. It is probable, therefore, that Bergman's salt was a borate of magnesia dissolved in an excess of boracic acid; which acid being taken up by the alkohol, the true borate of magnesia was precipitated in a white powder, and mistaken by him for magnesia.

One of the best known combinations of this acid is the native *magnesio-calcareous borate* of Kalkberg, near Lunenburg; the *wurfelstein* of the Germans, *cubic quartz* of various mineralogists, and boracite of Kirwan.

The *borate of potash* is but little known, though it is said to be capable of supplying the place of that of soda in the arts; but more direct experiments are required to establish this effect. Like that, it is capable of existing in two states, neutral and with excess of base, but it is not so crystallisable, and assumes the form of parallelopipeds.

With *soda* the boracic acid forms two different salts. One, in which the alkali is more than triple the quantity necessary to saturate the acid, is of considerable use in the arts, and has long been known by the name of borax. See *Borax.* The other is a neutral salt, not changing the syrup of violets green like the borate with excess of base; differing from it in taste and solubility; crystallising neither so readily, nor in the same manner; not efflorescent like it; but, like it, fusible into a glass, and capable of being employed for the same purposes. This salt may be formed by saturating the superabundant soda in borax with some other acid, and then separating the two salts; but it is obviously more eligible to saturate the excess of soda with an additional portion of the boracic acid itself.

Borate of ammonia forms in small rhomboidal crystals, easily decomposed by fire; or in scales, of a pungent urinous taste, which lose the crystalline form, and grow brown on exposure to the air.

It is very difficult to combine the boracic acid with *alumina*, at least in the direct way.

The boracic acid unites with *silex* by fusion, and forms with it a solid and permanent vitreous compound. This *borate of silex*, however, is neither sapid, nor soluble, nor perceptibly alterable in the air; and cannot be formed without the assistance of a violent heat. In the same manner, triple compounds may be formed with silex and borates already saturated with other bases.

BORACITE. Borate of magnesia. A crystallised mineral found in gypsum in the Kalberg, in Brunswick, and at Segeberg, in Holland. It is translucent, and of a shining greasy lustre, yellowish, greyish, or of a greenish-white colour. Vauquelin's Analysis gives 83·4 boracic acid, and 16·6 magnesia.

BO'RAGE. See *Borago.*

BORA'GO. (*o, inis,* f.; formerly written *Corago,* — from *cor*, the heart, and *ago*, to affect, — because it was supposed to comfort the heart and spirits.) Borage.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the officinal borage. See *Borago officinalis.*

Borago officinalis. Borage. The systematic name for the *borago* of the shops; called also *Corrago, Buglossum verum, Buglossum latifolium,* and *Borago hortensis.* The leaves and flowers of this plant, *Borago —foliis omnibus alternis, calycibus patentibus* of Linnæus, are esteemed in some countries as refrigerant and cordial. A syrup is prepared from the leaves in France, and used in pleurisies and inflammatory fevers. Their principal use in this island is in that grateful summer beverage, known by the name of cool tankard.

BO'RAS. (*as, atis.* f.) A salt formed of boracic acid, with the salifiable bases. The only one used in medicine is the borate of soda. See *Sodæ Boras* and *Borax.*

Boras sodæ. Borate of soda. See *Borax.*

BO'RATE. See *Boras.*

BO'RAX. (*Borax, acis.* m.; *Borak,* Arabian.) The obsolete synonyms are *Chrysocolla, Capistrum auri, Ancinar, Borax-trion, Acestis anucar, Antincar, Tincal, Amphitane, Baurach, Nitrum factitium, Santerna, Nitrum nativum, Boras sodæ,* and *Sub-boras sodæ.*

It does not appear that borax was known to the ancients, their chrysocolla being a very different substance, composed of the rust of copper, triturated with urine. The word borax occurs for the first time in the works of Geber.

Borax is found in the East, and likewise in South America.

It is a sub-borate of soda, or boracic acid, with triple the quantity of soda necessary to saturate the acid. It was long purified, and the market supplied by the Venetians and Hollanders, who for a long time kept their processes a secret. Chaptal found, after trying all the processes in the large way, that the simplest method consists in boiling the borax strongly, and for a long time, with water. This solution being filtered, affords by evaporation crystals, which are somewhat foul, but may be purified by repeating the operation.

Purified borax, or sub-borate of soda, is white, transparent, rather greasy in its fracture, affecting the form of six-sided prisms, terminating in three-sided or six-sided pyramids. Its taste is styptic; it converts syrup of violets to a green; and when exposed to heat, it swells up, boils, loses its water of crystallisation, and becomes converted into a porous, white, opake mass, commonly called Calcined Borax. A stronger heat brings it into a state of quiet fusion; but the glassy substance thus afforded, which is transparent, and of a greenish yellow colour, is soluble in water, and effloresces in the air. It requires about eighteen times its weight of water to dissolve it at the temperature of sixty degrees of Fahrenheit; but water at the boiling heat dissolves three times this quantity.

The sub-borate of soda is rarely used internally in modern practice; and, according to Murray, it does not appear to possess any activity, although it is supposed by some to be, in doses of half a drachm or two scru-

ples, diuretic and emmenagogue. It is occasionally given in cardialgia as an antacid. Its solution is in common use as a cooling gargle, and to detach mucus, &c. from the mouth in putrid fever; and, mixed with an equal quantity of sugar, it is used in the form of powder to remove the aphthous crust from the tongue in children.

It is from this salt that the acid of borax is obtained. See *Boracic acid.*

BORBORY'GMUS. (*us, i.* m.; from βορβορυζω, to make a noise.) The rumbling noise occasioned by flatus in the intestines. See *Flatulency.*

BORDER. The upper spreading part of some corollæ; as that of *Primula* and *Auricula.* See *Lamina.*

BORDERED. See *Marginatus.*

BORDEU, Theophilus de, a French physician, born in 1722. He graduated at Montpelier, and was soon after appointed inspector of the mineral waters at Bareges, and professor of anatomy. Subsequently he went to Paris, and was admitted to the faculty there in 1754. He died of apoplexy in his 55th year. His most esteemed work is on the cellular membrane; his distinctions of the pulse appear too nice for practical utility.

BORELLI, John Alphonsus, was born at Castelnuovo, in 1608. His grand work, "De Motu Animalium," was published after his death, which happened in 1679, at the expense of Christina, queen of Sweden. The imposing appearance of his opinions gained them many converts at first, but they have been found very defective on maturer examination. He was author of many other publications on different subjects.

Boritis lapis. The philosopher's stone.

BORON. The basis of boracic acid. See *Boracic acid.*

Boro'zail. An Ethiopian word for an epidemic disease, in appearance similar to the lues venerea.

Borra'go. See *Borago.*

Bo'rri. *Borri-borri. Boberri.* The Indian name for turmeric; also an ointment used there, in which the roots of turmeric are a chief ingredient.

BOS. (*os, ovis,* m.) The ox. A genus of animal the most valuable to mankind, the flesh and milk affording the most excellent and best of all foods.

Bos bubalis. The buffalo; a species of the genus bos. See *Bos.*

Bos taurus. The male is called *taurus,* the bull; the female *vacca,* the cow; the young, until six months old, *vitellus,* the *calf;* from that period until two years old, the *heifer.* The castrated animal is named the *ox. Bos* and *taurus* are applied to the perfect animal. *Bos* is often used for both bull and cow.

Bo'sa. An Egyptian word for an inebriating mass, made of the meal of darnel, hemp-seed, and water.

Bo'smoros. (From βοσκω, to eat, and μορος, a part; because it is divided for food by the mill.) *Bosporas.* A species of meal.

Bota'le foramen. A name formerly applied to the foramen ovale of the heart.

BOTALLUS, Leonard, an eminent physician of Piedmont, flourished about the middle of the 16th century. He published a treatise on gun-shot wounds, which long remained in high estimation. But that which chiefly gained him celebrity was a work on bleeding, general and local, which he recommended to be freely practised in a great variety of diseases, both acute and chronic. His opinions were adopted by many, and carried to an extravagant length, particularly in France: but more enlarged experience has tended greatly to lessen their prevalence.

Bota'nicon. (From βοτανη, an herb.) A plaster made of herbs, and described by Paulus Ægineta.

BOTANIST. (*Botanicus, i.* m.; from Βοτανη, a herb.) One who understands the nature, history, and distinction of vegetables, on settled and certain principles, and can call every plant by a distinct, proper, and intelligible name.

BO'TANY. (Βοτανικη, *Botanica;* from βοτανη, an herb or grass, which is derived from βοω, or βοσκω, to feed, because grass is the chief food of the animals which are most useful to man.) That branch of natural history which relates to the vegetable kingdom, the second of the three grand assemblages into which all terrestrial objects are divided. It is a science not confined to the description and classification of plants, as has often been represented, but it comprehends many other important particulars. Its various objects may be conveniently arranged under the following general heads:—

1. The *terminology,* or description and nomenclature of the several parts of a plant, which are externally visible.

If all natural objects were simple in their form, it would not be easy to distinguish one from another, nor would it be possible to describe them so as to give a clear and precise idea of them. Hence a boundless variety, connected with general resemblances, is wisely and benevolently made their universal character. Every plant is composed of several parts, which differ in each other from their outward appearance, and which cannot fail to strike the most careless spectator. Many of them also are themselves compound, and are obviously capable of being divided into subordinate parts.

2. The *classification* or arrangement. A knowledge of the different parts of a plant must necessarily be gained before it is described. But amidst the numerous vegetable productions of even a single country, this of itself would avail but little. To give a peculiar name to every individual, would be a labour which no invention or diligence can

perform; and, if performed, would produce a burden which no memory can sustain. It is necessary, therefore, to pursue resemblances and differences through a number of gradations, and to found on them primary and subordinate divisions, either ascending from particulars to generals, or descending from generals to particulars. The former is the method in which science of every kind is slowly formed and extended; the latter that in which it is most easily taught. The number of stages through which these subdivisions should be carried, is either not pointed out by nature, or enough of nature is not known to fix them with precision. They differ, therefore, in different systems; and, unfortunately, corresponding ones have not always been called by the same names.

3. The *synonyms* of plants, or the names by which they are distinguished in the writings of professed botanists and others, from the earliest times to the present.

4. The *sensible qualities* of plants, or the different manner in which they severally affect the organs of sight, smell, taste, and touch.

5. The *anatomy of plants*, or description of the different visible parts of which their substance is composed.

6. The *physiology of plants*. A plant, like an animal, is a very compound, organised, living being, in which various operations, both chemical and mechanical, are continually carrying on, from its first production to its final dissolution. It springs from a seed fertilised by the pollen of its parent plant. It takes in foreign substances by its inhaling and absorbent vessels. It elaborates and assimilates to its own substance those parts of them that are nutritious, and throws off the rest. It secretes a variety of fluids by the means of glands, and other unknown organs. It gives that motion to its sap on which a continuance of its life depends.

7. The *purposes* to which different plants are *applied*, either as articles of food, ingredients in the composition of medicine, or materials and instruments in the useful and elegant arts; the soil and situation in which they are generally found, and which are most favourable to their growth, the time of year in which they open their flowers, and ripen their fruit, with many other incidental particulars, are properly within the province of the botanist. But, as a botanist, he is concerned with nothing more than the simple facts. The best methods of cultivating such as are raised in considerable quantities for the special use or amusement of man; the theory of their nutritious or medicinal properties; and the manner in which they are to be prepared, so as to effect the intended purposes, are the province either of the gardener, farmer, physician, chemist, or the artist.

8. The *history* of botany.

BOTANY BAY. An English settlement in Australia; so called because it afforded the botanist numerous plants. A yellow resin goes by the name of Botany Bay gum, which exudes spontaneously from the trunk of the tree called *Acarois resinifera*, and also from the wounded bark. All the information that has been hitherto collected respecting the history of the yellow gum is the following:—The plant that produces it is low and small, with long grassy leaves; but the fructification of it shoots out in a singular manner from the centre of the leaves, on a single straight stem, to the height of twelve or fourteen feet. Of this stem, which is strong and light, like some of the reed class, the natives usually make their spears. The resin is generally dug up out of the soil under the tree, not collected from it, and may, perhaps, be that which Tasman calls "gum-lac of the ground." Mr. Boles, surgeon of the Lady Penrhyn, gives a somewhat different account; and as this gentleman appears to have paid considerable attention to the subject, his account may certainly be relied upon. After describing the tree in precisely the same manner as above, he observes, that at the top of the trunk of the tree, long grassy leaves grow in great abundance. The gum is found under these leaves in considerable quantities: it commonly exudes in round tears, or drops, from the size of a large pea to that of a marble, and sometimes much larger. These are, by the heat of the sun, frequently so much softened, that they fall on the ground, and in this soft state adhere to whatever they fall upon: hence the gum is frequently found mixed with dirt, wood, the bark of the tree, and various other substances; so that one lump has been seen composed of many small pure pieces of various sizes, united together, which weighed nearly half a hundred weight. It is produced in such abundance, that one man may collect thirty or forty pounds in the space of a few hours. The convicts have another method of collecting it: they dig round the tree, and break off pieces of the roots, which always have some, and frequently considerable quantities, of the gum in them. This gum appears nearly, but not entirely, the same as that which exudes from the trunk of the tree; the former is often mixed with a strong smelling resinous substance of a black nature, and is so interwoven in the wood itself, that it is with difficulty separated. The latter appears a pure unmixed resinous substance.

Several experiments have been made, principally with the view of determining what menstruum would dissolve the gum the most readily, and in the greatest quantity, from which it appears alkohol and æther dissolve the most.

The diseases in which this resin is administered are those of the primæ viæ, and

principally such as arise from spasm, a debility, a loss of tone, or a diminished action in the muscular fibres of the stomach and bowels, such as loss of appetite, sickness, vomiting, flatulency, heart-burn, pains in the stomach, &c. when they were really idiopathic complaints, and not dependent upon any disease in the stomach, or affections of other parts of the body communicated to the stomach. In debilities and relaxations of the bowels, and the symptoms from thence arising, such as purging and flatulency, it has been found of good effect. In certain cases of diarrhœa, however, (and it seemed those in which an unusual degree of irritability prevailed,) it did not answer so well, unless given in small doses, and combined with opiates, when the patient seemed to gain greater advantage than when opiates only were had recourse to. In cases of amenorrhœa, depending on (what most of those cases do depend upon) a sluggishness, a debility, and flaccidity of the system, this medicine, when assisted by proper exercise and diet, has, by removing the symptoms of dyspepsia, and by restoring the tone and action of the muscular fibres, been found very serviceable. This medicine does not, in the dose of about half a drachm, appear to possess any remarkably sensible operation. It neither vomits, purges, nor binds the belly, nor does it materially increase the secretion of urine or perspiration. It has, indeed, sometimes been said to purge, and at others to occasion sweating; but they are not constant effects, and when they do occur, it generally depends on some accidental circumstance. It should seem to possess, in a very extensive degree, the property of allaying morbid irritability, and of restoring tone, strength, and action to the debilitated and relaxed fibre. When the gum itself is given, it should always be the pure unmixed part; if given in the form of a draught, it should be mixed in water with mucilage of gum-arabic; if made into pills, a small portion of Castile soap may be employed: it was found the lixiv. sapon. dissolved it entirely. It is commonly, however, made into a tincture, by mixing equal parts of the gum and rectified spirit; one drachm of this tincture (containing half a drachm of the pure gum) made into a draught with water and syrup, by the assistance of fifteen grains of gum-arabic in mucilage, forms an elegant medicine, and at the same time very palatable. It soon solidifies by the sun, into pieces of a yellow colour, of various sizes. It pulverises easily without caking; nor does it adhere to the teeth when chewed. It has a slightly sweet astringent taste. It melts at a moderate heat. When kindled, it emits a white fragrant smoke. It is insoluble in water, but imparts to it the flavour of storax. Out of nine parts, six are soluble in water, and astringent to the taste; and two parts are woody fibre.

Bo'thor. (An Arabian word.) The Arabians applied this term,

1. To every kind of tumour.
2. To a tumour with ulceration.
3. To small tumours or pimples on the face.

It has also been applied to the small-pox or measles, and to an abscess in the nostril.

Bo'thrion. (From βοθριον, a little pit.) *Botrium.* 1. The socket for the tooth.

2. An ulceration of the cornea.

BOTHRIOCEPHALUS. (*us, i.* m.; from βοθρος, a depression, and κηφαλη, a head: so called because there are several depressions at the head.) The tape-worm. See *Worm.*

Bothriocephalus latus. See *Worm.*

Bo'tia. An obsolete name of scrophula.

Bo'tin. Turpentine.

BO'TIUM. 1. A bronchocele.

2. Indurated bronchial glands.

Botothi'num. An obscure Paracelsian word, meaning, perhaps, the most evident symptom of disease.

Botri'tis. (From βοτρυς, a bunch of grapes.) *Botryites.* A sort of burnt cadmia, collected in the top of the furnace, and resembling a bunch of grapes.

BOTRYOLITE. A brittle and moderately hard mineral, which occurs in mamillary concretions of a pearly or greyish-white colour, composed of silica, boracic acid, lime, oxide of iron, and water. It comes from Norway.

BO'TRYS. (*Botrus, i.* m.; Βοτρυς, a cluster of grapes: so called because its seeds hang down like a bunch of grapes.) 1. The oak of Jerusalem.

2. The trivial name of a species of chenopodium.

Botrys mexicana. See *Chenopodium ambrosioides.*

Botrys vulgaris. See *Chenopodium botrys.*

Bo'tus. *Botia. Botus barbatus.* A cucurbit of the chemist.

Bouba'lios. See *Momordica elaterium,* and *Pudendum muliebre.*

Bou'bon. See *Bubo.*

BOUGI'E. (French for wax candle.) Called also *Candela cerea, Candela medicata, Cereus medicatus,* and *Cereolus chirurgorum.* A term applied by surgeons to a long, slender instrument, that is introduced through the urethra into the bladder. Bougies made of the elastic gum are preferable to those made of wax. The caustic bougie differs from the ordinary one in having a thin roll of caustic in its middle, which destroys the stricture, or any part it comes in contact with. Those made of catgut are very seldom used, but are deserving of the attention of the surgeon. Bougies are chiefly used to overcome strictures in the urethra, and the introduction of them requires a good deal of address and caution. They should not be kept in the urethra so

long at one time as to excite much pain or irritation. Before their use is discontinued, they should, if practicable, be carried the length of the bladder, in order to ascertain the extent of the strictures, taking care that this be performed not at once, but in a gradual manner, and after repeated trials, for much injury might arise from any hasty or violent efforts to remove the resistance that may present itself. There are bougies also for the œsophagus and rectum.

Bou'limus. (*us, i.* m.; from βου, greatly, and λιμος, hunger; or from βουλομαι, to desire.) A canine or voracious appetite.

BOURNONITE. An antimonial sulphuret of lead.

Bovey coal. Of a brownish-black colour and lamellar texture, formed of wood, penetrated with petroleum or bitumen, and found in England, France, Italy, &c.

Bovi'llæ. (From *bos*, an ox, because cattle were supposed subject to it.) The measles.

Bovi'na fames. See *Bulimia.*

Bovi'stus. See *Lycoperdon.*

BOWED. See *Arcuatus.*

BOX-TREE. See *Buxus.*

Boyle's fuming liquor. The hydroguretted sulphuret of ammonia.

Brache'rium. (From *brachiale*, a bracelet.) A truss or bandage for hernia; a term used by the barbarous Latin writers.

BRACHIÆ'US. See *Brachial.*

Brachiæus externus. See *Triceps extensor cubiti.*

Brachiæus internus. See *Brachialis internus.*

Brachiæus musculus. See *Brachialis internus.*

BRACHIAL. (*Brachialis* and *brachiæus*, from *brachium*, the arm.) Brachial: of or belonging to the arm.

Brachial artery. *Arteria brachialis.* The brachial artery is the continuation of the axillary artery, which, as it passes behind the tendon of the pectoralis major, receives the name of *brachial.* It runs down on the inside of the arm, over the musculus coracobrachialis, and anconæus internus, and, along the inner edge of the biceps, behind the vena basilica, giving out small branches as it goes along. Below the bend of the arm it divides into the cubitalis and radialis. Sometimes, though rarely, the *brachial artery* is divided from its origin into two large branches, which run down on the arm, and afterwards on the fore-arm, where they are called *cubitalis* and *radialis.*

Brachia'le. The word means a bracelet; but the ancient anatomical writers apply this term to the carpus, the part on which the bracelet was worn.

Brachialis externus. See *Triceps extensor cubiti.*

Brachialis internus. *Brachiæus* of Winslow. *Brachiæus internus* of Cowper. A muscle of the fore-arm, situated on the fore-part of the os humeri. It arises fleshy from the middle of the os humeri, at each side of the insertion of the deltoid muscle, covering all the inferior and fore-part of this bone, runs over the joint, and adheres firmly to the ligament; is inserted, by a strong short tendon, into the coronoid process of the ulna. Its use is to bend the fore-arm, and to prevent the capsular ligament of the joint from being pinched.

BRACHIATUS. Brachiate. Applied to branches, panicles, &c. spread in four directions, crossing each other alternately in pairs: a common mode of growth in the branches of shrubs that have opposite leaves; as the lilac, syringa, &c.

Bra'chii os. See *Humeri os.*

Brachio-cubital ligament. See *Ligamentum brachio-cubitale.*

Brachio-radial ligament. See *Ligamentum brachio-radiale.*

BRA'CHIUM. (*um, i.* n.; βραχιον, the arm.) 1. That part of the upper extremity which extends from the shoulder to the wrist.

2. The name of a measure, about 24 inches or two feet, from the arm-pit to the base of the middle finger.

Brachium movens quartus. See *Latissimus dorsi.*

Brachu'na. According to Avicenna, a species of furor uterinus.

Brachychro'nius. (From βραχυς, short, and χρονος, time.) A disease which continues but a short time.

BRACHYPNŒ'A. (From βραχυς, short, and πνεω, to breathe.) Shortness and difficulty of breathing.

Bra'chys. (From βραχυς, short.) A muscle of the scapula.

Bra'cium. Copper. Verdigris.

BRAC'TEA. (*a, æ.* f.; a thin leaf or plate of metal.) A floral leaf. One of the seven *fulcra* or props of plants, according to Linnæus. A bractea is a little leaf-like appendage to some flowers, lying under or interspersed in the flower, but generally different in colour from the true leaves of the plant.

1. It is *green* in some; as in *Ocymum basilicum majus.*

2. *Coloured* in others; as in *Salvia horminum*, &c.

3. In some it is *caducous*, falling off before the flowers.

4. In others it remains; as in *Tilia europæa.*

Coma bracteata is, when the flower-stem is terminated with a number of very large bracteæ, resembling a bush of hair.

BRACTEATÆ. (From *bractea*, here meaning a corolla.) The name of a class of Boerhaave's method of plants, consisting of herbaceous vegetables, which have petals, and the seeds of which are furnished with a single lobe or cotyledon.

BRACTEATUS. (From *bractea*, a

floral leaf.) Bracteate: having a floral leaf; as *pedunculus bracteatus.*

BRACTEIFORMIS. Resembling a bractea or floral leaf.

BRADYPE'PSIA. (From βραδυς, slow, and πεπτω, to concoct.) Weak digestion.

BRADYSPERMATISMUS. (From βραδυς, slow, and σπερμα, seed.) Slow emission of seed. See *Sterility.*

BRA'GGAT. A name formerly applied to a ptisan of honey and water.

BRAIN. See *Cerebrum.*

Brain, little. See *Cerebellum.*

BRAN. *Furfur.* The husks or shells of wheat, which remain in the boulting machine. It contains a portion of the farinaceous matter, and is said to have a laxative quality. Decoctions of bran, sweetened with sugar, are used by the common people, and sometimes with success, against coughs, hoarseness, &c.

BRA'NCA. (*a, æ.* f.; the Spanish for a foot, or branch.) A term applied to some herbs, which are supposed to resemble a particular foot: as *branca leonis,* lion's foot; *branca ursina,* bear's foot.

BRANCA LEONINA. See *Alchemilla.*

BRANCA LEONIS. See *Alchemilla.*

BRANCA URSINA. See *Acanthus* and *Heracleum.*

BRANCH. See *Ramus.*

BRA'NCHA. (From βρεχω, to make moist.) A swelled tonsil, or glandular tumour, of the fauces.

BRANCHED. See *Ramosus.*

BRA'NCHUS. (From βρεχω, to moisten.)

1. A defluxion of humours from the fauces.

2. A tumour of the fauces.

BRANDY. *Spiritus Gallicus.* A colourless, slightly opake, and milky fluid, of a hot and penetrating taste, and a strong and agreeable smell, obtained by distilling from wine. It consists of water, ardent spirit, and a small portion of oil, which renders it milky at first, and, after a certain time, colours it yellow. It is the fluid from which rectified or ardent spirit is obtained. Its peculiar flavour depends on the nature of the volatile principles, or essential oil, which come over along with it in the distillation, and likewise, in some measure, upon the management of the fire, the wood of the cask in which it is kept, &c. It is said, that our rectifiers imitate the flavour of brandy, by adding a small proportion of nitrous æther to the spririt of malt, or molasses. The utility of brandy is very considerable, but, from its pleasant taste and exhilirating property, it is too often taken to excess. It gives energy to the animal functions; it is a powerful tonic, cordial, and antispasmodic; and its utility with camphire, in gangrenous affections, is very great.

BRANKS. The name, in Scotland, for the mumps. See *Cynanche parotidæa.*

BRANK-URSINE. See *Acanthus mollis.*

BRASI'LIA. Brazil wood.

BRASILIENSE LIGNUM. See *Hæmatoxylum campechianum.*

BRASILIENSIS RADIX. The ipecacuanha root is sometimes so called.

BRA'SIUM. (From βρασσω, to boil.) Malt, or germinated barley.

BRA'SMA. (From βρασσω, to boil.)

1. The unripe black pepper.

2. Fermentation.

BRA'SMOS. Fermentation.

BRASS. See *Æs.*

BRASSADE'LLA. *Brassatella.* See *Ophioglossum spicatum.*

BRA'SSICA. (*a, æ.* f. Varro says, *quasi præsica;* from *præseco,* to cut off; because it is cut from the stalk for use: or from πρασια, a bed in a garden where they are cultivated; or from βρασσω, to devour, because it is eagerly eaten by cattle.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliquosa.* Crambe. Cabbage. Colewort.

BRASSICA ALBA. The white cabbage.

BRASSICA APIANA. Jagged or crimpled colewort.

BRASSICA CANINA. See *Mercurialis annua.*

BRASSICA CAPITATA. Cabbage. There are several varieties of cabbage, all of which are generally hard of digestion, producing flatulencies, and afford very little nourishment. These inconveniences are not experienced by those whose stomachs are strong and accustomed to them. Few vegetables run into a state of putrefaction so quickly as cabbages: they ought, therefore, always to be used immediately after cutting. In Holland and Germany there is a method of preserving them, by cutting them into pieces, and sprinkling salt and some aromatic herbs among them; this mass is put into a tub, where it is pressed close, and left to ferment, when it is called *sour crout,* or *sauer kraut.* These, and all pickles of cabbage, are considered as wholesome and antiscorbutic, from the vinegar and spices they contain.

BRASSICA CONGYLODES. Turnip cabbage.

BRASSICA CUMANA. The red colewort.

BRASSICA ERUCA. *Brassica erucastrum. Eruca sylvestris.* Garden rocket. Roman rocket. Rocket gentle. The systematic name for the plant which affords the *semen erucæ. Brassica —foliis lyartis, caule hirsuto siliquis glabris,* of Linnæus. The seeds of this plant, and of the wild rocket, have an acrid taste, and are eaten by the Italians in their pickles, &c. They are said to be good aperients and antiscorbutics, but are esteemed by the above-mentioned people for their supposed aphrodisiac qualities.

BRASSICA ERUCASTRUM. See *Brassica eruca.*

BRASSICA FLORIDA. The cauliflower.

Brassica gonylicodes. The turnip cabbage.

Brassica lacuturria. The savoy plant.

Brassica marina. See *Convolvulus soldanella.*

Brassica napus. Wild navew, or rape. The systematic name for the plant from which the *semen napi* is obtained. *Napus sylvestris. Bunias.* The seeds yield, upon expression, a large quantity of oil, called rape oil, which is sometimes ordered in stimulating liniments.

Brassica oleracea. The systematic name for the *brassica capitata* of the shops. See *Brassica capitata.*

Brassica rapa. The systematic name for the plant whose root is called turnip. Called also *Rapum, Rapus, Napus,* and *Napus dulcis.* The turnip is accounted a salubrious food, demulcent, detergent, somewhat laxative and diuretic, but liable, in weak stomachs, to produce flatulencies, and prove difficult of digestion. The liquor pressed out of it, after boiling, is sometimes taken medicinally in coughs and disorders of the breast. The seeds are occasionally taken as diuretics; they have no smell, but a mild acrid taste.

Brassica rubra. Red cabbage. A very excellent test both for acids and alkalies, in which it is superior to litmus, being naturally blue, turning green with alkalies, and red with acids.

Brassica sabauda. The savoy plant.

Brassica sativa. The common garden cabbage.

Brassidé'llica ars. A way of curing wounds, mentioned by Paracelsus, by applying the herb *Brassidella* to them.

Bra'thu. Βραθυ. An old name for savin.

Brazil wood. See *Cæsalpina crista.*

BREAD. *Panis.* " Farinaceous vegetables are converted into meal by trituration, or grinding in a mill; and when the husk or bran has been separated by sifting or bolting, the powder is called flour. This is composed of a small quantity of mucilaginous saccharine matter, soluble in cold water; much starch, which is scarcely soluble in cold water, but combines with that fluid by heat; and an adhesive grey substance, insoluble in water, alcohol, oil, or æther, and resembling an animal substance in many of its properties.

When flour is kneaded together with water, it forms a tough paste, containing these principles very little altered, and not easily digested by the stomach. The action of heat produces a considerable change in the gluten, and probably in the starch, rendering the compound more easy to masticate, as well as to digest. Hence the first approaches towards the making of bread consisted in parching the corn, either for immediate use as food, or previous to its trituration into meal; or else in baking the flour into unleavened bread, or boiling it into masses more or less consistent; of all which we have sufficient indications in the histories of the earlier nations, as well as in the various practices of the moderns. It appears, likewise, from the Scriptures, that the practice of making leavened bread is of very considerable antiquity; but the addition of yeast, or the vinous ferment, now so generally used, seems to be of modern date.

Unleavened bread, in the form of small cakes, or biscuit, is made for the use of shipping in large quantities; but most of the bread used on shore is made to undergo, previous to baking, a kind of fermentation, which appears to be of the same nature as the fermentation of saccharine substances; but is checked and modified by so many circumstances, as to render it not a little difficult to speak with certainty and precision respecting it.

When dough or paste is left to undergo a spontaneous decomposition in an open vessel, the various parts of the mass are differently affected, according to the humidity, the thickness or thinness of the part, the vicinity or remoteness of fire, and other circumstances less easily investigated. The saccharine part is disposed to become converted into alkohol, the mucilage has a tendency to become sour and mouldy, while the gluten in all probability verges toward the putrid state. An entire change in the chemical attractions of the several component parts must then take place in a progressive manner, not altogether the same in the internal or more humid parts as in the external parts, which not only become dry by simple evaporation, but are acted upon by the surrounding air. The outside may therefore become mouldy or putrid, while the inner part may be only advanced to an acid state. Occasional admixture of the mass would, of course, not only produce some change in the rapidity of this alteration, but likewise render it more uniform throughout the whole. The effect of this commencing fermentation is found to be, that the mass is rendered more digestible and light; by which last expression it is understood, that it is rendered much more porous by the disengagement of an elastic fluid, that separates its parts from each other, and greatly increases its bulk. The operation of baking puts a stop to this process, by evaporating great part of the moisture which is requisite to favour the chemical attraction, and probably also by still farther changing the nature of the component parts. It is then bread.

Bread made according to the preceding method will not possess the uniformity which is requisite, because some parts may be mouldy, while others are not yet sufficiently changed from the state of dough. The same means are used in this case as have

been found effectual in promoting the uniform fermentation of large masses. This consists in the use of a leaven or ferment, which is a small portion of some matter of the same kind, but in a more advanced stage of the fermentation. After the leaven has been well incorporated by kneading into fresh dough, it not only brings on the fermentation with greater speed, but causes it to take place in the whole of the mass at the same time; and as soon as the dough has by this means acquired a due increase of bulk from the carbonic acid, which endeavours to escape, it is judged to be sufficiently fermented, and ready for the oven.

The fermentation by means of leaven, or sour dough, is thought to be of the acetous kind, because it is generally so managed, that the bread has a sour flavour and taste. But it has not been ascertained that this acidity proceeds from true vinegar. Bread raised by leaven is usually made of a mixture of wheat and rye, not very accurately cleared of the bran. It is distinguished by the name of rye-bread; and the mixture of these two kinds of grain is called bread-corn, or meslin, in many parts of the kingdom, where it is raised on one and the same piece of ground, and passes through all the processes of reaping, thrashing, grinding, &c. in this mixed state.

Yeast or barm is used as the ferment for the finer kinds of bread. This is the mucilaginous froth which rises to the surface of beer in its first stage of fermentation. When it is mixed with dough, it produces a much more speedy and effectual fermentation than that obtained by leaven, and the bread is accordingly much lighter, and scarcely ever sour. The fermentation by yeast seems to be almost certainly of the vinous or spirituous kind.

Bread is much more uniformly miscible with water than dough; and on this circumstance its good qualities most probably do in a great measure depend.

A very great number of processes are used by cooks, confectioners, and others, to make cakes, puddings, and other kinds of bread, in which different qualities are required. Some cakes are rendered brittle, or, as it is called *short*, by an admixture of sugar or of starch. Another kind of brittleness is given by the addition of butter or fat. White of egg, gum-water, isinglass, and other adhesive substances are used when it is intended that the effect of fermentation shall expand the dough into an exceedingly porous mass. Dr. Percival has recommended the addition of salep, or the nutritious powder of the orchis root. He says, that an ounce of salep, dissolved in a quart of water, and mixed with two pounds of flour, two ounces of yeast, and eighty grains of salt, produced a remarkably good loaf, weighing three pounds two ounces; while a loaf made of an equal quantity of the other ingredients, without the salep, weighed but two pounds twelve ounces. If the salep be in too large quantity, however, its peculiar taste will be distinguishable in the bread. The farina of potatoes, likewise, mixed with wheaten flour, makes very good bread. The reflecting chemist will receive considerable information on this subject from an attentive inspection of the receipts to be met with in treatises of cooking and confectionary.

Mr. Accum, in his Treatise on Culinary Poisons, states, that the inferior kind of flour which the London bakers generally use for making loaves, requires the addition of alum to give them the white appearance of bread made from fine flour. 'The baker's flour is very often made of the worst kinds of damaged foreign wheat, and other cereal grains mixed with them in grinding the wheat into flour. In this capital, no fewer than six distinct kinds of wheaten flour are brought into the market. They are called fine flour, seconds, middlings, fine middlings, coarse middlings, and twenty-penny flour. Common garden beans and pease are also frequently ground up among the London bread flour.

'The smallest quantity of alum that can be employed with effect, to produce a white, light, and porous bread from an inferior kind of flour, I have my own baker's authority to state, is from three to four ounces to a sack of flour weighing 240 pounds.'

'The following account of making a sack of five bushels of flour into bread, is taken from Dr. P. Markham's Considerations on the Ingredients used in the Adulteration of Flour and Bread, p. 21.

Five bushels flour,
Eight ounces of alum,
Four lbs. salt,
Half a gallon of yeast, mixed with about
Three gallons of water.

'Another substance employed by fraudulent bakers is subcarbonate of ammonia. With this salt they realise the important consideration of producing light and porous bread from spoiled, or what is technically called *sour flour*. This salt, which becomes wholly converted into a gaseous substance during the operation of baking, causes the dough to swell up into air-bubbles, which carry before them the stiff dough, and thus it renders the dough porous; the salt itself is at the same time totally volatilised during the operation of baking.' — 'Potatoes are likewise largely, and, perhaps, constantly used by fraudulent bakers, as a cheap ingredient to enhance their profit.'— 'There are instances of convictions on record, of bakers having used gypsum, chalk, and pipe-clay, in the manufacture of bread.'

Mr. E. Davy, Prof. of Chemistry at the Cork Institution, has made experiments, showing that from twenty to forty grains of common carbonate of magnesia, well mixed with a pound of the worst *new seconds*

flour, materially improved the quality of the bread baked with it.

The habitual and daily introduction of a portion of alum into the human stomach, however small, must be prejudicial to the exercise of its functions, and particularly in persons of a bilious and costive habit. And, besides, as the best sweet flour never stands in need of alum, the presence of this salt indicates an inferior and highly acescent food; which cannot fail to aggravate dyspepsia, and which may generate a calculous diathesis in the urinary organs. Every precaution of science and law ought, therefore, to be employed to detect and stop such deleterious adulterations. Bread may by analysed for alum by crumbling it down, when somewhat stale, in distilled water, squeezing the pasty mass through a piece of cloth, and then passing the liquid through a paper filter. A limpid infusion will thus be obtained. It is difficult to procure it clear if we use new bread or hot water. A dilute solution of muriate of barytes, dropped into the filtered infusion, will indicate by a white cloud, more or less heavy, the presence and quantity of alum. I find that genuine bread gives no precipitate by this treatment. The earthy adulterations are easily discovered by incinerating the bread at a red-heat in a shallow earthen vessel, and treating the residuary ashes with a little nitrate of ammonia. The earths themselves will then remain, characterised by their whiteness and insolubility."

The latest chemical treatise on the art of making bread, except the account given by Mr. Accum in his work on the *Adulterations of Food*, is the article Baking in the Supplement to the Encyclopædia Britannica.

Under *Process of Baking* we have the following statement: 'An ounce of alum is then dissolved over the fire in a tin pot, and the solution poured into a large tub, called by the bakers the *seasoning-tub*. Four pounds and a half of salt are likewise put into the tub, and a pailful of hot water.' Note on this passage.—'In London, where the goodness of bread is estimated entirely by its whiteness, it is usual, with those bakers who employ flour of an inferior quality, to add *as much* alum as common salt to the dough. Or, in other words, the quantity of salt added is diminished one half, and the deficiency supplied by an equal weight of alum. This improves the look of the bread very much, rendering it much whiter and firmer.'

BREAD-FRUIT. The tree which affords this, grows in all the Ladrone Islands in the South Sea, in Otaheite, and now in the West Indies. The bread-fruit grows upon a tree the size of a middling oak. The fruit is about the size of a child's head, and the surface is reticulated, not much unlike the surface of a truffle. It is covered with a thin skin, and has a core about the size of a small knife. The eatable part is between the skin and the core: it is as white as snow, and somewhat of the consistence of new bread. It must be toasted before it is eaten, being first divided into three or four parts. Its taste is insipid, with a slight sweetness, nearly like that of wheaten bread and artichoke together. This fruit is the constant food of the inhabitants all the year, it being in season eight months.

Bread-nut. See *Brosimum alicastrum.*

BREAST. See *Mamma.*

Breast-bone. See *Sternum.*

BRECCIA. An Italian term, frequently used by our mineralogical writers to denote such compound stones as are composed of agglutinated fragments of considerable size. When the agglutinated parts are rounded the stone is called pudding-stone. Breccias are denominated according to the nature of their component parts. Thus we have calcareous breccias, or marbles; and siliceous breccias, which are still more minutely classed, according to their varieties.

BRE'GMA. (*a, atis.* n.; from βρεχω, to moisten: formerly so called, because, in infants, and sometimes even in adults, they are tender and moist.) An old name for the parietal bones.

BRENNING. Brenning, and burning, are ancient and obsolete terms for the gonorrhœa.

BRE'VIS. Short. Applied to distinguish parts differing only in length, and to some parts the termination of which is not far from their origin; as *brevia vasa*, the branches of the splenic vein.

BREY'NIA. (An American plant named in honour of Dr. Brennius.) A species of capparis.

BRIAR. See *Rosa.*

BRI'CUMUM. A name which the Gauls gave to the herb artemisia.

BRIGHTON. A town in Sussex, not many years ago a small insignificant village, but now of great extent and population, and which, from its easy distance from London, has become a fashionable and much frequented town. Every accommodation is here found for the invalid who requires a salubrious local atmosphere and sea-breezes, and baths of all kinds; and there is a chalybeate close to the town, not inferior to that of Cheltenham.

BRIMSTONE. See *Sulphur.*

BRISTLE. See *Seta.*

Bristle-shaped. See *Setaceus.*

BRISTOL, HOT-WELL. *Bristoliensis aqua.* A pure, thermal or warm, slightly acidulated, mineral spring, situated about a mile below Bristol. The fresh water is inodorous, perfectly limpid, and sparkling, and sends forth numerous air-bubbles when poured into a glass. It is very agreeable to the palate, but without having any very decided taste, at least none that can be distinguished by a common observer. Its specific gravity is only 1·00077, which approaches so near to

that of distilled water, that this circumstance alone would show that it contained but a very small admixture of foreign ingredients. The temperature of these waters, taking the average of the most accurate observations, may be reckoned at 74 deg.; and this does not very sensibly vary during winter or summer. Bristol water contains both solid and gaseous matter, and the distinction between the two requires to be attended to, as it is owing to the very small quantity of solid matter that it deserves the character of a very fine natural spring; and to an excess in gaseous contents that it seems to be principally indebted for its medical properties, whatever they may be, independent of those of mere water, with an increase of temperature. From the different investigations of chemists, it appears that the principal component parts of the Hot-Well water, are a large proportion of carbonic acid gas, or fixed air, and a certain portion of magnesia and lime, in various combinations, with the muriatic, vitriolic, and carbonic acids. The general inference is, that it is considerably pure for a natural fountain, as it contains no other solid matter than is found in almost all common spring water, and in less quantity.

On account of these ingredients, especially the carbonic acid gas, the Hot-Well water is efficacious in promoting salutary discharges, in green-sickness, as well as in the blind hæmorrhoids. It may be taken with advantage in obstructions, and weakness of the bowels, arising from habitual costiveness; and, from the purity of its aqueous part, it has justly been considered as a specific in diabetes, rendering the urinary organs more fitted to receive benefit from those medicines which are generally prescribed, and sometimes successful.

But the high reputation which this spring has acquired, is chiefly in the cure of pulmonary consumption. From the number of unsuccessful cases among those who frequent this place, many have denied any peculiar efficacy in this spring, superior to that of common water. It is not easy to determine how much may be owing to the favourable situation and mild temperate climate which Bristol enjoys; but it cannot be doubted that the Hot-Well water, though by no means a cure for consumption, alleviates some of the most harassing symptoms of this formidable disease. It is particularly efficacious in moderating the thirst, the dry burning heat of the hands and feet, the partial night-sweats, and the symptoms that are peculiarly hectical: and thus, in the earlier stages of phthisis, it may materially contribute to a complete re-establishment of health; and even in the latter periods, mitigate the disease when the cure is doubtful, if not hopeless.

The sensible effects of this water, when drunk warm and fresh from the spring, are a gentle glow of the stomach, succeeded sometimes by a slight and transient degree of headach and giddiness. By a continued use, in most cases it is diuretic, keeps the skin moist and perspirable, and improves the appetite and health. Its effects on the bowels are variable. On the whole, a tendency to costiveness seems to be the more general consequence of a long course of this medicinal spring, and therefore the use of a mild aperient is requisite. These effects, however, are applicable only to invalids, for healthy persons, who taste the water at the fountain, seldom discover any thing in it but a degree of warmth, which distinguishes it from the common element.

The season for the Hot-Well is generally from the middle of May to October; but as the medicinal properties of the water continue the same throughout the year, the summer months are preferred merely on account of the concomitant benefits of air and exercise.

It should be mentioned, that another spring, nearly resembling the Hot-Well, has been discovered at Clifton, which is situated on the summit of the same hill, from the bottom of which the Hot-Well issues. The water of Sion-spring, as it is called, is one or two degrees colder than the Hot-Well; but in other respects it sufficiently resembles it to be employed for all similar purposes.

Britannica herba. See *Rumex hydrolapathum*, and *Arctium lappa*.

BRITA'NNICUS. British: applied to plants which grow in this country, and to some remedies.

BRITISH GUM. When starch is exposed to a temperature between 600° and 700°, it swells, and exhales a peculiar smell; it becomes of a brown colour, and in that state is employed by calico-printers. It is soluble in cold water, and does not form a blue compound with iodine. Vauquelin found it to differ from gum in affording oxalic instead of mucous acid, when treated with nitric acid. — *Brande's Manual*, iii. 34.

British Oil. A variety of the black species of petroleum, to which this name has been given as an empirical remedy.

BROCATELLO. A calcareous stone or marble, composed of fragments of four colours, white, grey, yellow, and red.

BRO'CCOLI. *Brassica Italica*. As an article of diet, this may be considered as more delicious than cauliflower and cabbage. Sound stomachs digest broccoli without any inconvenience; but in dyspeptic stomachs, even when combined with pepper, &c. it always produces flatulency, and nauseous eructations.

Brochos. (Βροχος, a snare.) A bandage.

Bro'chthus. (From βρεχω, to pour.) The throat; also a small kind of drinking-vessel.

BRO'CHUS. Βροκος. One with a prominent upper-lip, or one with a full mouth

and prominent teeth. Castellus is of opinion that it means some surgical instrument; inasmuch as, according to Galen and Oribasius, it is necessary to some operations. Galen also expresses by it a deprivation of voice. It also means, in surgery, a noose.

BROCKLESBY, Richard, was born in 1722. About 1757, he was appointed physician to the army in Germany, and on his return published "Economical and Medical Observations." He was author of several other works, and died in 1797.

Bro'dium. A term in pharmacy, signifying the same with *jusculum*, broth, or the liquor in which any thing is boiled. Thus we sometimes read of *brodium salis*, or a decoction of salt.

BRO'MA. (*a, atis* m.; Βρωμα, from βρωσκω, to eat.) Food of any kind that is masticated, and not drank.

Broma-theon. (From βρωσκω, to eat.) Mushrooms.

BROMATO'LOGY. (*Bromatologia, æ.* f.; from βρωμα, food, and λογος, a discourse.) A discourse or treatise on food.

BROME. (*Bromium*, from βρωμος, *fœtor;* so called because it possesses a very offensive smell.) A new elementary body, called also *Bromine*. It is obtained in the following way:—After passing for some time a current of chlorine through the mother water of salt works, a quantity of æther must be poured on the surface of the liquid, so as entirely to fill up the flask into which it has been put. These two liquids are to be thoroughly intermixed by strong agitation, and then left at rest for a few instants, to allow them to separate from each other. The æther is now seen floating in a stratum of a fine hyacinthine red; while the mother water of the salt springs, deprived of colour, presents no more the lively and irritating odour of the brome, but the soothing smell of the æther held in solution. The æthereous solution of brome loses, eventually, its hue and disagreeable odour, on agitation with some alkaline substance; for example, with caustic potash. This absorbs the brome; and by agitating successively the mother water of salt works rendered yellow by æther, and the coloured æther with potash, it is possible to combine, with a small quantity of this alkali, the whole brome afforded from a very large body of water. The potash, losing by degrees its alkaline qualities, is changed into a saline matter, soluble in water, and which crystallises in cubes by the evaporation of the liquid. From these cubic crystals brome is extracted. The pulverised crystals, mixed with pure peroxide of manganese, being put into a retort, sulphuric acid, diluted with half its weight of water, is poured in. Ruddy vapours immediately rise, which condense into drops of *brome*. These may be collected by plunging the neck of the retort to the bottom of the small receiver containing cold water. The brome which comes over in vapour is dissolved in this liquid; but that which is condensed on the neck of the retort, under the form of little drops, falls to the bottom of the vessel from its great specific gravity. To procure it in a state of purity, it is merely necessary to separate it from the water it may retain.

Properties. — It is a blackish liquid, of a very unpleasant smell, and a peculiarly strong taste. It attacks organic substances, as wood, cork, &c.; and particularly the skin, which it tinges yellow and corrodes. It is volatile; soluble in water, alcohol, and particularly æther.

BROME'LIA. (*a, æ,* f.; so named in honour of Olaus Bromel, a Swede, author of *Lupologia*, &c. in 1687.) The name of a genus of plants. Class, *Hexandria;* Order, *Monogynia*.

Bromelia ananas. The systematic name of the plant which affords the pine apple. *Bromelia—foliis ciliato spinosis, mucronatis, spica comosa* of Linnæus. It is used principally as a delicacy for the table, and is also given with advantage as a refrigerant in fevers.

Bromelia karatas. The systematic name of the plant from which we obtain the fruit called penguin, which is given in the Spanish West Indies to cool and quench thirst in fevers, dysenteries, &c. It grows in a cluster, there being several of the size of one's finger together. Each portion is clothed with husk containing a white pulpy substance, which is the eatable part; and if it be not perfectly ripe, its flavour resembles that of the pine-apple. The juice of the ripe fruit is very austere, and is made use of to acidulate punch. The inhabitants of the West Indies make a wine of the penguin, which is very intoxicating, and has a good flavour.

BROMFIELD, William, was born in 1712, and attained considerable reputation as a surgeon. He wrote many works; the most considerable was entitled "Chirurgical Cases and Observations," in 1773, but reckoned not to answer the expectations entertained of him. He attained his eightieth year.

BROMIC. (*Bromicus*, from *Bromium.*) Appertaining to brome or bromine.

Bromic acid. See *Brome*.

Bro'mion. (From βρωμος, the oat.) The name of a plaster made with oaten flour, mentioned by Paulus Ægineta.

BRO'MUS. (*Bromus;* from βρωμα, food.) The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia*. Brome-grass.

Bromus dioscoridis. Most probably the wild oat, a species of *Avena*.

Bromus sterilis. (From βρωσκω, to eat.) The wild oat.

BRO'NCHIA. (*a, orum.* neut. plur.; from βρογχος, the throat.) See *Trachea*.

BRONCHIAL. See *Bronchialis.*

BRONCHIA'LIS. (From *bronchia.*) Appertaining to the windpipe, or bronchia; as bronchial gland, artery, &c.

Bronchialis arteria. Bronchial artery. A branch of the aorta given off in the chest.

Bronchialis glandula. Bronchial gland. Large blackish glands, situated about the bronchia and trachea.

BRONCHITIS. (*is, idis,* f.; from βρογχος, the windpipe, and ιτις, the terminal which denotes inflammatis.) Inflammation of the Bronchia. See *Croup.*

BRONCHOCE'LE. (*e, es.* f.; from βρογχος, the windpipe, and κηλη, a tumour.) The Derbyshire neck. Called also *Botium, Hernia gutturis, Guttur tumidum, Trachelophyma, Gossum, Exechebronchos, Gongrona, Hernia bronchialis,* and *Tracheocele.* This disease is marked by a tumour on the fore-part of the neck, and seated between the trachea and skin. In general it has been supposed principally to occupy the thyroid gland. We are given to understand that it is a very common disorder in Derbyshire; but its occurrence is by no means frequent in other parts of Great Britain, or in Ireland. Amongst the inhabitants of the Alps, and other mountainous countries bordering thereon, it is a disease very often met with, and is there known by the name of goitre. The cause which gives rise to it is by no means certain, and the observations of different writers are of very little practical utility. Dr. Saunders controverts the general idea of the bronchocele being produced by the use of snow water. The swelling is at first without pain, or any evident fluctuation: when the disease is of long standing, and the swelling considerable, we find it in general a very difficult matter to effect a cure by medicine, or any external application; and it might be unsafe to attempt its removal with a knife, on account of the enlarged state of its arteries, and its vicinity to the carotids; but in an early stage of the disease, by the aid of medicine, a cure may be effected.

Although some relief has been obtained at times, and the disease probably somewhat retarded by external applications, such as blisters, discutient embrocations, and saponaceous and mercurial plasters, still a complete cure has seldom been effected without an internal use of medicine; and that which has always proved the most efficacious, is burnt sponge. The form under which this is most usually exhibited, is that of a lozenge. ℞. spongiæ ustæ ℥ss. mucilag. Arab. gum. q. s. fiat trochiscus. When the tumour appears about the age of puberty, and before its structure has been too morbidly deranged, a pill, consisting of a grain or two of calomel, must be given for three successive nights; and, on the fourth morning, a saline purge. Every night afterwards, for three weeks, one of the troches should, when the patient is in bed, be put under the tongue, suffered to dissolve gradually, and the solution swallowed. The disgust at first arising from this remedy soon wears off. The pills and the purge are to be repeated at the end of three weeks, and the troches had recourse to as before; and this plan is to be pursued till the tumour is entirely dispersed. Some recommend the burnt sponge to be administered in larger doses. Sulphuretted potash dissolved in water, in the proportion of 30 grains to a quart daily, is a remedy which has been employed by Dr. Richter with success, in some cases, where calcined sponge failed. The sodæ subcarbonas, being the basis of burnt sponge, is now frequently employed instead of it, and, indeed, it is a more active medicine. Of late iodine has superseded the use of these medicines. One grain, or ten minims, of the tincture is given three times a day, and with more success than any other medicine. Its use must be continued for some months.

BRONCHOPHONISM. (*Bronchophonismus, i.* m.; from βρογχος, the windpipe, and φωνη, the voice: so called because the voice is heard in the bronchia.) The sound of the voice in the bronchia, or large tubes of the trachea, within the chest.

BRO'NCHOS. (*os, i.* m.; βρογχος, the windpipe.) A catarrh; a suppression of the voice from a catarrh.

BRONCHO'TOMY. (*Bronchotomia, æ.* f.; from βρογχος, the windpipe, and τεμνω, to cut.) Bronchotomy; Tracheotomy; Laryngotomy. This is an operation in which an opening is made into the larynx, or trachea, either for the purpose of making a passage for the air into and out of the lungs, when any disease prevents the patient from breathing through the mouth and nostrils; or of extracting foreign bodies, which have accidentally fallen into the trachea; or, lastly, in order to be able to inflate the lungs, in cases of sudden suffocation, drowning, &c. Its practicableness and little danger, are founded on the facility with which certain wounds of the windpipe, even of the most complicated kind, have been healed, without leaving any ill effects whatever, and on the nature of the parts cut, which are not furnished with any vessel of consequence.

BRO'NCHUS. (*us, i.* m.; from βρεχω, to pour.) The ancients believed that the solids were conveyed into the stomach by the œsophagus, and the fluids by the bronchia: whence its name. 1. The windpipe.

2. A defluxion from the fauces. See *Catarrhus.*

BRONZE. A mixed metal, consisting chiefly of copper, with a small portion of tin, and sometimes other metals.

BRONZITE. A massive metal-like mineral, frequently resembling bronze, found in large masses in beds of serpentine in Upper Stiria, and in Perthshire.

BROOKLIME. See *Veronica beccabunga.*

BROOM. See *Spartium scoparium.*

BROSIMUM. (*um, i.* n.; from *βρωσιμος*, eatable.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Monandria.*

BROSIMUM ALICASTRUM. The specific name of the tree which affords the bread-nut.

BROWN, JOHN, born in the county of Berwick, in 1735. He made very rapid progress in his youth in the learned languages, and at the age of twenty went to Edinburgh to study theology; but before he could be ordained, became attached to free-living and free-thinking. About 1759, having translated the inaugural thesis of a medical candidate into Latin, and the performance being highly applauded, he was led to the study of medicine. The professors at Edinburgh allowed him to attend their lectures gratuitously; and he maintained himself by instructing the students in Latin, and composing or translating their dissertations. Dr. Cullen particularly encouraged him, notwithstanding his irregularities, employing him as tutor to his sons, and allowing him to repeat and enlarge upon his lectures in the evening to those pupils who chose to attend. In 1765 he married, and his house was soon filled with boarders; but his imprudence brought on bankruptcy within four years after. About this period he was an unsuccessful candidate for one of the medical chairs; and attributing his failure to Dr. Cullen, became his declared enemy. This probably determined him to form his new system of medicine, afterwards published under the title of "Elementa Medicinæ:" in which certainly much genius is displayed, but little acquaintance with practice, or with what had been written before on the subject. His chief object seems to have been to reduce the medical art to the utmost simplicity; whence he arranged all diseases under the two divisions of sthenic and asthenic, and maintained that all agents operate on the body as stimuli; so that we had only to increase or diminish the force of these according to circumstances. At the head of his stimulant remedies he places wine, brandy, and opium, in the recommendation of which he is very liberal; and especially betrays his partiality to them by asserting, contrary to universal experience, that he found them in his own person the best preservatives against the gout. He is said to have prepared himself for his lectures by a large dose of laudanum in whisky; and thus roused himself to a degree of enthusiasm bordering on frenzy. After completing his work, he procured a degree from St. Andrew's, and commenced public teacher. The novelty and imposing simplicity of his doctrines procured him at first a pretty numerous class: but being irregular in his attendance, and his habits of intemperance increasing, they fell off by degrees; and he was at length so embarrassed, as to be obliged to quit Edinburgh in 1786. He then settled in London, but met with little success, and in about two years after died. His opinions at first found many supporters, as well in this as in other countries; but they appear now nearly fallen into deserved oblivion.

BROWN SPAR. A white, red, or brown, or black spar. Called also Pearl spar. Sideroculcite. Harder than the calcareous, but yields to the knife.

BROWNE, SIR THOMAS, was born in 1605. After studying and practising for a short time at Oxford, he spent about three years in travelling, graduating at length at Leyden. He then came to London, and published his "Religio Medici," which excited great attention as a work of genius, though blemished by a few of the popular superstitions then prevailing. In 1646 appeared his most popular work, "On Vulgar Errors," which added greatly to his fame; though he injudiciously ranked the Copernican system among them. He was knighted by Charles II.; and died at the termination of his 77th year. His son Edward was also a physician, and attained considerable eminence, having had the honour of attending Charles II. and William III., and being for three years president of the college.

BRU'CEA. (*a, æ.* f.; so named by Sir Joseph Banks, in honour of Mr. Bruce, the traveller in Abyssinia, who first brought the seeds thence into England.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Tetrandria.*

BRUCEA ANTIDYSENTERICA. The systematic name of the plant from which it was erroneously supposed we obtained the angustura bark. See *Cusparia.*

BRUCEA FERRUGINEA. This plant was also supposed to afford the angustura bark.

BRUCIA. (*a, æ.* f.; so called because obtained from the plant of that name.) Brucine. A new vegetable alkali, lately extracted from the bark of the false angustura, or *Brucia antidysenterica*, by Pelletier and Caventou. After being treated with sulphuric æther, to get rid of a fatty matter, it was subjected to the action of alkohol. The dry residuum, from the evaporated alkoholic solution, was treated with Goulard's extract, or solution of acetate of lead, to throw down the colouring matter, and the excess of lead was separated by a current of sulphuretted hydrogene. The nearly colourless alkaline liquid was saturated with oxalic acid, and evaporated to dryness. The saline mass being freed from its remaining colouring particles by absolute alkohol, was then decomposed by lime or magnesia, when the *brucia* was disengaged. It was dissolved in boiling alkohol, and obtained in crystals, by the slow evaporation of the liquid. These crystals, when obtained by very slow evaporation, are oblique prisms, the bases of which

are parallelograms. When deposited from a saturated solution in boiling water, by cooling, it is in bulky plates, somewhat similar to boracic acid in appearance. It is soluble in 500 times its weight of boiling water, and in 850 of cold. Its solubility is much increased by the colouring matter of the bark.

Its taste is exceedingly bitter, acrid, and durable in the mouth. When administered in doses of a few grains, it is poisonous, acting on animals like strychnia, but much less violently. It is not affected by the air. The dry crystals fuse at a temperature a little above that of boiling water, and assume the appearance of wax. At a strong heat it is resolved into carbon, hydrogene, and oxygene; without any trace of azote. It combines with the acids, and forms both neutral and super salts.

Brucine. See *Brucia*.

BRUISEWORT. See *Saponaria*.

BRUMALIS. (From *Bruma*, winter.) *Hyemalis*. Belonging to winter.

BRUMALLES. Plants which flower in our winter, common about the Cape.

Brune'lla. See *Prunella*.

BRUNNER, John Conrad, was born in 1653. He discovered the mucous glands in the duodenum; and was author of several inconsiderable works. He died in 1727.

Brunner's glands. Brunneri glandulæ. Peyer's glands. The muciparous glands, situated between the villous and cellular coat of the intestinal canal; so named after Brunner, who discovered them.

BRUNNEUS. A deep dark brown. See *Colour*.

BRUNONIAN. A system of the principles and practice of physic, formed by Dr. Brown, goes by this appellation.

BRUNSWICK GREEN. An ammoniaco-muriate of copper.

BRUNTKUP FERZ. Purple copper ore.

Bru'nus. An erysipelatous eruption.

Bru'scus. See *Ruscus*.

Brut'a. An Arabian word which means instinct, and is also applied to savin.

Bru'tia. The *Pix Brucia;* so called from Brutia, a country in the extreme parts of Italy, where it was produced. An epithet for the most resinous kind of pitch, therefore used to make the *Oleum Picinum*.

Bruti'no. Turpentine.

Bru'tobon. An ointment used by the Greeks.

Brutua. See *Cissampelos Pareira*.

Bruxane'li. (Indian.) A tall tree in Malabar, the bark of which is diuretic.

Bry'gmus. (From βρυχω, to make a noise.) A peculiar kind of noise, such as is made by gnashing or grating the teeth; or, according to some, a certain kind of convulsion affecting the lower jaw, and striking the teeth together, most frequently observed in such children as have worms.

BRYO'NIA. (*a, æ. f.*; from βρυω, to abound, from its abundance.) Bryony.

1. The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Syngenesia*.

2. The pharmacopœial name of the white bryony. See *Bryonia alba*.

Bryonia alba. The systematic name of the white bryony plant: called also *Vitis alba sylvestris, Vitis agrostis, Ampelo sagria, Archeostris, Echetrosis* by Hippocrates, *Bryonia aspera, Cedrostis, Chelidonium, Labrusca, Melothrum, Ophiostaphylon,* and *Psilothrum*.

Bryonia—foliis palmatis utrinque calloso-scabris of Linnæus. This plant is very common in woods and hedges. The root has a very nauseous biting taste, and disagreeable smell. Bergius states the virtues of this root to be purgative, hydragogue, emmenagogue, and diuretic; the fresh root emetic. This powerful and irritating cathartic, though now seldom prescribed by physicians, is said to be of great efficacy in evacuating serous humours, and has been chiefly employed in hydropical cases. Instances of its good effects in other chronic diseases are also mentioned; as asthma, mania, and epilepsy. In small doses, it is reported to operate as a diuretic, and to be resolvent and deobstruent. In powder from ℈j. to a drachm, it proves strongly purgative; and the juice, which issues spontaneously, in doses of a spoonful or more, has similar effects, but is more gentle in its operation. An extract prepared by water acts more mildly, and with greater safety than the root in substance, given from half a drachm to a drachm. It is said to prove a gentle purgative, and likewise to operate powerfully by urine. Of the expressed juice, a spoonful acts violently both upwards and downwards; but cream of tartar is said to take off its virulence. Externally, the fresh root has been employed in cataplasms, as are solvent and discutient: also in ischiadic and other rheumatic affections.

Bryonia mechoachana nigricans. See *Convolvulus jalapa*.

Bryonia nigra. See *Tamus communis*.

Bryonia peruviana. See *Convolvulus jalapa*.

BRY'ONY. See *Bryonia nigra*.

Bryony, black. See *Tamus communis*.

Bryony, white. See *Bryonia alba*.

Bry'thion. βρυθιον. A poultice, so called and described by Paulus Ægineta.

Bry'ton. (From βρυω, to pour out.) A kind of ale, or wine, made of barley.

BUBALUS. Of or belonging to the ox. See *Bos bubalis*.

Bubasteco'rdium. (From βυβαστικὸν, and *cor*, the heart.) An obsolete name of the mugwort.

BU'BO. (*o, onis*, m.; from βουβων, the groin: because they most frequently happen in that part. Dr. Good says, *bubo* is a Greek term, borrowed from the Hebrew

verb *bo*, or *boa*, importing "to swell," and merely doubled according to the analogy of the language, to give it an intense or superlative power: whence *bobo* or *bubo*.) A swelling of a lymphatic gland, particularly of those of the groin and axilla. The disease may arise from the mere irritation of some local disorder, when it is called *sympathetic bubo;* from the absorption of some irritating matter, such as the venereal poison; or from constitutional causes, as in the pestilential bubo, and scrophulous swellings, of the inguinal and axillary glands.

BU'BON. (*Bubon*, from βουβων, the groin, or a tumour to which that part is liable, and which it was supposed to cure.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Bubon galbanum. The lovage-leaved bubon. The systematic name of the plant which affords the officinal galbanum; called also *Albetad, Chalbane, Gesor.* The plant is also named *Ferula Africana, Oreoselinum Africanum, Anisum fruticosum galbaniferum, Anisum Africanum fruticescens,* and *Ayborzat.*

Bubon—foliis rhombeis dentatis striatis glabris, umbellis paucis, of Linnæus. Galbanum is the gummi-resinous juice, obtained partly by its spontaneous exudation from the joints of the stem, but more generally, and in greater abundance, by making an incision in the stalk, a few inches above the root, from which it immediately issues, and soon becomes sufficiently concrete to be gathered. It is imported into England from Turkey, and the East Indies, in large, softish, ductile, pale-coloured masses, which, by age, acquire a brownish-yellow appearance: these are intermixed with distinct whitish tears, that are the most pure part of the mass. Galbanum has a strong unpleasant smell, and a warm, bitterish, acrid taste. Like the other gummy resins, it unites with water, by trituration into a milky liquor, but does not perfectly dissolve, as some have reported, in water, vinegar, or wine. Rectified spirit takes up much more than either of these menstrua, but not the whole: the tincture is of a bright golden colour. A mixture of two parts of rectified spirit, and one of water, dissolves all but the impurities, which are commonly in considerable quantity. In distillation with water, the oil separates and rises to the surface, in colour yellowish, in quantity one twentieth of the weight of the galbanum. Galbanum, medicinally considered, may be said to hold a middle rank between assafœtida and ammoniacum; but its fœtidness is very inconsiderable, especially when compared with the former: it is therefore accounted less antispasmodic, nor are its expectorant qualities equal to those of the latter; it however is esteemed more efficacious than either in hysterical disorders. Externally, it is often applied, by surgeons, to expedite the suppuration of inflammatory and indolent tumours, and, by physicians, as a warm stimulating plaster. It is an ingredient in the *pilulæ galbani compositæ*, the *emplastrum galbani compositum* of the London Pharmacopœia, and in the *emplastrum gummosum* of the Edinburgh.

Bubon Macedonicum. Macedonian parsley. The systematic name of the plant which affords the *semen petroselini Macedonici* of the shops. It is also called *Apium petræum,* and *Petrapium.* This plant is similar in quality to the common parsley, but weaker and less grateful. The seeds enter the celebrated compounds mithridate and theriaca.

Bubo'nium. (From βουβων, the groin.) A name of the golden starwort: so called because it was supposed to be efficacious in diseases of the groin.

BUBONOCE'LE. (*e, es.* f.; from βουβων, the groin, and κηλη, a tumour.) A rupture in the groin. A species of hernia, in which the bowels protrude, at the abdominal ring. See *Hernia inguinalis.*

BU'CCA. (*a, æ.* f.; Hebrew.) The cheek. The hollow inner part of the cheek, that is inflated by the act of blowing.

Buccacra'ton. (From *bucca,* or *buccella,* and κραω, to mix.) A morsel of bread, sopped in wine, which served in old times for a breakfast.

BUCCAL. (*Buccalis,* from *bucca,* the cheek.) Of or belonging to the cheek.

Buccinales glandulæ. The small glands of the mouth, under the cheek, which assist in secreting saliva into that cavity.

Bu'ccea. (From *bucca,* the cheek; as much as can be contained at one time within the cheeks.) 1. A mouthful; a morsel.

2. A polypus of the nose.

Buccelaton. (From *buccella,* a morsel.) A purging medicine, made up in the form of a loaf; consisting of scammony, &c. put into fermented flour, and then baked in an oven.

Bucce'lla. Paracelsus calls the polypus in the nose by this name, because he supposes it to be a portion of flesh parting from the bucca, and insinuating itself into the nose.

Buccella'tio. (From *buccellatus,* cut into small pieces.) *Buccellatio.* A method of stopping an hæmorrhage, by applying small pieces of lint to the vein, or artery.

BUCCINA'TOR. (*or, oris.* m.; from βουκανον, a trumpet: so named from its use in forcing the breath to sound the trumpet.) *Retractor anguli oris* of Albinus. The trumpeter's muscle. The buccinator was long thought to be a muscle of the lower jaw, arising from the upper alveoli, and inserted into the lower alveoli, to pull the jaw upwards; but its origin and insertion, and the direction of its fibres, are quite the reverse of this. For this large flat muscle,

which forms in a manner the walls of the cheek, arises chiefly from the coronoid process of the lower jaw-bone, and partly also from the end of the alveoli, or socket process of the upper jaw, close by the pterygoid process of the sphenoid bone: it goes forward, with direct fibres, to be implanted into the corner of the mouth: it is thin and flat, covers in the mouth, and forms the walls of the cheek, and is perforated in the middle of the cheek by the duct of the parotid gland. These are its principal uses: — it flattens the cheek, and so assists in swallowing liquids; it turns, or helps to turn, the morsel in the mouth while chewing, and prevents it from getting without the line of the teeth; in blowing wind instruments, it both receives and expels the wind; it dilates like a bag, so as to receive the wind in the cheeks; and it contracts upon the wind, so as to expel it, and to swell the note. In blowing the strong wind-instruments, we cannot blow from the lungs, for it distresses the breathing: we reserve the air in the mouth, which we keep continually full; and from this circumstance, as mentioned above, it is named buccinator, from blowing the trumpet.

Bu'ccula. (*a, æ.* f.; diminutive of *bucca*, the cheek.) The fleshy part under the chin.

Bucephalon, red-fruited. See *Trophis Americana.*

BUCEPHALUS. (*us, i.* m.; from βους, an ox, and κεφαλη, the head: *i. e.* a great head.) The name of Alexander's great horse. Applied by way of eminence in the several departments of natural history, &c.

Bu'ceras. (From βους, an ox, and κερας, a horn; so called from the horn-like appearance of its seed.) *Buceros.* See *Trigonella Fœnumgræcum.*

BUCHAN, William, was born in 1729. After studying and practising at Edinburgh, where he remained several years, he composed his celebrated Work, called "Domestic Medicine," on the plan of Tissot's "Avis aux Peuples." He afterwards practised in London, and published some other works; and died in 1805.

BUCK. The male of the deer. See *Cervus.*

BUCK-BEAN. See *Menyanthes trifoliata.*

BUCK-THORN. See *Rhamnus catharticus.*

BUCK-WHEAT. See *Polygonum fagopyrum.*

Buck-wheat, eastern. See *Polygonum divaricatum.*

BUCKOO. See *Diosma crenata.*

BUCNEMIA. (*ia, æ.* f.; from βου, a Greek augment, and κνημη, the leg.) So Dr. Good calls the disease of the leg, which is characterised by a tense, diffuse, inflammatory swelling of a lower extremity; usually commencing at the inguinal glands, and extending in the course of the lymphatics. Under this genus he comprises the white leg, and the tumid leg of hot climates. See *White leg*, and *Barbadoes leg.*

Bucra'nion. (From βους, an ox, and κρανιον, the head; so called from its supposed resemblance to a calf's snout.) The Snap-dragon plant. See *Antirrhinum.*

Bu'cton. The hymen, according to *Piræus.*

BUD. See *Gemma.*

BUFFALO. See *Bos.*

BUFO. (*o, onis*, m.) A toad.

Buga'ntia. A chilblain. See *Pernio.*

BUGLE. See *Prunella vulgaris.*

BUGLOSS. See *Anchusa officinalis.*

BUGLO'SSA. See *Anchusa officinalis.*

BUGLO'SSUM. (*um, i.* n.; from βους, an ox, and γλωσσα, a tongue: so called from the shape and roughness of its leaf.) See *Anchusa officinalis.*

Buglossum angustifolium. See *Anchusa officinalis.*

Buglossum majus. See *Anchusa officinalis.*

Buglossum sativum. See *Anchusa officinalis.*

Buglossum sylvestre. See *Anchusa officinalis.*

Bu'gula. (A diminutive of *buglossa.*) See *Ajuga pyramidalis.*

BULBIFERUS. (From *bulbus*, and *fero*, to bear.) Bulb-bearing. Having one or more bulbs; applied to stems: hence *Caulis bulbiferus*, &c.

BULBOCA'STANUM. (*um, i.* n.; from βολϐος, a bulb, and καςανον, a chestnut; so called from its bulbous appearance.) See *Bunium bulbocastanum.*

BULBOCAVERNO'SUS. (So called from its origin and insertion.) See *Accelerator urinæ.*

Bu'lbonach. See *Lunaria rediviva.*

BULBOSUS. (From *bulba*, a bulb.) Bulbous: 1. In *Anatomy*, applied to soft parts which are naturally enlarged; as the bulbous part of the urethra.

2. In *Botany*, to roots which have a bulb; as tulip, onion, lily, &c.

Bulbosæ. (From *bulbus.*) The name of a class of *Cæsalpinus*'s systematic method, consisting of herbaceous vegetables, which have a bulbous root, and a pericarpium, divided into three cells; also, the name of one of the natural orders of plants.

BULBULUS. A little bulb.

BUL'BUS. (*us, i.* m.; from βολϐος, a bulb, or somewhat rounded root.) A bulb. A globular, or pyriform coated body, solid, or formed of fleshy scales or layers, constituting the lower part of some plants, and giving off radicles from the circumference of the flattened basis. A bulb differs from a *tuber*, which is a farinaceous root, and sends off radicles in every direction.

Bulbs are divided into,

1. The *solid*, which consists of a solid fleshy nutritious substance; as in *Crocus*

sativus, Colchicum autumnale, Tulipa gesneriana.

2. The *scaly*, which consists of fleshy concentrical scales attached to a radical plate; as in *Allium cepa.*

3. The *squamose*, consisting of concave, overlapping scales; as in *Lilium candidum*, and *Lilium bulbiferum.*

4. The *compounded*, consisting of several lesser bulbs, lying close to each other; as in *Allium sativum.*

The bulbs of the orchis tribe differ from the common bulbs in not sending off radicles from the lower part, but from between the stem and basis. These are distinguished into,

5. *Testiculate*, having two bulbs of a round-oblong form; as in *Orchis morio*, and *Orchis mascula.*

6. *Palmate*, a compressed bulb, hand-like, divided below into finger-like lobes; as in *Orchis maculata.*

Bulbus esculentus. An esculent bulb, or such bulbous roots as are commonly eaten are so called.

Bulbus vomitorius. See *Hyacinthus muscari.*

BULGE-WATER-TREE. The *Geoffroya jamaicensis.*

BULGING. See *Gibbus.*

BULI'MIA. (*a, æ.* f.; from βου, a particle of excess, and λιμος, hunger.) Voracity, gluttony, insatiable hunger, canine appetite: called also, *Bulimiasis, Boulimos, Bulimus, Bolismos* by Avicenna, *Fames canina, Fames bovina, Appetitus caninus, Phagedæna, Adephagia, Bupeina*, and *Cynorexia.*

There are many who, from a very early or particular period of life, are in the habit of eating enormous quantities of food: but in the disease called bulimia, the quantity is beyond all credibility. A case is related in the Philosophical Transactions, by Dr. Mortimer, of a boy only twelve years old, who, from a feeling of hunger, had so strong a craving that he would gnaw his own flesh when not supplied with food. When awake, he was constantly eating: the food given him consisted of bread, meat, beer, milk, water, butter, cheese, sugar, treacle, puddings, pies, fruits, broths, potatoes; and of these he swallowed, for a considerable time, 384 ℔. 8 oz. avoirdupois, being 64 ℔. a day on the average. The disease continued for a year. The food was usually rejected soon after it was swallowed.

Mr. Percy, surgeon-in-chief to the French army, relates the case of a soldier, who, before he was enlisted, was in the habit of devouring enormous quantities of the coarsest flesh, fruits, and roots; and, subsequently, he was found, after swallowing his own rations, to feed on the refuse of his comrades' messes, or offensive meats thrown upon the dunghills; and to devour cats, dogs, and serpents. He was strongly suspected of cannibalism; and was often restrained, with difficulty, from the place appropriated to the dead. He at length fled from the army, before a rumour of having devoured a child of sixteen months old, which had suddenly disappeared. The alvine evacuations of this man were not immoderate; but, after gorging his stomach, he slept and sweated in torrents of perspiration, a symptom common to the disease. He fell at length into a hectic, and died of marasmus.

This disease is often symptomatic of worms, pregnancy, and some unusual organisation of the stomach: but as an idiopathic one, it occurs occasionally, and the voracity is accompanied by a sense of inanition and faintness, and in some cases by vomiting; hence there are three species:

1. *Bulimia helluonum*; in which there is no other disorder of the stomach, than an excessive craving of food.

2. *Bulimia syncopalis*; in which there is a frequent desire of food, and the sense of hunger is preceded by swooning.

3. *Bulimia emetica*, also *cynorexia*; in which an extraordinary appetite for food is followed by vomiting. The real causes of this disease are, perhaps, not properly understood. In some cases, it has been supposed to proceed from an acid in the stomach; and in others, from a superabundance of acid in the gastric juice, and from indigested sordes, or worms. Some consider it as depending more frequently on monstrosity than disease. The voracious appetite which is produced by an exhausted state of the system, and that which occurs during pregnancy, is soon removed by good plain food, and plenty of it. So that which accompanies the rapid growth of the body, and that which results from excessive discharges, and long fasting, is removed in the same way. In all cases, more good results from moderation than from medicines; the best of which, if any be required, is a combination of ipecacuanha and bitter tonics, with cold bathing.

BULIMI'ASIS. See *Bulimia.*

BU'LIMUS. See *Bulimia.*

BULI'THUM. (From βους, an ox, and λιθος, a stone.) A bezoar, or stone, found in the kidneys, or gall, or urinary bladder, of an ox, or cow.

BULL. See *Bos taurus.*

BU'LLA. (*a, æ.* f.; a bubble.)

1. A clear vesicle, which arises from burns, or scalds; or other causes.

2. This word is also applied by Dr. Willan, as one of his definitions of cutaneous diseases; thus, "a large portion of the cuticle detached from the skin, by the interposition of a transparent watery fluid."

BU'LLACE. The English name of the fruit of the *Prunus insitia* of Linnæus, which grows wild in our hedges. There are two varieties of bullace, the red and the

white, which are used with the same intention as the common damsons.

BULLA'TUS. (From *bulla*, a bubble, or blister.) Bullate; blistered; blistery.

1. Applied to a leaf which has its veins so tight, that the intermediate space appears blistered. This appearance is frequent in the garden cabbage.

2. Applied to the vesicular fever, because the skin is covered with little vesicles, or blisters. See *Pemphigus*.

BULLO'SUS. (From *bulla*, a bubble.) Having small bladders, or vesicles.

BUNCH. In the language of botany, is a fruit-stalk, furnished with short lateral branches; as a bunch of currants, grapes, &c. See *Racemus*.

BUNDLE. In *Botany*, several flowers standing on their respective flower-stalks, which grow nearly from the same point, and rise to the same height; as in Sweet William, &c. See *Fasciculus*.

BUNDLED. See *Fasciculatus*.

Buni'tes vinum. (From *bunium*, wild parsley.) Wine made of bunium and must.

BU'NIUM. (*um, ii.* n.; from βουνος, a little hill: so called from the tuberosity of its root.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

2. The name of the wild parsley.

Bunium bulbocastanum. Earth-nut; Hawk-nut; Kipper-nut; and Pig-nut. The systematic name of a plant, the root of which is called also *Agriocastanum*, *Nucula terrestris*, *Bulbocastaneum*, and *Bulbocastanum majus et minus*. The root is as large as a nutmeg; hard, tuberous, and whitish; which is eaten raw or roasted. It is sweetish to the taste, nourishing, and supposed to be of use against strangury and bloody urine. The roots, which are frequently ploughed up by the peasants of Burgundy, and called by them *arnotta*; and those found in Scotland, and called *arnots*, are most probably the roots of this species of bunium. They are roasted, and thus acquire the flavour of chestnuts.

Bu'nius. A species of turnip.

BU'PEINA. (*a, æ.* f.; from βου, a particle of magnitude, and πεινα, hunger.) A voracious appetite.

BU'PHAGOS. (From βου, a particle of excess, and φαγω, to eat.) The name of an antidote which created a voracious appetite in Marcellus Empericus.

BUPHTHA'LMUM. (*um, i.* n.; from βους, an ox, and οφθαλμος, an eye: so called from its flowers, which are supposed to resemble an eye.) See *Chrysanthemum leucanthemum*.

Buphthalmum creticum. See *Anthemis pyrethrum*.

Buphthalmum germanicum. See *Chrysanthemum leucanthemum*.

Buphthalmum majus. See *Chrysanthemum leucanthemum*.

BUPHTHALMUS. (*us, i.* m.; from βους, an ox, and οφθαλμος, an eye: so named from its large appearance, like an ox's eye.) 1. Houseleek.

2. Diseased enlargement of the eye.

BUPLEU'RUM. (*um, i.* n.; from βου, large, and πλευρον, a rib; so named from its having large rib-like filaments upon its leaves.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua*.

2. The pharmacopœial name of the herb hare's ear. See *Bupleurum rotundifolium*.

Bupleurum rotundifolium. Round-leaved hare's ear, or thorow wax. The systematic name of the plant called *perfoliata*, in some pharmacopœias; and *Bupleuron* and *Bupleuroides*. This plant was formerly celebrated for curing ruptures, mixed into a poultice with wine and oatmeal.

Bu'rac. (An Arabian word.) Borax, or any kind of salt.

BU'RBOT. See *Gadus lota*.

BU'RDOCK. See *Arctium lappa*.

BURGUNDY. A province of France, the vines of which afford the grape that gives the delicious wine called Burgundy. It is a light and deliciously flavoured wine, but soon becomes acid in weak stomachs.

Burgundy pitch. See *Pinus abies*.

Bu'ris. According to Avicenna, a scirrhous hernia, or hard abscess.

BURN. See *Ambustio*.

Bu'rnea. Pitch.

Burnet saxifrage. See *Pimpinella*.

Burning. An ancient term, denoting an infectious disease, got in the stews by conversing with lewd women, and supposed to be the same with what we now call the venereal disease.

Burnt hartshorn. See *Cornu ustum*.

Burnt sponge. See *Spongia usta*.

Bu'rrhi spiritus matricalis. Burrhus's spirit, for disorders of the womb. A compound of myrrh, olibanum, amber, and spirit of wine.

BU'RSA. (*a, æ.* f.; from βυρσα, a bag.) A bag. 1. The scrotum.

2. A herb called *Thlaspi bursæ pastoris*, from the resemblance of its seminal follicles to a triangular purse.

Bursa mucosa. A mucous bag, composed of proper membranes, containing a kind of mucous fat, formed by the exhaling arteries of the internal coat. The bursæ mucosæ are of different sizes and firmness, and are connected by the cellular membrane with articular cavities, tendons, ligaments, or the periosteum. Their use is to secrete and contain a substance to lubricate tendons, muscles, and bones, in order to render their motion easy.

BURSA'LIS. (From its resemblance to a *bursa*, or purse.) See *Obturator externus et internus*.

BURSA'LOGY. (*Bursalogia, æ.* f.; from βυρσα, a bag, and λογος, a discourse.) The doctrine of the bursæ mucosæ.

BUSELI'NUM. (*um, i.* n.; from βου, great, and σελινον, parsley.) A large species of parsley.

BU'SSII SPIRITUS BEZOARDICUS. The bezoardic spirit of Bussius, an eminent physician at Dresden. A distillation of ivory, sal-ammoniac, amber, &c.

BUTCHERSBROOM. See *Ruscus.*

BU'TIGA. Small red pimples on the face.

BU'TINO. Turpentine.

BU'TOMON. See *Iris pseudacorus.*

BUTTER. (*Butyrum, i.* n.; from βους, a cow, and τυρος, *coagulum*, or cream.) The oily inflammable part of milk, which is prepared in many countries as an article of food. The common mode of preserving it is by the addition of salt, which will keep it good a considerable time, if in sufficient quantity.

Fresh butter is nourishing and relaxing, but it readily becomes sour, and, in general, agrees with few stomachs. Rancid butter is one of the most unwholesome and indigestible of all foods.

Butter of antimony. See *Antimonium.*

Butter of cacao. An oily concrete white matter, of a firmer consistance than suet, obtained from the cacao nut, of which chocolate is made. The method of separating it consists in bruising the cacao and boiling it in water. The greater part of the superabundant and uncombined oil contained in the nut is by this means liquefied, and rises to the surface, where it swims, and is left to congeal, that it may be the more easily taken off. It is generally mixed with small pieces of the nut, from which it may be purified, by keeping it in fusion without water in a pretty deep vessel, until the several matters have arranged themselves according to their specific gravities. By this treatment it becomes very pure and white.

Butter of cacao is without smell, and has a very mild taste, when fresh; and in all its general properties and habitudes it resembles fat oils, among which it must therefore be classed. It is used as an ingredient in pomatums.

BUTTER-BUR. See *Tussilago petasites.*

BUTTER-FLOWER. See *Ranunculus.*

BUTTER-MILK. The thin and generally sour milk which is separated from the cream by churning it into butter.

Butterfly-shaped. See *Papilionaceus.*

BUTTERWORT. See *Pinguicula.*

BUTUA. See *Cissampelos pariera.*

BUTYRIC. (*Butyricus*, from *butyrum*, butter.) Appertaining to butter.

BUTYRIC ACID. (*Acidum butyricum*; so called, because obtained from *butyrum*, or butter.) Butter is composed of two fat bodies, analogous to those of hog's lard, of a colouring principle, and a remarkably odorous one, to which it owes the properties that distinguish it from the fats, properly so called. This principle, called butyric acid, forms well-characterised salts with barytes, strontian, lime, the oxides of copper, lead, &c.

BUTY'RUM. See *Butter.*

BUTYRUM ANTIMONII. See *Antimonium.*

BUXTON. A village in Derbyshire, in which there are warm mineral springs. *Buxtonienses aquæ.* They have been long celebrated for their medicinal properties. With respect to sensible properties, the Buxton water cannot be distinguished from common spring water, when heated to the same temperature. Its temperature, in the gentleman's bath, is invariably 82°. The principal peculiarity in the appearance of this spring, is a large quantity of elastic vapour, that rises and forms bubbles, which pass through the water, and break as soon as they reach the surface. The air of these bubbles was ascertained, by Dr. Pearson, to consist of azotic gas, mixed with a small proportion of atmospheric air. Buxton water is frequently employed both internally and externally: one of which methods often proves beneficial, when the other would be injurious: but, as a bath alone, its virtues may not be superior to those of tepid common water. As the temperature of 82° is several degrees below that of the human body, a slight shock of cold is felt on the first immersion into the bath; but this is almost immediately succeeded by a pleasing glow over the whole system. It is therefore proper for very delicate and irritable habits. The cases which derive most benefit from the *external* use of Buxton waters, are those in which a loss of action, and sometimes of sensation, affects particular limbs, in consequence of long-continued or violent inflammation, or external injury. Hence the chronic rheumatism succeeding the acute, and where the inflammation has been seated in particular limbs, is often wonderfully relieved by this bath. The *internal* use of the water has been found to be of considerable service in symptoms of defective digestion, and derangement of the alimentary organs. A judicious use of this simple remedy will often relieve the heartburn, flatulency, and sickness: it will increase the appetite, animate the spirits, and improve the health. At first, however, it sometimes occasions a diarrhœa, which is rather salutary than detrimental; but costiveness is a more usual effect, especially in sluggish habits. It also affords great relief when taken internally, in painful disorders of the bladders and kidneys; and has likewise been recommended in cases of gout: but when taken for these complaints, the addition of some aromatic tincture is recommended. In all cases of active inflammation, the use of these waters should be carefully avoided, on account of their supposed heating properties. A full course consists of

two glasses, each containing one third of a pint, before breakfast; which quantity should be repeated between breakfast and dinner. In chronic cases, a long residence on the spot is requisite to ensure the desired effect.

BU'XUS. (*us, i.* m.; from πυκαζω, to become hard.) The box-tree.

1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Triandria.*

2. The pharmacopœial name of the box. See *Buxus sempervirens.*

Buxus sempervirens. The systematic name of the *buxus* of the pharmacopœias. The leaves possess a very strong, nauseous, bitter taste, and aperient virtues. They are occasionally exhibited, in form of decoction, amongst the lower orders of people, in cases of dropsy, and asthma, and worms. As much as will lie upon a shilling, of the common dwarf box, dried and powdered, may be given at bed-time, every night, to a child.

By'arus. A plexus of blood-vessels in the brain.

Byng. A Chinese name for green tea.

Byre'thrum. (*Beretta,* Ital. or *barette,* Fr. a cap.) *Byrethrus.* An odoriferous cap, filled with cephalic drugs, for the head.

By'rsa. (Βυρσα, leather.) A leather skin, to spread plaisters upon.

Bysau'chen. (From βυω, to hide, and αυχην, the neck.) Stiffness of the neck.

BYSSOLITE. A massive mineral, of an olive green colour, found, at the foot of Mount Blanc and near Oisans, in gneiss.

By'ssus. (Hebrew.) 1. A woolly kind of moss.

2. The Pudendum muliebre.

3. A kind of fine linen.

By'thos. (Βυθος, deep.) An epithet used by Hippocrates for the bottom of the stomach.

By'zen. (From βυω, to rush together.) In a heap; throngingly. Hippocrates uses this word to express the hurry in which the menses flow in an excessive discharge.

C.

C, in the chemical alphabet, means nitre.

Cabali'stica ars. (It is derived from the Hebrew word signifying to receive by tradition.) The cabalistic art: called also *Cabala, Cabula, Kabala.* A term that hath been anciently used, in a very mysterious sense, amongst divines; and since, some enthusiastic philosophers and chemists transplanted it into medicine, importing by it somewhat magical; but such unmeaning terms are now justly rejected.

CABALLINE. (*Caballinus;* from καϐαλλος, a horse.) Of, or belonging to, a horse: applied to the coarsest aloes, because it is so drastic as to be fit only for horses.

Caballine aloes. See *Aloë.*

CABBAGE. See *Brassica.*

Cabbage tree. See *Geoffroya jamaicensis.*

Cacago'gus. (From κακκη, excrement, and αγω, to expel.) Cathartic.

CACA'LIA. (From κακον, bad, and λιαν, exceedingly; because it is mischievous to the soil on which it grows.) Κακαλια of Dioscorides. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia Æquales.*

Cacalia alpina. This plant, called also *Cacamum,* and *Leontice veterum,* and in English the strange colt's-foot, is supposed, by Paulus Ægineta and Dioscorides, to be the *Cacanum* of former writers. Its virtues are similar to those of the common colt's-foot.

Cacalia souchifolia. This is said to be an expectorant, and to check a looseness of the bowels.

Ca'camum. See *Cacalia.*

CA'CAO. See *Theobroma cacao.*

CACAPHO'NIA. (From κακος, bad, and φωνη, the voice.) Defective articulation.

Cacatoria febris. An epithet given by Silvius to a kind of intermittent, attended with copious stools.

Cacato'rius. (From *caco,* to go to stool.) That which is accompanied by copious evacuations from the bowels.

Caccio'nde. A pill recommended by Baglivi against dysenteries; its basis is catechu.

CACHE'XIA. (*a, æ.* f.; from κακος, bad, and ἑξις, a habit.) A bad condition or habit of body, known by a depraved or vitiated state of the solids and fluids.

Cachexia africana. See *Pica.*

Cache'xiæ. (The plural of *cachexia.*) A class of diseases in Cullen's Nosology, embracing three orders: viz. *Marcores, Intumescentiæ,* and *Impetigines.*

CACCHINNA'TIO. (From *cachinno,* to laugh aloud.) Immoderate laughter, as in some hysteric and maniacal affections.

Ca'chlex. A little stone or pebble. Galen says, that the cachleces, heated in the fire and quenched in whey, become astringents, and useful in dysenteries.

CACHOLONG. A variety of quartz.

Cacho're. A name of catechu.

CA'CHRYS. (*rys, ryos.* f.; καχρυς, from κλιω, to burn; which is used in various senses.) 1. The oak apple, beech nut, and some other seeds, which were supposed to have a heating property.

2. Galen says it sometimes means parched barley.

3. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Cachrys odontalgica. A plant, the root of which may be substituted for that of the pyrethrum against toothach.

Cachu. See *Acacia catechu.*

CACHU'NDE. A medicine highly celebrated among the Chinese and Indians, made of several aromatic ingredients, perfumes, medicinal earths, and precious stones. They make the whole into a stiff paste, and form out of it several figures, according to their fancy, which are dried for use. These are principally used in the East Indies, but are sometimes brought over to Portugal. In China, the principal persons usually carry a small piece in their mouths, which is a continued cordial, and gives their breath a very sweet smell. It is highly esteemed as a medicine in nervous complaints; and it is reckoned a prolonger of life, and a provocative to venery; the two great intentions of most of the medicines used in the East.

Cachy'mia. Κακυμια. An imperfect metal, or an immature metalline ore, according to Paracelsus.

Cacoalexite'rium. (From κακος, bad, and αλεξιτηρεω, to preserve.) An antidote to poison or against infectious diseases.

CACOCHO'LIA. (*a, æ.* f.; from κακος, and χολη, bile.) A vitiated or unhealthy condition of the bile.

CACOCHY'LIA. (*a, æ.* f.; from κακος, bad, and χυλη, the chyle.)

1. Unhealthy chyle.

2. Depraved chylification.

CACOCHY'MIA. (*a, æ.* f.; from κακος, bad, and χυμος, juice, or humour.) A diseased or unhealthy state of the humours.

CACOCNE'MUS. (From κακος, bad, and κνημη, the leg.) Having a natural defect in the tibia or leg.

CACOCORE'MA. (From κακος, bad, and κορεω, to purge or cleanse.) A medicine which purges off the vitiated humours.

CACODÆ'MON. (*on, onis.* m.; from κακος, bad, and δαιμων, a spirit.)

1. An evil spirit, or genius, which was supposed to preside over the bodies of men, and afflict them with certain disorders.

2. The night-mare.

Cacodes. Offensive matter, voided by the stomach or bowels.

CACO'DIA. (*a, æ.* f.; from κακος, bad, and οζω, to smell.) A defect in the sense of smelling.

CACOE'THES. (*es, is,* n.; from κακος, ill, and ηθος, a word which, when applied to diseases, signifies a quality, or a disposition.) Hippocrates applied this word to malignant and difficult distempers. Galen, and some others, express by it an incurable ulcer, that is rendered so through the acrimony of the humours flowing to it. Linnæus and Vogel use this term much in the same sense with Galen, and describe the ulcer as superficial, spreading, weeping, and with callous edges.

CACOPA'THIA. (*a, æ.* f.; from κακος, bad, and παθος, affection.) An ill affection of the body, or part.

CACOPHO'NIA. (*a, æ.* f.; from κακος, bad, and φωνη, the voice.)

1. A defect in the organs of speech.

2. A bad pronunciation.

CACOPRA'GIA. (From κακος, bad, and πραττω, to perform.) A disease in those viscera by which nutrition is performed.

Cacorry'thmus. (*us, i.* m.; from κακος, bad, and ρυθμος, order.) A disordered pulse.

CACOS. Κακος. Evil: bad.

CACO'SIS. (*is, is.* m.; from κακος, bad.) A bad disposition of body.

CACOSI'TIA. (*a, æ.* f.; from κακος, and σιτιον, food.) An aversion to food, or nausea.

CACOSPHY'XIA. (*a, æ.* f.; from κακος, bad, and σφυξις, pulse.) A disorder or bad state of the pulse.

CACOSTO'MACHUS. (*us, i.* m.; from κακος, bad, and στομαχος, the stomach.) A bad or disordered stomach.

CACO'STOMUS. (*us, i.* m.; from κακος, bad, and στομα, a mouth.) 1. A badly formed mouth.

2. Disordered state of the mouth.

CACOTHY'MIA. (*a, æ.* f.; from κακος, ill, and θυμος, the mind.) A vicious disposition or diseased state of the mind.

CACOTRO'PHIA. (*a, æ.* f.; from κακος, ill, and τροφη, nutriment.)

1. A vitiated nourishment.

2. A wasting of the body, from want of nutrition.

CA'CTUS. (*us, i.* f.; from κακτος, the Greek name of a plant described by Theophrasta.) The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Monogynia.* The melon-thistle.

Cactus opuntia. The systematic name of the *opuntia* of the pharmacopœias. The prickly leaves of this plant abound with a mucilaginous matter, which is esteemed in its native countries an emollient, in the form of poultice.

CACU'BALUS. (*us, i.* m.; from κακος, evil, and βαλλω, to cast out: so named, because it was thought to be efficacious in expelling poisons.) See *Cucubalus bacciferus.*

Ca'cule. The Arabian for cardamoms.

CACU'MEN. (*en, inis.* neut.) The top or point.

Cadago pall. See *Nerium.*

CADA'VER. (*er, eris.* neut.; from *cado*, to fall: because the body, when deprived of life, falls to the ground.) A carcase, or body deprived of life.

CA'DMIA. (*a, æ,* f.; Hebrew.) See *Zinc.*

Cadmia factitia. See *Tutia.*

Cadmia fornacum. See *Tutia.*

Cadmia fossilis. See *Calamine.*

Cadmia lapidosa. See *Calamine.*

Cadmia metallica. A name given, by the Germans, to cobalt.

CADMIUM. (*um, ii.* n.) A metal, first discovered in some carbonate of zinc, in Hanover. It has been since found in the Derbyshire silicates of zinc.

Its colour is a fine white, with a slight shade of bluish-grey, approaching much to that of tin; which metal it resembles in lustre and susceptibility of polish. Its texture is compact, and its fracture hackly.

Cadmium forms a single oxide.

CADOGAN, William, published a small treatise on the management of children, which was very much approved. In 1764, his *Dissertation on the Gout and all Chronic Diseases*, attracted considerable attention, being written in a popular style. He referred the gout principally to indolence, vexation, and intemperance; and his plan of treatment is generally judicious. He died in 1797, at an advanced age.

Cadtchu. See *Acacia catechu.*

Caduca membrana. See *Decidua.*

CADU'CUS. (From *cado*, to fall.) Falling off: applied generally in natural history.

1. *In Botany*, applied to the shedding or falling off, before the unfolding of the flower or leaf; as the *perianthium* of Papaver, the *stipulæ* of *Prunus avium*. This term is expressive of the shortest period of duration, and has different acceptations, according to the different parts of the plant to which it is applied. A calyx is said to be caducous, which drops at the first opening of the petals, or even before, as in the poppy. Petals are caducous, which are scarcely unfolded before they fall off, as in *Thalictrum;* and such leaves as fall off before the end of summer, have obtained this denomination.

2. In *Anatomy*, applied to a membrane. See *Deciduus*, and *Parasiticus.*

3. In *Pathology*, *Morbus caducus:* the falling sickness. See *Epilepsia.*

CÆ'CITAS. (From *cæcus*, blind.) Blindness. See *Caligo*, and *Amaurosis.*

CÆ'CUM. (*um, i.* m.; from *cæcus*, blind: so called from its being perforated at one end only.) The blind gut. The first portion of the large intestines, placed in the right iliac region, about four fingers' breadth in length. It is in this intestine that the ileum terminates by a valve, called the valve of the cæcum. The *appendicula cæci vermiformis* is also attached to it. See *Intestines.*

CÆCUS. Blind: applied in anatomy to canals which terminate abruptly or in a pouch; as the *intestinum cæcum.*

CÆ'LIUS, Aurelianus, is supposed to have been born at Sicca, in Africa, and is referred by Le Clerc to the fifteenth century, from the harshness of his style. He has left a Latin translation of the writings of Soranus, with additional observations, partly collected from others, partly from his own experience. The work is in eight books, three on acute, the rest on chronic disorders.

Cæ'ros. *Καιρος.* Hippocrates, by this word, means the opportunity or moment in which whatever is to be effected should be done.

CÆRULEUS. Blue. Applied to sky-blue, or the blue of the flower of borage. See *Colour.*

CÆSALPINI'A. (*a, æ.* f.; so named in honour of Cæsalpinus, chief physician to Pope Clement VIII.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

Cæsalpinia crista. The tree that affords the Brazil wood. It is of the growth of the Brazils in South America, and also of the Isle of France, Japan, and elsewhere. It is chiefly used as a red dye.

CÆSALPI'NUS, Andrew, was born in Tuscany in 1519. His works are numerous, and evince much genius and learning. In 1571, he published a work, defending the philosophy of Aristotle against the doctrines of Galen, from some passages in which he appears to have approached very near to a knowledge of the circulation of the blood; having explained the use of the valves of the heart, and pointed out the course which these compelled the blood to take on both sides during the contraction and dilatation of that organ. In a treatise *De Plantis*, he justly compared the seeds to the eggs of animals; and formed an arrangement of them according to the parts of fructification.

Cæ'sares. See *Cæsarian.*

CÆSARIAN. (*Cæsarianus*, derived from Julius Cæsar, who is said to have been cut out of his mother's womb: hence those who are so brought into the world are called *Cæsares*, and the operation is termed the *Cæsarian.*) Appertaining to Julius Cæsar.

Cæsa'rian operation. The operation for extracting the fœtus from the uterus, by dividing the integuments of the abdomen and the uterus. See *Cæsarian.*

There are three cases in which this operation may be necessary: — 1. When the fœtus is perceived to be alive, and the mother dies, either in labour or in the last two months. 2. When the fœtus is dead, but cannot be delivered in the usual way, from the deformity of the mother, or the disproportionate size of the child. 3. When both the mother and the child are living, but delivery cannot take place, from the same causes as in the second instance. Both the mother and the child, if accounts can be credited, have often lived after the Cæsarian operation, and the mother even borne children afterwards.

CÆSIUS. A dull light blue-grey colour. See *Colour.*

Cæsones. The same as Cæsares.

CÆSPITO'SUS. (From *Cæspes*, turf.) Cæspitose: matted: interwoven together.

Cæ'tchu. See *Acacia catechu.*

Caf; *Cafa; Caffa.* Names given by the Arabians to camphire.

CAFFEIN. The name of a bitter principle procured from coffee by Chenevix, by adding muriate of tin to an infusion of unroasted coffee. From this he obtained a precipitate, which he washed and decomposed by sulphuretted hydrogene. The supernatant liquid contained this principle, which occasioned a green precipitate in concentrated solutions of iron. When the liquid was evaporated to dryness, it was yellow and transparent, like horn. It did not attract moisture from the air, but was soluble in water and alkohol. The solution had a pleasant bitter taste, and assumed with alkalies a garnet-red colour. It is almost as delicate a test of iron as infusion of galls is; yet gelatine occasions no precipitate with it.

CAGA'STRUM. A barbarous term used by Paracelsus, to express the morbific matter which generates diseases.

CAITCHU. See *Acacia catechu.*

CAIUS, JOHN, was born at Norwich in 1510. After studying at Cambridge, and in different parts of Italy, and distinguishing himself by his interpretations of Hippocrates, Galen, and other ancient authors, he graduated at Bologna. In 1544, he returned to this country, and for some time read lectures in anatomy to the corporation of surgeons in London. He was physician to Edward VI., to Mary, and to Elizabeth. On the death of Linacre, he was chosen president of the College of Physicians, and during the seven years, for which he held that office, performed many important services. He was also a signal benefactor to Gonvil Hall, where he studied at Cambridge, having obtained permission to erect it into a college, considerably enlarging the building, and assigning provision for three fellows and twenty scholars. His death happened in 1573. He published a dissertation *De Canibus Britannicis,* which Mr. Pennant has entirely followed in his British Zoology, and some other learned works.

CA'JAN. See *Phaseolus creticus.*

CA'JEPUT OIL. See *Melaleuca.*

CALA'BA. See *Catophyllum inophyllum.*

CALAGUA'LÆ RADIX. See *Polypodium calaguala.*

CALAMA'CORUS. Indian reed.

CALAMAGRO'STIS. (*is, is.* f.; from καλαμος, a reed, and αγρωστις, a sort of grass.) Reed grass. *Gramen Arundinacum.* The *Arundo calamagrostis* of Linnæus; the root of which is said to be diuretic and emmenagogue.

CALAMARIÆ. The name of an order of Linnæus's fragments of a natural method, which embraces the reed-plants.

CALAMARIUS. (From *calamus,* a reed.) Reed-like.

CALA'MBAC. An Indian name for agalolchum. See *Lignum Aloes.*

CALAME'DON. (From καλαμος, a reed.) A sort of fracture which runs along the bone, in a straight line, like a reed, but is lunated in the extremity.

CALAMINA PRÆPARATA. Prepared calamine. Burn the calamine, and reduce it to powder; then let it be brought into the state of a very fine powder, in the same manner that chalk is directed to be prepared. See *Calamine.*

CA'LAMINE. (*Calamina, æ,* f.; from *calamus,* a reed: so called from its reed-like appearance.) *Cadmia, Cathmia, Cadmia lapidosa ærosa, Cadmia fossilis, Lapis calaminaris.* A mineral, containing oxide of zinc and carbonic acid, united with a portion of iron, and sometimes other substances. It is very heavy, moderately hard and brittle, of a grey, yellowish, red, or blackish brown; found in quarries of considerable extent, in several parts of Europe, and particularly in this country, in Derbyshire, Gloucestershire, Nottinghamshire, and Somersetshire; as also in Wales. The calamine of England is, by the best judges, allowed to be superior in quality to that of most other countries. It seldom lies very deep, being chiefly found in clayey grounds, near the surface. In some places it is mixed with lead ores. This mineral is an article in the materia medica; but, before it comes to the shops, it is usually roasted, or calcined, to separate some arsenical or sulphureous particles which, in its crude state, it is supposed to contain, and in order to render it more easily reducible into a fine powder. In this state, it is employed in collyria, for weak eyes, for promoting the cicatrisation of ulcers, and healing excoriations of the skin. It is the basis of an officinal cerate, called Ceratum calaminæ by the London College, formerly called ceratum lapidis caliminaris, ceratum epuloticum; and ceratum carbonatis zinci impuri by the Edinburgh College. These compositions form the cerate which Turner strongly recommends for healing ulcerations and excoriations, and which have been popularly distinguished by his name. The collyria in which the prepared calamine has been employed, have consisted simply of that substance added to rose-water, or elder-flower water.

CALAMINT. See *Melissa calamintha.*

Calamint, mountain. See *Melissa grandiflora.*

CALAMI'NTHA. (*a, æ.* f.; from καλος, beautiful, or καλαμος, a reed, and μινθη, mint.) See *Melissa calamintha.*

CALAMINTHA ANGLICA. See *Melissa.*

CALAMINTHA HUMILIOR. See *Glecoma.*

CALAMINTHA MAGNO FLORE. See *Melissa grandiflora.*

CALAMINTHA MONTANA. See *Melissa.*

CALAMINTHA PALUSTRIS. See *Mentha.*

CALAMITA. See *Styrax.*

CALAMITIS. The grey oxide of zinc or tutia, which, by fixing on pieces of iron, &c. had the appearance of a reed.

CA'LAMUS. (*us, i.* m.; from *Ka'am,* an Arabian word.) 1. A general name denoting the stalk of any plant.

2. The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia.*

CALAMUS AROMATICUS. See *Acorus*.

CALAMUS AROMATICUS ASIATICUS. See *Acorus calamus*.

CALAMUS ODORATUS. See *Acorus*.

CALAMUS ROTANG. The Dragon's blood plant; called also, *Cinnabaris græcorum*, *Draconthæma*, *Asegen*, and *Asegon*. The red resinous juice called dragon's blood, is obtained by wounding the bark of this plant: *Calamus rotang — caudice densissime aculeato, aculeis erectis, spadice erecto*. The *Petrocarpus draco* and *Dracæna draco* also afford this resin. It is chiefly obtained from the Molucca islands, Java, and other parts of the East Indies. It is generally much adulterated, and varied in goodness and purity. The best kind is of a dark red colour, which, when powdered, changes to crimson: it is insoluble in water, but soluble in a great measure in alkohol; it readily melts and catches flame, has no smell, but to the taste discovers some degree of warmth and pungency. The ancient Greeks were well acquainted with the astringent power of this drug; in which character it has since been much employed in hæmorrhages, and in alvine fluxes. At present, however, it is not used internally, being superseded by more certain and effectual remedies of this numerous class.

CALAMUS SCRIPTORIUS. A furrow or kind of canal at the bottom of the fourth ventricle of the brain, so called from its resemblance to a writing pen.

CALAMUS VULGARIS. See *Acorus*.

CALATHIANA. (*a, æ*. f.; from καλαθος, a twig basket: so called from the shape of its flowers.) See *Gentiana pneumonanthe*.

CALBI'ANUM. The name of an old plaster.

CALCA'DINUM. Vitriol.

CALCA'DIS. An Arabian name for white vitriol and alkali.

CALCA'NEUM. (*um, i*. n.; from *calx*, the heel.) See *Calcis os*.

CALCANTHOS. See *Calcanthum*.

CALCAN'THUM. (*um, i*. n.; from χαλκος, brass, and ανθος, a flower: *i. e.* flowers of brass.) *Calcanthos*. Copperas; Vitriol.

CALCAR. (*ar, aris*. n.; from *calx*, the heel.) 1. The heel-bone.

2. A spur, or horn. In *Botany*, applied to a part of the ringent and personate corolla of plants. It is a tube forming an obtuse or acute sac, at the side of the receptacle. It is of rare occurrence.

3. The flower of the larkspur is called *flos calcaris*.

4. (From *caleo*, to heat.) The furnace of a laboratory.

CALCARA'TUS. Spurred: applied to the corols and nectaries of plants; as *Corolla calcarata*, *Nectarium calcaratum*; in *Aquilegia* and *Antirrhinum linaria*.

CALCAREOUS. (*Calcarius*; from *calx*, lime.) That which partakes somewhat of the nature and qualities of *calx* or lime.

CALCAREOUS EARTH. See *Calx* and *Lime*.

CALCAREOUS SPAR. Crystallised carbonate of lime, which occurs in more than 600 different forms. It is found in veins in all rocks from granite to alluvial strata. The rarest and most beautiful crystals are found in Derbyshire, but it exists in every part of the world.

CALCA'RIS FLOS. The larkspur.

CALCARIUS LAPIS. See *Lime* and *Calx*.

CA'LCATAR. A name of vitriol.

CAL'CATON. White arsenic.

CALCATRIPPA. See *Delphinium*.

CALCEDONY. A mineral, so called from Calcedon, in Asia Minor, where it was found in ancient times.

CALCE'NA. *Calcenonius*. *Calcetus*. Paracelsus uses these words to express the tartarous matter in the blood; or that the blood is impregnated with tartarous principles.

CA'LCEUM EQUINUM. (From *calceus*, a shoe, and *equus*, a horse: so called from the figure of its leaf.) See *Tussilago*.

CALCHANTRUM. Copperas.

CALCHITHEOS. (From καλχιον, purple.) Verdigris.

CALCHOI'DES. (From χαλιξ, a chalk-stone, and ειδος, form.) An obsolete name, applied to the cuneiform bones.

CALCIDI'CIUM. The name of a medicine in which arsenic is an ingredient.

CALCI'FRAGA. (*a, æ*. f.; from *calx*, a stone, and *frango*, to break: so named from its supposed property of breaking the human calculus.) Breakstone. In *Scribonius Largus*, it means the herb spleenwort, or *scolopendrium*; others mean by it the *Pimpinella saxifraga* of Linnæus.

CALCIGRADUS. (From *calx*, the heel, and *gradus*, a step.) One who in walking lays much stress on his heels.

CALCINA'TION. (*Calcinatio, onis*. f.; from *calx*, lime.) The fixed residues of such matters as have undergone combustion are called cinders, in common language, and calces, but now more commonly oxides, by chemists; and the operation, when considered with regard to these residues, is termed calcination. In this general way, it has likewise been applied to bodies not really combustible, but only deprived of some of their principles by heat. Thus we hear of the calcination of chalk, to convert it into lime by driving off its carbonic acid and water; of gypsum, or plaster-stone; of alum; of borax; and other saline bodies, by which they are deprived of their water of crystallisation; of bones which lose their volatile parts by this treatment, and of various other bodies.

CALCINATUM MAJUS. Whatsoever is dulcified by the chemical art, which was not so by nature; such as dulcified mercury, lead, and the like substances, which are very speedily consolidated.

CALCINATUM MAJUS POTERII. Mercury dissolved in aqua fortis, and precipitated with salt water.

CALCINATUM MINUS. Any thing which is sweet by nature, and speedily cures; as sugar, manna, tamarinds, &c.

CALCINA'TUS. Calcined.

CALCINO'NIUS. See *Calcena.*

CA'LCIS AQUA. See *Calcis liquor.*

CALCIS CARBONAS. See *Creta præparata, Testæ preparatæ,* and *Carbonic acid.*

CALCIS CHLORAS. Chlorate of lime. This preparation is coming into general use to correct putrid tending and putrid substance, to destroy contagion, &c. See *Soda, chlorate of,* and *Chloric acid.*

CALCIS LIQUOR. Solution of lime, formerly called *aqua calcis.* Lime-water. Take of lime, half a pound; boiling distilled water, twelve pints. Pour the water upon the lime, and stir them together; next cover the vessel immediately, and let it stand for three hours; then keep the solution upon the remaining lime in stopped glass bottles, and pour off the clear liquor when it is wanted for use.

Lime is soluble in about 450 times its weight of water, or little more than one grain in one fluid ounce. It is given internally, in doses of two ounces and upwards, in cardialgia, spasms, diarrhœa, &c. and in proportionate doses in convulsions of children arising from acidity, or ulcerated intestines, intermittent fevers, &c. Externally, it is applied to burns and ulcers.

CALCIS MURIAS. Muriate of lime: called also, *Calx solita, Sal ammoniacus fixus.* Take of the salt remaining after the sublimation of subcarbonate of ammonia two pounds, water a pint; mix and filter through paper. Evaporate the salt to dryness, and preserve it in a closely-stopped vessel. This preparation is exhibited with the same views as the muriate of barytes. It possesses deobstruent, diuretic, and cathartic virtues, and was much used by the celebrated Fourcroy against scrophula, and other analogous diseases. Six, twelve, and twenty grains, are given to children three times a day, and a drachm to adults.

CALCIS MURIATIS LIQUOR. Take of muriate of lime two ounces, distilled water three fluid ounces; dissolve the salt in the water, and filter it through paper.

CALCIS OS. *Calcar. Calcaneum Pterna.* The largest bone of the tarsus, which forms the heel. It is situated posteriorly under the astragalus, is very regular, and divided into a body and processes. It has a large *tuberosity,* or knob, projecting behind to form the heel. A *sinuous cavity,* as its fore-part, which, in the fresh subject, is filled with fat, and gives origin to several ligaments. Two *prominences,* at the inner and fore-part of the bone, with a pit between them, for the articulation of the under and fore-part of the astragalus. A *depression,* in the external surface of the bone near its fore-part, where the tendon of the peronæus longus runs. A large *cavity,* at the inner side of the bone, for lodging the long flexors of the toes, together with the vessels and nerves of the sole. There are two *prominences,* at the under and back part of this bone, that give origin to the aponeurosis, and several muscles of the sole. The anterior surface of the os calcis is concave, for its articulation with the os cuboides, and it is articulated to the astragalus by ligaments.

CALCIS VIVI FLORES. The pellicle on the surface of lime-water.

CALCITA'RI. Alkaline salt.

CALCITE'A. Vitriol.

CALCITEO'SA. Litharge.

CA'LCITHOS. Verdigris.

CALCITRA'PA. (*a, æ.* f.; an old botanical term of similar meaning to *tribulus,* compounded of *calco,* to tread or kick, and τρεπω, to turn, because the caltrops are continually kicked over, if they fail of their intended mischief. See *Trapa.*) See *Centaurea calcitrapa.*

CALCITRAPA OFFICINALIS. See *Centaurea.*

CALCITRE'A. Vitriol.

CALCIUM. (*um, i.* n.; from *calx,* of which it is the basis.) The metallic basis of lime. There is only one known combination of calcium and oxygene, which is the important substance called lime.

CA'LCOTAR. Vitriol.

CALCSINTER. Stalactitical carbonate of lime, which is continually forming by the infiltration of carbonated lime water through the crevices of the roofs of caverns. The irregular masses on the bottoms of caves have been called *stalagmites.*

CALCTUFF. An alluvial formation of carbonate of lime, probably deposited from calcareous springs of a yellowish dull grey colour, containing impressions of vegetable matter.

CALCULI'FRAGUS. (From *calculus,* a stone, and *frango,* to break.) Stone-breaker: having the power to break stone in the human body. 1. Applied to medicines which are supposed to have this power. See *Lithontriptic.*

2. The name of an instrument which is introduced into the bladder to break down calculi. See *Lithontrite.*

3. The scolopendrium, and pimpernel. See *Calcifraga.*

CALCULOSUS. Afflicted with the stone.

CA'LCULUS. (*us, i.* m.; diminutive of *calx,* a lime-stone.) I. In *Natural History,* a stone or pebble.

II. In *Pathology,* a stone-like concretion formed in the urinary bladder, the kidney, the gall-bladder, in the intestines, or in and about the joints.

That which is found in the urinary bladder is commonly denominated *Calculus humanus; Bezoar microcosmicum.* The Gravel and Stone. In English we understand by *gravel,* small sand-like concretions, or stones, which pass from the kidneys through the ureters in a few days; and by *stone,* a calculous concretion in the kidneys, or bladder, of too large a size to pass without great difficulty. Similar concretions are found occasionally in other cavities or passages. When a disposition to form minute calculi or gravel exists, we often find nephritic paroxysms, as they are called (see *Nephritis*), which consist of a pain in the back, shooting down through the pelvis to the thighs; sometimes a numbness in one leg, and a retraction of either testicle in men, symptoms arising from the irritation of a stone passing

through the ureters, as these cross the spermatic cord, on the nerves passing to the lower extremities. These pains, often violent, are terminated by the painful discharge of small stones through the urethra, and the patient is for a time easy. What, however, is meant by the stone is a more serious and violent disease. It is singular that these discharges of small gravel do not usually terminate in stone. Many have experienced them during a long life, without any more serious inconvenience; while the latter is a disease chiefly of the young, and depending on circumstances not easily explained. If the stone attacks persons more advanced in age, it is often the consequence of paroxysms of gout, long protracted, and terminating imperfectly.

When once a stone has acquired a moderate size, it usually occasions the following symptoms: — frequent inclination to make water, excessive pain in voiding it drop by drop, and sometimes a sudden stoppage of it, if discharged in a stream: after making water, great torture in the glans penis, which lasts one, two, or three minutes; and, in most constitutions, the violent straining makes the rectum contract and expel its excrements; or, if it be empty, occasions a tenesmus, which is sometimes accompanied with a prolapsus ani. The urine is often tinctured with blood, from a rupture of the vessels, and sometimes pure blood itself is discharged. Sometimes the urine is very clear, but frequently there are great quantities of slimy sediment deposited at the bottom of it, which is only a preternatural separation of the mucilage of the bladder, but has often been mistaken for pus. The stone is a disease to which both sexes and all ages are liable; and calculi have even been found in the bladders of very young children, nay of infants only six months old.

Women seem less subject to this complaint than men, either owing to constitutional causes, or to the capaciousness, shortness, and straightness of their urethræ, allowing the calculi to be discharged while small, together with the urine.

The Seat and Physical Properties of Urinary Calculi.

Calculi are found in different parts of the urinary system, in the pelvis of the kidney, in the ureters, in the bladder, and urethra; but as they, for the most part, originate in the kidney, the calculi renales make the nucleus of the greatest number of urinary stones. The *calculi renales* differ greatly with respect to their external qualities; for the most part, however, they consist of small, concrete, roundish, smooth, glossy, and crystalline bodies, of a red-yellow colour, like that of wood, and so hard as to admit of polishing. On account of their minuteness, they easily pass through the urinary passages, in form of gravel, which, being sometimes of a rough surface, cause several complaints on their passage. But in some instances they are of too great a size to be able to pass along the ureters; in which case they increase in the kidneys, sometimes to a great size. Calculi renales of this kind are generally of a brown, dark red, or black colour, and surrounded with several strata of coagulated blood and pus; they have also been observed of a yellow, reddish, and lighter colour; and some consisting of an homogeneous stony mass, but white or grey calculi renales are very rarely to be met with. Amongst the great number that were examined, one or two only were found of a grey or blackish colour, and of a composition similar to those which generally bear the name of mulberry-like stones.

The stones in the ureters, which, on passing into the ureters, are prevented by their size from descending into the bladder, frequently increase very much: they, however, rarely occur; their colour is white, and they consist of phosphate of lime.

The stones in the bladder are the most frequent urinary concrements that have been principally examined; they draw their first origin from the kidneys, whence they descend into the bladder, where they increase; or they immediately originate and increase in the bladder; or they arise from a foreign body that by chance has got into the bladder, which not unfrequently happens, particularly in the female sex. Concretions of this kind differ greatly in their respective physical qualities and external form, which, however, is generally spherical, oval, or compressed on both sides; and sometimes, when there are several stones in the bladder, they have a polyhedrous or cubical form; their extremities are frequently pointed or roundish, but they are very seldom found cylindrical, and more rarely with cylindrical ends.

There is a great variety in the size of the calculi, and likewise in their colour, which is materially different, according to their respective nature and composition. They occur, 1. Of a yellowish colour, approaching nearly to red, or brown; such stones consist of lithic acid. 2. Grey, or more or less white; these stones always contain phosphates of earths. 3. Dark grey, or blackish; stones of this colour have oxalates of earths. Many stones show brown or grey spots, on a yellow or white ground, generally raised on the surface, and consisting of oxalate of lime, which is enclosed in lithic acid, when the ground-colour of the stone is of a wood colour, or in phosphate of lime, when it is white. These spots are, in general, only to be observed in the middle of the stone, or at one of its extremities.

All that is here stated is the result of observations on more than 600 calculi; and different other colours, that are said to have been observed, either arise from heterogeneous substances, or are merely variations of the above colours. Their surface is smooth and polished in some; in others, only smooth; and in others uneven, and covered with rough or smooth corpuscles, which are always of a yellow colour; in some, the surface is partly smooth and partly rough. The white ones

are frequently even and smooth, half transparent, and covered with shining crystals, that generally indicate phosphate of ammonia, with magnesia; or they are faint, and consist of minute grains; or rough, in which case they consist of phosphate of lime. The brown and dark grey stones are, from their similarity to mulberries, called mulberry-stones, and being frequently very rugged, they cause the most pain of all.

On examining the specific weight of urinary calculi in more than 500 specimens, it was found to be, in the lightest, as 1213·1000, in the heaviest, as 1976·1000. Their smell is partly strong, like urine or ammonia, partly insipid, and terreous; especially the white ones, which are like sawed ivory, or rasped bone.

The internal texture of calculi is but seldom guessed from their external appearance, particularly when they exceed the size of a pigeon's egg. On breaking them, they generally separate into two or three strata, more or less thick and even, which prove that they are formed by different precipitations, at different times. In the middle, a nucleus is generally seen, of the same mass as the rest. When the place they are broken at is finely streaked, and of a yellow or reddish colour, the lithic acid predominates; but when they are half transparent, luminous like spar, they have ammoniacal phosphate of magnesia in them, and phosphate of lime, and then they are brittle and friable; but when they are so hard as to resist the instrument, of a smooth surface, and a smell like ivory, they contain oxalate of lime. It frequently happens, that the exterior stratum consists of white phosphate of earth, while the nucleus is yellow lithic acid, or oxalate of lime, covered sometimes with a yellow stratum of lithic acid, in which case the nucleus appears radiant; but when it consists of lithic acid, and is covered with white phosphate of earth, it is roundish, oval, and somewhat crooked. These concretions have very seldom three strata; namely, on the outside a phosphate, towards the inside lithic acid, and quite withinside an oxalate of lime; but still rarer these substances occur in more strata, or in another order, as before mentioned.

Stones of the urethra are seldom generated in the urethra itself; however, there are instances of their having been formed in the fossa navicularis, by means of foreign bodies that have got into the urethra. We also very frequently observe stony concrements deposited between the glans and prepuce. All the concretions produced in the inside and outside the urethra consist of phosphate of earths, which are easily precipitated from the urine. There are likewise stones in the urethra which have come out of the bladder, having been produced there, or in the kidneys; and they generally possess the properties of stones of the kidneys.

The different constituents of Urinary Calculi.

"If we except Scheele's original observation concerning the uric or lithic acid, all the discoveries relating to urinary concretions are due to Dr. Wollaston; discoveries so curious and important, as alone are sufficient to entitle him to the admiration and gratitude of mankind. They have been fully verified by the subsequent researches of Fourcroy, Vauquelin, and Brande, Drs. Henry, Marcet, and Prout. Dr. Marcet, in his late valuable essay on the chemical history and medical treatment of calculous disorders, arranges the concretions into nine species:—

1. The lithic acid calculus.
2. The ammonia magnesian phosphate calculus.
3. The bone earth calculus, or phosphate of lime.
4. The fusible calculus, a mixture of the 2d and 3d species.
5. The mulberry calculus, or oxalate of lime.
6. The cystic calculus; cystic oxide of Dr. Wollaston.
7. The alternating calculus, composed of alternate layers of different species.
8. The compound calculus, whose ingredients are so intimately mixed, as to be separable only by chemical analysis.
9. Calculus from the prostate gland, which, by Dr. Wollaston's researches, is proved to be phosphate of lime, not distinctly stratified, and tinged by the secretion of the prostate gland.

To the above Dr. Marcet has added two new sub-species. The first seems to have some resemblance to the cystic oxide, but it possesses also some marks of distinction. It forms a bright lemon yellow residuum on evaporating its nitric acid solution, and is composed of laminæ. But the cystic oxide is not laminated, and it leaves a white residuum from the nitric acid solution. Though they are both soluble in acids as well as alkalies, yet the oxide is more so in acids than the new calculus, which has been called by Dr. Marcet, from its yellow residuum, *xanthic* oxide. Dr. Marcet's other new calculus was found to possess the properties of the fibrin of the blood, of which it seems to be a deposite. He terms it *fibrinous* calculus.

Species 1. *Uric acid calculi.* Dr. Henry says, in his instructive paper on urinary and other morbid concretions, read before the Medical Society of London, March 2. 1819, that it has never yet occurred to him to examine calculi composed of this acid in a state of absolute purity. They contain about 9-10ths of the pure acid, along with urea, and an animal matter which is not gelatine, but of an albuminous nature. This must not, however, be regarded as a cement. The calculus is aggregated by the cohesive attraction of the lithic acid itself. The colour of lithic acid calculi is yellowish or reddish brown, resembling the appearance of wood. They have commonly a smooth polished surface, a lamellar or radiated structure, and consist of fine particles well compacted. Their sp. gra-

vity varies from 1·3 to 1·8. They dissolve in alkaline lixivia, without evolving an ammoniacal odour, and exhale the smell of horn before the blowpipe. The relative frequency of lithic acid calculi will be seen from the following statement:—Of 150 examined by Mr. Brande, 16 were composed wholly of this acid, and almost all contained more or less of it. Fourcroy and Vauquelin found it in the greater number of 500 which they analysed. All those examined by Scheele consisted of it alone; and 300 analysed by Dr. Pearson, contained it in greater or smaller proportion. According to Dr. Henry's experience, it constitutes 10 urinary concretions out of 26, exclusive of the alternating calculi. And Mr. Brande lately states, that out of 58 cases of *kidney* calculi, 51 were lithic acid, 6 oxalic, and 1 cystic.

Species 2. *Ammonia-magnesian phosphate.* This calculus is white like chalk, is friable between the fingers, is often covered with dog-tooth crystals, and contains semi-crystalline layers. It is *insoluble* in alkalies, but soluble in nitric, muriatic, and acetic acids. According to Dr. Henry, the earthy phosphates, comprehending the 2d and 3d species, were to the whole number of concretions in the ratio of 10 to 85. Mr. Brande justly observes, in the 16th number of his Journal, that the urine has at all times a tendency to deposit the triple phosphate upon any body over which it passes. Hence drains by which urine is carried off, are often incrusted with its regular crystals; and in cases where extraneous bodies have got into the bladder, they have often in a very short time become considerably enlarged by deposition of the same substance. When this calculus, or those incrusted with its semi-crystalline particles, are strongly heated before the blowpipe, ammonia is evolved, and an imperfect fusion takes place. When a little of the calcareous phosphate is present, however, the concretion readily fuses. Calculi composed *entirely* of the ammonia-magnesian phosphate are very rare. Mr. Brande has seen only two. They were crystallised upon the surface, and their fracture was somewhat foliated. In its pure state, it is even rare as an incrustation. The powder of the ammonia-phosphate calculus has a brilliant white colour, a faint sweetish taste, and is somewhat soluble in water. Fourcroy and Vauquelin suppose the above deposits to result from incipient putrefaction of urine in the bladder. It is certain that the triple phosphate is copiously precipitated from urine in such circumstances out of the body.

Species 3. The *bone-earth calculus.* Its surface, according to Dr. Wollaston, is generally pale brown, smooth, and when sawed through it appears of a laminated texture, easily separable into concentric crusts. Sometimes, also, each lamina is striated in a direction perpendicular to the surface, as from an assemblage of crystalline needles. It is difficult to fuse this calculus by the blowpipe, but it dissolves readily in dilute muriatic acid, from which it is precipitable by ammonia. This species, as described by Fourcroy and Vauquelin, was white, without lustre, friable, staining the hands, paper, and cloth. It had much of a chalky appearance, and broke under the forceps, and was intimately mixed with a gelatinous matter, which is left in a membraneous form, when the earthy salt is withdrawn by dilute muriatic acid. Dr. Henry says, that he has never been able to recognise a calculus of pure phosphate of lime in any of the collections which he has examined; nor did he ever find the preceding species in a pure state, though a calculus in Mr. White's collection contained more than 90 per cent. of ammonia-magnesian phosphate.

Species 4. The *fusible calculus.* This is a very friable concretion, of a white colour, resembling chalk in appearance and texture; it often breaks into layers, and exhibits a glittering appearance internally, from intermixture of the crystals of triple phosphate. Sp. grav. from 1·14 to 1·47. Soluble in dilute muriatic and nitric acids, but not in alkaline lixivia. The nucleus is generally lithic acid. In 4 instances only, out of 187, did Dr. Henry find the calculus composed throughout of the earthy phosphates. The analysis of fusible calculus is easily performed by distilled vinegar, which at a gentle heat dissolves the ammonia-magnesian phosphate, but not the phosphate of lime; the latter may be taken up by dilute muriatic acid. The lithic acid present will remain, and may be recognised by its solubility in the water of pure potash or soda. Or the lithic acid may, in the first instance, be removed by the alkali, which expels the ammonia, and leaves the phosphate of magnesia and lime.

Species 5. The *mulberry calculus.* Its surface is rough and tuberculated; colour deep reddish-brown. Sometimes it is pale brown, of a crystalline texture, and covered with flat octohedral crystals. This calculus has commonly the density and hardness of ivory, a sp. grav. from 1·4 to 1·98, and exhales the odour of semen when sawed. A moderate red heat converts it into carbonate of lime. It does not dissolve in alkaline lixivia, but slowly and with difficulty in acids. When the oxalate of lime is voided directly after leaving the kidney, it is of a greyish-brown colour, composed of small cohering spherules, sometimes with a polished surface resembling hempseed. They are easily recognised by their insolubility in muriatic acid, and their swelling up and passing into pure lime before the blowpipe. Mulberry calculi contain always an admixture of other substances besides oxalate of lime. These are, uric acid, phosphate of lime, and animal matter in dark flocculi. The colouring matter of these calculi is probably effused blood. Dr. Henry rates the frequency of this species at 1 in 17 of the whole which he has compared; and out of 187 calculi, he found that 17 were formed round *nuclei* of oxalate of lime.

Species 6. The *cystic-oxide calculus.* It

resembles a little the triple phosphate, or more exactly magnesian limestone. It is somewhat tough when cut, and has a peculiar greasy lustre. Its usual colour is pale brown, bordering on straw yellow; and its texture is irregularly crystalline. It unites in solution with acids and alkalies, crystallising with both. Alkohol precipitates it from nitric acid. It does not become red with nitric acid; and it has no effect upon vegetable blues. Neither water, alkohol, nor æther dissolves it. It is decomposed by heat into carbonate of ammonia and oil, leaving a minute residuum of phosphate of lime. This concretion is of very rare occurrence. Dr. Henry states its frequency to the whole as 10 to 985. In two which he examined, the nucleus was the same substance with the rest of the concretion; and in a third, the nucleus of an uric acid calculus was a small spherule of cystic oxide. Hence, as Dr. Marcet has remarked, this oxide appears to be in reality the production of the kidneys, and not, as its name would import, to be generated in the bladder. It might be called with propriety *renal* oxide.

Species 7. The *alternating calculus*. The surface of this calculus is usually white like chalk, and friable or semicrystalline, according as the exterior coat is the calcareous or ammonia-magnesian phosphate. They are frequently of a large size, and contain a nucleus of lithic acid. Sometimes the two phosphates form alternate layers round the nucleus. The above are the most common alternating calculi; next are those of oxalate of lime with phosphates; then oxalate of lime with lithic acid; and, lastly, those in which the three substances alternate. The alternating, taken all altogether, occur in 10 out of 25, in Dr. Henry's list; the lithic acid with phosphates, as 10 to 48; the oxalate of lime with phosphates, as 10 to 116; the oxalate of lime with lithic acid, as 10 to 170; the oxalate of lime with lithic acid and phosphates, as 10 to 265.

Species 8. The *compound calculus*. This consists of a mixture of lithic acid with the phosphates in variable proportions, and is consequently variable in its appearance. Sometimes the alternating layers are so thin as to be undistinguishable by the eye, when their nature can be determined only by chemical analysis. This species, in Dr. Henry's list, forms 10 in 235. About 1-40th of the calculi examined by Fourcroy and Vauquelin were compound.

Species 9. has been already described.

In almost all calculi, a central nucleus may be discovered, sufficiently small to have descended through the ureters into the bladder. The disease of stone is to be considered, therefore, essentially and originally as belonging to the kidneys. Its increase in the bladder may be occasioned, either by exposure to urine that contains an excess of the same ingredient as that composing the nucleus, in which case it will be uniformly constituted throughout; or if the morbid nucleus deposit should cease, the concretion will then acquire a coating of the earthy phosphates. It becomes, therefore, highly important to ascertain the nature of the most predominant nucleus. Out of 187 calculi examined by Dr. Henry, 17 were formed round nuclei of oxalate of lime; 3 round nuclei of cystic oxide; 4 round nuclei of the earthy phosphates; 2 round extraneous substances; and in 3 the nucleus was replaced by a small cavity, occasioned probably by the shrinking of some animal matter, round which the ingredients of the calculi (fusible) had been deposited. Rau has shown by experiment, that pus may form the nucleus of an urinary concretion. The remaining 158 calculi of Dr. Henry's list, had central nuclei composed chiefly of lithic acid. It appears also, that in a very great majority of the cases referred to by him, the disposition to secrete an excess of lithic acid has been the essential cause of the origin of stone. Hence it becomes a matter of great importance to enquire, what are the circumstances which contribute to its excessive production, and to ascertain by what plan of diet and medicine this morbid action of the kidneys may best be obviated or removed. A calculus in Mr. White's collection had for its nucleus a fragment of a bougie, that had slipped into the bladder. It belonged to the fusible species, consisting of 20 phosphate of lime, 60 ammonia-magnesian phosphate, 10 lithic acid, 10 animal matter, in 100. In some instances, though these are comparatively very few, a morbid secretion of the earthy phosphates in excess, is the cause of the formation of stone. Dr. Henry relates the case of a gentleman, who, during paroxysms of gravel, preceded by severe sickness and vomiting, voided urine as opake as milk, which deposited a great quantity of an impalpable powder, consisting of the calcareous and triple phosphate in nearly equal proportions. The weight of the body was rapidly reduced from 188 to 100 pounds, apparently by the abstraction of the earth of his bones; for there was no emaciation of the muscles corresponding to the above diminution.

The first rational views on the treatment of calculous disorders, were given by Dr. Wollaston. These have been followed up lately by some very judicious observations of Mr. Brande, in the 12th, 15th, and 16th numbers of his Journal; and also by Dr. Marcet, in his excellent treatise already referred to. Of the many substances contained in human urine, there are rarely more than three which constitute gravel; viz. calcareous phosphate, ammonia-magnesian phosphate, and lithic acid. The former two form a white sediment; the latter, a red or brown. The urine is always an acidulous secretion. Since by this excess of acid, the earthy salts,

or white matter, are held in solution, whatever disorder of the system, or impropriety of food and medicine, diminishes that acid excess, favours the formation of white deposite. The internal use of acids was shown by Dr. Wollaston to be the appropriate remedy in this case.

White gravel is frequently symptomatic of disordered digestion, arising from excess in eating or drinking; and it is often produced by too farinaceous a diet. It is also occasioned by the indiscreet use of magnesia, soda water, or alkaline medicines in general. Medical practitioners, as well as their patients, ignorant of chemistry, have often committed fatal mistakes, by considering the white gravel, passed on the administration of alkaline medicines, as the dissolution of the calculus itself; and have hence pushed a practice, which has rapidly increased the size of the stone. Magnesia, in many cases, acts more injuriously than alkali, in precipitating insoluble phosphate from the urine. The acids of urine, which, by their excess, hold the earths in solution, are the phosphoric, lithic, and carbonic. Mr. Brande has uniformly obtained the latter acid, by placing urine under an exhausted receiver; and he has formed carbonate of barytes, by dropping barytes water into urine recently voided.

The appearance of white sand does not seem deserving of much attention, where it is merely occasional, following indigestion brought on by an accidental excess. But if it invariably follows meals, and if it be observed in the urine, not as a mere deposit, but at the time the last drops are voided, it becomes a matter of importance, as the forerunner of other and serious forms of the disorder. It has been sometimes viewed as the *effect* of irritable bladder, where it was in reality the *cause*. Acids are the proper remedy, and unless some peculiar tonic effect be sought for in sulphuric acid, the vegetable acids ought to be preferred. Tartar, or its acid, may be prescribed with advantage, but the best medicine is citric acid, in daily doses of from 5 to 30 grains. Persons returning from warm climates, with dyspeptic and hepatic disorders, often void this white gravel, for which they have recourse to empyrical solvents, for the most part alkaline, and are deeply injured. They ought to adopt an acidulous diet, abstaining from soda water, alkalies, malt liquor, madeira, and port; to eat salads, with acid fruits; and if habit requires it, a glass of cider, champagne, or claret, but the less of these fermented liquors the better. An effervescing draught is often very beneficial, made by dissolving 30 grains of bicarbonate of potash, and 20 of citric acid, in separate tea-cups of water, mixing the solution in a large tumbler, and drinking the whole during the effervescence. This dose may be repeated 3 or 4 times a-day. The carbonic acid of the above medicine enters the circulation, and passing off by the bladder, is useful in retaining, particularly, the triple phosphate in solution, as was first pointed out by Dr. Wollaston. The bowels should be kept regular by medicine and moderate exercise. The febrile affections of children are frequently attended by an apparently formidable deposit of white sand in the urine. A dose of calomel will generally carry off both the fever and the sand. Air, exercise, bark, bitters, mineral tonics, are in like manner often successful in removing the urinary complaints of grown-up persons.

In considering the red gravel, it is necessary to distinguish between those cases in which the sand is actually voided, and those in which it is deposited, after some hours, from originally limpid urine. In the first, the sabulous appearance is an alarming indication of a tendency to form calculi; in the second, it is often merely a fleeting symptom of indigestion. Should it frequently recur, however, it is not to be disregarded.

Bicarbonate of potash, or soda, is the proper remedy for the red sand, or lithic acid deposit. The alkali may often be beneficially combined with opium. Ammonia, or its crystallised carbonate, may be resorted to with advantage, where symptoms of indigestion are brought on by the other alkalies; and particularly in red gravel connected with gout, in which the joints and kidneys are affected by turns. Where potash and soda have been so long employed as to disagree with the stomach, to create nausea, flatulency, a sense of weight, pain, and other symptoms of indigestion, magnesia may be prescribed with the best effects. The tendency which it has to accumulate in dangerous quantities in the intestines, and to form a white sediment in urine, calls on the practitioner to look minutely after its administration. It should be occasionally alternated with other laxative medicines. Magnesia dissolved in carbonic acid, as Mr. Scheweppe used to prepare it many years ago, by the direction of Mr. Brande, is an elegant form of exhibiting this remedy.

Care must be had not to push the alkaline medicines too far, lest they give rise to the deposition of earthy phosphates in the urine.

Cases occur in which the sabulous deposit consists of a mixture of lithic acid with the phosphates. The sediment of urine in inflammatory disorders is sometimes of this nature; and of those persons who habitually indulge in excess of wine; as also of those who, labouring under hepatic affections, secrete much albumen in their urine. Purges, tonics, and nitric acid, which is the solvent of both the above sabulous matters, are the appropriate remedies. The best diet for patients labouring under the lithic deposit, is a vegetable. Dr. Wollaston's fine observation, that the excrement of birds fed solely upon animal matter, is in a great measure lithic acid; and the curious fact since ascertained, that the excrement of the boa constrictor, fed also entirely on animals, is pure

lithic acid, concur in giving force to the above dietetic prescription. A week's abstinence from animal food has been known to relieve a fit of lithic acid gravel, where the alkalies were of little avail. But we must not carry the vegetable system so far as to produce flatulency and indigestion.

Such are the principal circumstances connected with the disease of gravel in its incipient or sabulous state. The calculi formed in the kidneys are, as we have said above, either lithic, oxalic, or cystic; and very rarely indeed of the phosphate species. An aqueous regimen, moderate exercise on horseback when not accompanied with much irritation, cold bathing, and mild aperients, along with the appropriate chemical medicines, must be prescribed in kidney cases. These are particularly requisite immediately after acute pain in the region of the ureter, and inflammatory symptoms have led to the belief that a nucleus has descended into the bladder. Purges, diuretics, and diluents, ought to be liberally enjoined. A large quantity of mucus streaked with blood, or of a purulent aspect, and hæmorrhagy, are frequent symptoms of the passage of the stone into the bladder.

When a stone has once lodged in the bladder, and increased there to such a size as no longer to be capable of passing through the urethra, it is generally allowed by all who have candidly considered the subject, and who are qualified by experience to be judges, that the stone can never again be dissolved; and although it is possible that it may become so loosened in its texture as to be voided piecemeal, or gradually to crumble away, the event is so rare as to be barely probable.

By examining collections of calculi we learn, that in by far the greater number of cases, a nucleus of lithic acid is enveloped in a crust of the phosphates. Our endeavours must therefore be directed towards reducing the excess of lithic acid in the urine to its natural standard; or, on the other hand, to lessen the tendency to the deposition of the phosphates. The urine must be submitted to chemical examination, and a suitable course of diet and medicines prescribed. But the chemical remedies must be regulated nicely, so as to hit the happy equilibrium, in which no deposit will be formed. Here is a powerful call on the physicians and surgeons to make themselves thoroughly versant in chemical science; for they will otherwise commit the most dangerous blunders in calculous complaints.

'The idea of dissolving a calculus of uric acid in the bladder, by the internal use of the caustic alkalies,' says Mr. Brande, 'appears too absurd to merit serious refutation.' In respect to the phosphates, it seems possible, by keeping up an unusual acidity in the urine, so far to soften a crust of the calculus, as to make it crumble down, or admit of being abraded by the sound: but this is the utmost that can be looked for; and the lithic nucleus will still remain. 'These considerations,' adds Mr. Brande, 'independent of more urgent reasons, show the futility of attempting the solution of a stone of the bladder by the injection of acid and alkaline solutions. In respect to the alkalies, if sufficiently strong to act upon the uric crust of the calculus, they would certainly injure the coats of the bladder; they would otherwise become inactive by combination with the acids of the urine, and they would form a dangerous precipitate from the same cause.'—'It therefore appears to me, that Fourcroy and others, who have advised the plan of injection, have thought little of all these obstacles to success, and have regarded the bladder as a lifeless receptacle into which, as into an India rubber bottle, almost any solvent might be injected with impunity.'—*Journal of Science*, vol. viii. p. 216.

It does not appear that the peculiarities of water in different districts, have any influence upon the production of calculous disorders. Dr. Wollaston's discovery of the analogy between urinary and gouty concretions has led to the trial in gravel of the *vinum colchici*, the specific for gout. By a note to Mr. Brande's dissertation we learn, that benefit has been derived from it in a case of red gravel.

Dr. Henry confirms the above precepts in the following decided language:—'These cases, and others of the same kind, which I think it unnecessary to mention, tend to discourage all attempts to dissolve a stone supposed to consist of uric acid, after it has attained considerable size in the bladder; all that can be effected under such circumstances by alkaline medicines appears, as Mr. Brande has remarked, to be the precipitating upon it a coating of the earthy phosphates from the urine, a sort of concretion which, as has been observed by various practical writers, increases much more rapidly than that consisting of uric acid only. The same unfavourable inference may be drawn also from the dissections of those persons in whom a stone was supposed to be dissolved by alkaline medicines; for in these instances it has been found either encysted, or placed out of the reach of the sound by an enlargement of the prostate gland.'

The urinary calculus of a dog, examined by Dr. Pearson, was found to consist principally of the phosphates of lime and ammonia, with animal matter. Several taken from horses, were of a similar composition. One of a rabbit consisted chiefly of carbonate of lime and animal matter, with perhaps a little phosphoric acid. A quantity of sabulous matter, neither crystallised nor concrete, is sometimes found in the bladder of the horse: in one instance there were nearly 45 pounds. These appear to consist of carbonate of lime and animal matter. A calculus of a cat gave Fourcroy three parts of car-

bonate, and one of the phosphate of lime. That of a pig, according to Berthollet, was phosphate of lime.

The renal calculus in man appears to be of the same nature as the urinary. In that of the horse, Fourcroy found 3 parts of carbonate, and one of phosphate of lime. Dr. Pearson, in one instance, carbonate of lime, and animal matter; in two others, phosphates of lime and ammonia, with animal matter.

Arthritic calculi, or those formed in the joints of gouty persons, were once supposed to be carbonate of lime, whence they were called chalkstones; afterwards it was supposed that they were phosphate of lime; but Dr. Wollaston has shown, that they are lithate of soda. The calculi found sometimes in the pineal, prostate, salivary, and bronchial glands, in the pancreas, in the corpora cavernosa penis, and between the muscles, as well as the tartar, as it is called, that incrusts the teeth, appear to be phosphate of lime. Dr. Crompton, however, examined a calculus taken from the lungs of a deceased soldier, which consisted of lime 45, carbonic acid 37, albumen and water 18. It was very hard, irregularly spheroidal, and measured about $6\frac{1}{2}$ inches in circumference.

It has been observed, that the lithic acid, which constitutes the chief parts of most human urinary calculi, and abounds in the arthritic, has been found in no phytivorous animal; and hence has been deduced a practical inference, that abstinence from animal food would prevent their formation. But we are inclined to think this conclusion too hasty. The cat is carnivorous; but it appeared above, that the calculus of that animal is equally destitute of lithic acid. If, therefore, we would form any deduction with respect to regimen, we must look for something used by man, exclusively of all other animals; and this is obviously found in fermented liquors, but apparently in nothing else: and this practical inference is sanctioned by the most respectable medical authorities.

The following valuable *criteria* of the different kinds of urinary calculi, have been given by M. Berzelius in his treatise on the use of the blowpipe:

'1. We may recognise them formed of *uric acid*, from their being carbonised and smoking with an animal odour, when heated by themselves on charcoal or platinum-foil. They dwindle away at the blowpipe flame. Towards the end, they burn with an increase of light; and leave a small quantity of very white alkaline ashes.

'To distinguish these concretions from other substances, which comport themselves in the above manner, we must try a portion of the calculus by the humid way. Thus a tenth of a grain of this calculus being put on a thin plate of glass or platinum, along with a drop of nitric acid, we must heat it at the flame of the lamp. The uric acid dissolves with effervescence. The matter, when dried with precaution to prevent it from charring, is obtained in a fine red colour. If the calculus contains but little uric acid, the substance sometimes blackens by this process. We must then take a new portion of the concretion, and after having dissolved it in nitric acid, remove it from the heat: the solution, when nearly dry, is to be allowed to cool and become dry. We then expose it, sticking to its support, to the warm vapour of caustic ammonia (from water of ammonia heated in a tea-spoon). This ammoniacal vapour developes a beautiful red colour in it. We may also moisten the dried matter with a little weak water of ammonia.

'If the concretions are a mixture of uric acid and earthy phosphate, they carbonise and consume like the above, but their residuum is more bulky; it is not alkaline, nor soluble in water. They exhibit, with nitric acid and ammonia, the fine red colour of uric acid. Their ashes contain phosphate of lime, or of lime and magnesia.

'2. Those composed of *urate of soda* are hardly met with except in the concretions round the articulations of gouty patients. When heated alone upon charcoal, they blacken, exhaling an empyreumatic animal odour; they are with difficulty reduced into ashes, which are strongly alkaline, and are capable of vitrifying silica. When there are earthy salts (phosphates) in these concretions, they afford a whitish or opake grey glass.

'3. Those formed of *urate of ammonia* comport themselves at the blowpipe like those of uric acid. A drop of caustic potash makes them exhale, at a moderate heat, much ammonia. We must not confound this odour with the slight ammoniaco-lixivial smell, which potash disengages from the greater part of animal substances. Urate of soda is likewise found in these calculi.

'4. The *phosphate of lime calculi* blacken, with the exhalation of an empyreumatic animal odour, without melting of themselves at the blowpipe, but whiten into an evident calcareous phosphate. With soda they swell up without vitrifying. Dissolved in boracic acid, and fused along with a little iron, they yield a bead of phosphuret of iron.

'5. Those which consist of *ammoniaco-magnesian phosphate*, heated alone on a plate of platinum, exhale the empyreumatic animal odour, at the same time blackening, swelling up, and becoming finally greyish-white. A kind of greyish-white enamel is in this manner obtained. With borax they melt into a glass, which is transparent, or which becomes of a milky-white on cooling. Soda in small quantity causes them to fuse into a frothy white slag; a larger quantity of soda makes them infusible. They yield, with iron and boracic acid, a bead of phosphuret of iron; with nitrate of cobalt, a glass of a deep red or brown. If salts of lime exist in these concretions, the mixture of them is less fusible.

'6. The *oxalate of lime calculi*, exposed to the blowpipe, exhale at first the urinous smell; they become first of a dull colour at the flame, and afterwards their colour brightens. What remains after a moderate ignition, effervesces with nitric acid. After a smart jet of the flame, there remains quick-lime on the charcoal, which reacts like an alkali on the colour of litmus, wild mallow flower, or cabbage, and slakes with water. But this does not happen when the residuum consists of calcareous phosphate.

'7. The *siliceous calculus*, heated alone, leaves sub-coriaceous or infusible ashes. Treated with a little soda, these dissolve with effervescence, but slowly, leaving a bead of glass of a grey colour, or of little transparency.

'8. Lastly, the *cystic oxide stones* afford nearly the same results as uric acid at the blowpipe. They readily take fire, burning with a bluish-green flame, without melting, with the disengagement of a lively and very peculiar acid odour, which has some affinity to that of cyanogen. Their ashes, which are not alkaline, redissolve by a jet of the flame, into a greyish-white mass. They do not yield a red colour in their treatment with nitric acid, like the uric acid concretions.'

The Causes of the Generation of Urinary Calculi.

To enquire into the causes by which urinary concretions are produced, is both interesting and useful, however attended with the greatest difficulties. The writings of medical authors are full of conjectures and hypotheses with regard to this subject, on which nothing could be ascertained before we had acquired an accurate knowledge of the nature of urinary concretions. It is owing to this circumstance, that the most enlightened physicians acquiesced in ascribing the immediate cause of them to a superabundance of terreous matter in the urine; and Boerhaave, as well as, particularly, Van Swieten, imagined that the urine of all men contained calculous matter in the natural state, and that, for the generation of stones, a nucleus was only required to attract it. That this may be the case, in some instances, is proved by frequent experience; but stones produced by foreign bodies, that have accidentally got into the urethra or bladder, are always white and composed of phosphates of earths, and seldom or never covered with lithic acid, a substance which is observed to form the stones that most frequently occur; but even in these the nucleus consists of a substance formed in the body itself, as a particle descended from the kidneys, &c. which must, therefore, have necessarily originated in a peculiar internal cause. A superabundance of uric acid in stony patients, and its more copious generation than in a sound state, though it seems to be one of the principal and most certain causes, is by no means satisfactory, as it only explains the precipitation of stony matter from the urine, but not why it unites in strata. A coagulating substance is required for separating, attracting, and, as it were, agglutinating the condensible particles that are precipitated. This substance is undoubtedly the animal matter which is constantly found in all calculous masses, and which seems to constitute the basis of stones, like the membraneous gelatine that of bones. It is known that the urine of calculous patients is generally muddy, ductile, in threads, slimy, and as if mixed with albumen, which quality it obtains at the moment when the ammonia is disengaged, or on the addition of potash that separates it from the acid in which it was dissolved; and in all cases of superabundance of lithic acid, the urine contains a great quantity of that animal matter, which promotes the precipitation of it, and attracts and unites the particles thus separated. Hence it appears, that every thing capable of increasing the quantity of that pituitous gluten in the urine, may be considered as the remote cause of the formation of calculi. And the old ideas on pituitous temperaments, or superabundant pituita, &c. which were thought to dispose people to a calculus, seemed to be connected with the late discoveries on the nature of urinary stones. Though the animal matter appears to be different in different calculi, yet it is certain, that every calculous substance contains an animal gluten, from which its concrete and solid state arises; whence we may fairly state the superabundance of that substance as the chief and principal cause of the formation of calculi.

There are, however, other causes which seem to have a particular influence on the nature of urinary stones, and the strata in which they are formed; but it is extremely difficult to penetrate and to explain them. We are, for instance, entirely ignorant of the manner in which urinary stones are formed from the oxalate of lime; though, from their occurring more frequently in children than in adults, we might be entitled to ascribe them to a disposition to acor, a cause considered by Boerhaave as the general source of a great number of diseases incident to the infantile age. This opinion seems to be proved by the ideas of Bonhomme, physician at Avignon, on the oxalic or saccharic acid, as the cause of mollities ossium in the rickets; by this acid being discovered in a species of saliva by Brugnatelli; and, lastly, by an observation of Turgais, who found this acid in the urine of a child diseased with worms. We but rarely observe saccharic acid in the human body, which appears to be mostly adventitious, and by which the animal matter is rendered coagulable, and deposited, or precipitated, with the oxalate of lime; or the oxalic acid decomposes the phosphate of lime, and forms an insoluble combination, incapable of being any longer kept dissolved in the urine. It is, however, extremely difficult to determine how far the constitution of the body is connected with that particular dispo-

sition in the urine, of precipitating sometimes phosphate of lime mixed with oxalate of lime, sometimes phosphate of ammoniacal magnesia, either by itself or mixed with lithic acid, &c. &c. Who can explain the reason why, of 600 stones, there were only two in which siliceous earth could be traced? Still more difficult is it to explain the causes why the above substances precipitate either at once or in different strata; but it may suffice to have shown how many observations and experiments are required, and what accurate attention and perseverance are necessary, in order to throw light on so difficult a subject.

The means to be employed in calculous complaints must vary according to circumstances. Permanent relief can be obtained only by the removal of the morbid concretion; and where this is of too large a size to be passed by the natural outlet, the operation of lithotomy becomes necessary. Various remedies, indeed, have been proposed as capable of dissolving urinary calculi; and some of them are certainly useful in palliating the symptoms, and perhaps preventing the formation of fresh calculous matter: but experience has not sanctioned their efficacy as actual lithontriptics; and by delaying the operation, we not only incur the risk of organic disease being produced, but the concretion may also become friable externally, so as to be with more difficulty removed. Sometimes, however, the advanced age of the patient, the complication with organic disease, or the exhausted state of the system, may render an operation inexpedient; or he may not be willing to submit to it: we shall then find some advantage from the use of chemical remedies, according to the morbid quality of the urine; that is generally from alkaline or earthy preparations, where a red deposit appears, and from acids where there is a white sediment. Tonic medicines may also be useful, and some of the mild astringents, especially uva ursi, and occasional narcotics, where violent pain attends: sometimes an inflammatory tendency may require fomentations, the local abstraction of blood, and other antiphlogistic measures. The most likely plan of effecting a solution of the calculus must certainly be that proposed by Fourcroy, namely, injecting suitable liquids into the bladder. The most common calculi, containing uric acid, are readily soluble in a solution of potash, or soda, weak enough to be held in the mouth, or even swallowed without inconvenience; those which consist of phosphoric acid neutralised by lime, or other base, the next in frequency, dissolve in nitric or muriatic acid of no greater strength; the most rare variety, made up mostly of oxalate of lime, may be dissolved, but very slowly, in nitric acid, or solutions of the fixed alkaline carbonates, weak enough not to irritate the bladder. However, it is not easy to ascertain which of these solvents is proper in a particular case, for most calculi are not uniform throughout, owing probably to the urine having varied during their formation, so that the examination of this secretion will not certainly indicate the injection required. The plan recommended therefore is, the bladder having been evacuated, and washed out with tepid water, to inject first the alkaline solution heated to the temperature of the body, and direct it to be retained for half an hour, or longer, if the person can bear it; then to the liquor voided and filtered add a little muriatic acid, which will cause a white precipitate, if there be any uric acid dissolved; and so long as this happens, the same injection should be used, otherwise diluted muriatic acid is to be thrown in, and ammonia added to it when discharged; whereby phosphate of lime, if there be any, is precipitated: and when neither of these succeeds, diluted nitric acid is to be tried; in each case varying the injection from time to time, as that previously used loses its efficacy. However, there appears one source of error in this method; namely, that the urine secreted, while the liquid is retained, may give rise to a precipitate, though none of the calculus may have been dissolved; it would therefore be proper to examine the urine previously, as well as occasionally during the use of injections, and, if necessary, correct its quality by the exhibition of proper internal medicines. See *Lithontriptics* and *Lithotomy*.

Calculus biliaris. See *Gall-stone*.

Calculus podagricus. See *Chalk-stone*.

Calculus intestinalis. See *Enterolithus*.

CALDA'RIUM. (*Quasi calidarium*; from *caleo*, to make hot.) A vessel in the baths of the ancients, to hold hot water.

Caldus. (For *calidus*.) Warm.

CALEFA'CIENT. (*Calefaciens*; from *calidus*, warm, and *facio*, to make.) That which excites a degree of warmth in the parts to which it is applied: as *piper*, *spiritus vini*, &c. They belong to the class of stimulants.

CALE'NDULA. (*a*, *æ*. f.; *quod singulis calendis*, i. e. *mensibus*, *florescat*: so called because it flowers every month.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia necessaria*.

2. The pharmacopœial name of the single marigold. See *Calendula officinalis*.

Calendula alpina. See *Arnica*.

Calendula arvensis. See *Caltha*.

Calendula officinalis. Garden marigold: called also, *Calendula sativa*, *Chrysanthemum*, *Sponsa solis*, and *Caltha vulgaris*. The flowers and leaves of this plant, *Calendula — seminibus cymbiformibus, muricatis, incurvatis omnibus*, of Linnæus, have been exhibited medicinally: the former, as aperients in uterine obstructions and icteric disorders, and as diaphoretics in exanthematous fevers; the latter, as gentle aperients, and to promote the secretions in general.

Calendula palustris. See *Caltha*.

Ca'lenture. (*Calentura*, *æ*. f.; from *calere*, to be hot.) A febrile delirium, said to be peculiar to sailors, wherein they imagine

the sea to be green fields, and will throw themselves into it if not restrained. This species of hallucination is not mentioned in the diseases of seafaring people of the present day.

CALE'SIUM. The Indian name of a tree which grows in Malabar, the bark of which, made into an ointment with butter, cures convulsions from wounds, and heals ulcers. The juice of the bark cures the aphthæ, and, taken inwardly, the dysentery.—*Ray.*

CALF. See *Bos taurus.*

Calf's snout. See *Antirrhinum.*

CA'LI. (Arabian.) The same as kali.

CALICHA'PA. The white-thorn.

CALIDÆ PLANTÆ. (From *calor*, heat.) Plants that are natives of warm climates.

CA'LIDUS. Warm. In medical language, it is commonly used for animal heat, or the vis vitæ: thus, *calidum animale innatum.*

CALIE'TA. (From καλιης, a nest, which it somewhat resembles.) A fungus growing on the juniper-tree.

CALI'GO. (*o, inis.* f.; a Latin term importing dimness, darkness, cloudiness, obscurity.) The dimness of sight which takes place without any apparent cause, for the most part makes its approach imperceptibly, and is often a common consequence of old age; and all that our art can do is to attempt the removal of fulness of vessels, if that state is suspected, and to stimulate the eye and neighbouring parts when a debility is supposed to exist. Dimness of sight may be produced by very many causes, by all the morbid changes of the membranes, and humours between the retina and the outer part of the transparent cornea, and consequently it is a symptom of the many diseases to which the parts are subject. But Caligo is selected by nosologists to designate that diminished or destroyed sight which is caused by the interposition of a dark body between the object and the retina: hence its species are,

1. *Caligo palpebrarum.* The obstruction to the light being in the eyelids.
2. *Caligo corneæ.* Opacities, &c.
3. *Caligo lentis.* The obstruction being in the capsule of, or the lens itself.
4. *Caligo pupillæ.* The iris being closed.
5. *Caligo humorum.* The aqueous or vitreous humours being faulty.

The cure in these instances is to be attempted by the proper remedies for the several diseases, whatever they may be.

CALIHA'CHA. The cassia-lignea, or cassia-tree of Malabar.

CALI'MIA. The lapis calaminaris.

CA'LIX. (*ix, icis.* m.; from καλυπτω, to cover.) See *Calyx.*

CALLÆ'UM. (From καλλυνω, to adorn.) The gills of a cock.

CALLE'NA. A kind of saltpetre.

CA'LLIA. (From καλος, beautiful.) A name of the chamomile.

CALLIBLE'PHARUS. (From καλος, good, and βλεφαρον, the eyelid.) A medicine, or composition, appropriated to the eyelids.

CALLICO'CCA. (*a, æ.* f.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia.*

CALLICOCCA IPECACUANHA. The plant from which ipecacuan root is obtained was long unknown: it was said by some writers to be the *Psychotria emetica*; by others, the *Viola ipecacuanha.* It is now ascertained to be neither, but a small plant called *Callicocca ipecacuanha.* There are three sorts of ipecacuan to be met with in our shops, viz. the ash-coloured or grey, the brown, and the white.

The ash-coloured is brought from Peru, and is a small wrinkled root, bent and contorted into a great variety of figures, brought over in short pieces, full of wrinkles, and deep circular fissures, down to a small white woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, looks smooth and resinous upon breaking: it has very little smell; the taste is bitterish and subacrid, covering the tongue, as it were, with a kind of mucilage.

The brown is small, somewhat more wrinkled than the foregoing; of a brown or blackish colour without, and white within: this is brought from Brazil.

The white sort is woody, and has no wrinkles, nor any perceptible bitterness in taste. The first, the ash-coloured or grey ipecacuan, is that usually preferred for medicinal use. The brown has been sometimes observed, even in a small dose, to produce violent effects. The white, though taken in a large one, has scarcely any effect at all. Experience has proved that this medicine is the safest emetic with which we are acquainted, having this peculiar advantage, that, if it does not operate by vomit, it readily passes off by the other emunctories. Ipecacuan was first introduced as an infallible remedy against dysenteries, and other inveterate fluxes, as diarrhœa, menorrhagia, leucorrhœa, &c. and also in disorders proceeding from obstructions of long standing; nor has it lost much of its reputation by time: its utility in these cases is thought to depend upon its restoring perspiration. It has also been successfully employed in spasmodic asthma, catarrhal and consumptive cases. Nevertheless, its chief use is as a vomit, and in small doses, joined with opium, as a diaphoretic. The officinal preparations are the *pulvis ipecacuanhæ compositus,* and the *vinum ipecacuanhæ.*

CALLI'CREAS. (From καλος, good, and κρεας, meat; so named from its delicacy as food.) The sweet-bread. See *Pancreas.*

CALLI'GONUM. (From καλος, beautiful, and γονυ, a knot, or joint; so named from its being handsomely jointed, like a cane.) The knot-grass. See *Polygonum.*

CALLIOMA'RCHUS. The Gaulic name, in Marcellus Empiricus, of colt's-foot.

CA'LLION. A kind of night-shade.

CALLIPHY'LLUM. (From καλλος, beauty, and φυλλον, a leaf.) See *Adianthum.*

CALLISTRU'THIA. (From καλος,

good, and στρυθος, a sparrow; because it was said to fatten sparrows.) A fig mentioned by Pliny, of a good taste.

CALLITRI'CHE. (*e, es.* f.; from καλλος, beauty, and θριξ, hair: so named because it has the appearance of long, beautiful hair; or, according to Littleton, because it nourishes the hair, and makes it beautiful.)

1. The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Digynia.* Water starwort; Water chickweed.

2. The herb maidenhair. See *Adianthum.*

CALLITRICHUM. See *Callitriche.*

CALLO'NE. (From καλος, fair.) Hippocrates uses this word, to signify that decency and gravity of character and deportment which it is necessary that all medical men should be possessed of.

CALLOSITY. *Calositas.* Preternatural hardness.

CALLOSUS. Callous, indurate, hard. Applied,—1. In *Surgery,* to parts which are morbidly hard; as the callous edges of ulcers.

2. In *Botany,* to seeds which are hard; as those of the *Citrus medica.*

CA'LLOUS. See *Callosus.*

CA'LLUS. (*us. i.* m.; and *um. i.* n.)

1. The bony matter deposited between the divided ends of broken bones, about the fourteenth day after the fracture. It is in reality nothing more than the new bone, or an osseous substance formed by a process of nature, very similar to the growth of any other part of the body.

2. A preternatural hardness, or induration, of any fleshy part.

3. An exuberant thickening of the cuticle, insensible to the touch. See *Corn.*

CALOCA'TANUS. (From καλος, beautiful, and καλαθον, a cup; so called from the beauty of its flower and shape.) The wild poppy. See *Papaver rhœas.*

CALO'MELAS. (*as, ănos,* m.; from καλος, good, and μελας, black; from its virtues and colour.) 1. A chloride of mercury. See *Hydrargyri submurias.*

2. The preparation called Æthiops mineral, or *hydrargyrus cum sulphure,* was formerly so named.

CALOR. Heat. See *Caloric, Ardor,* and *Frigus.*

Calor animalis. See *Animal heat, Ardor,* and *Frigus.*

Calor mordicans. That particularly unpleasant heat in fevers which has a biting, and pungent rather than burning, and leaves a smarting sensation on the fingers for several minutes after touching it.

CALO'RIC. (*Caloricum, i.* n.; from *calor,* heat.) Heat; Igneous fluid.

Heat and cold are perceptions of which we acquire the ideas from the senses: they indicate only a certain state in which we find ourselves, independent of any exterior object. But as these sensations are for the most part produced by bodies around us, we consider them as causes, and judging by appearances, we apply the terms *hot,* or *cold,* to the substances themselves; calling those bodies *hot,* which produce in us the sensation of heat, and those *cold,* which communicate the contrary sensation.

This ambiguity, though of little consequence in the common affairs of human life, has led unavoidably to confusion and perplexity in philosophical discussions. It was to prevent this, that the framers of the new nomenclature adopted the word *caloric,* which denotes that which produces the sensation of heat.

Theories of Heat. Two opinions have long divided the philosophical world concerning the nature of heat.

1. The one is; that the cause which produces the sensation of heat, is a real, or distinct substance, universally pervading nature, penetrating the particles or pores of all bodies, with more or less facility, and in different quantities.

This substance, if applied to our system in a greater proportion than it already contains, warms it, as we call it, or produces the sensation of heat, and hence it has been called *caloric* or *calorific.*

2. The other theory concerning heat is; that the cause which produces that sensation is *not* a separate or self-existing substance; but that it is merely like gravity, a property of matter; and that it consists in a specific or *peculiar motion,* or *vibration* of the particles of bodies.

The arguments in favour of the first theory have been principally deduced from the evolution and absorption of heat during chemical combinations; those of the latter are chiefly founded on the production of heat by friction. For it has been observed, that whatever is capable of producing motion in the particles of any mass of matter, excites heat. Count Rumford and Professor Davy have paid uncommon attention to this fact, and proved, that heat continues to be evolved from a body subjected to friction, so long as it is applied, and the texture or form of the body not altered.

All the effects of heat, according to this theory, depend therefore entirely on the vibratory motion of the particles of bodies. According as this is more or less intense, a higher or lower temperature is produced; and as it predominates over, is nearly equal, or inferior to the attraction of cohesion, bodies exist in the gaseous, fluid, or solid state.

Different bodies are susceptible of it in different degrees, and receive and communicate it with different celerity. From the generation, communication, and attraction of this repulsive motion, under these laws, all the phænomena ascribed to heat are explicable.

Each of these theories has been supported by the most able philosophers, and given occasion to the most important disputes in which chemists have been engaged; which has con-

tributed, in a very particular manner, to the advancement of the science. The obscurity of the subject, however, is such, that both parties have been able to advance most plausible arguments.

Setting aside all enquiries concerning the merits of these different doctrines, we shall confine ourselves to the general effects which heat produces on different bodies. For the phænomena which heat presents, and their relation to each other, may be investigated with sufficient precision, though the materiality, or immateriality of it, may remain unknown to us.

Nature of Heat. Those who consider heat as matter, assert that caloric exists in two states, namely, in combination, or at liberty.

In the first state it is not sensible to our organs, nor indicated by the thermometer; it forms a constituent part of the body; but it may be brought back to the state of sensible heat. In this state it affects animals with the sensation of heat. It, therefore, has been called sensible or free heat, or fire; and is synonymous with uncombined caloric, thermometrical caloric, caloric of temperature, interposed caloric, &c. expressions now pretty generally superseded.

From the diversity of opinions among chemists respecting the nature of caloric, several other expressions have been introduced, which it is proper to notice. For instance, by *specific heat* is understood, the relative quantities of caloric contained in equal weights of different bodies at the same temperature. *Latent heat* is the expression used to denote that quantity of caloric which a body absorbs when changing its form. It is, however, more properly called *caloric of fluidity.* The disposition, or property, by which different bodies contain certain quantities of caloric, at any temperature, is termed their *capacity for heat.* By the expression of *absolute heat,* is understood the whole quantity of caloric which any body contains.

Methods of exciting and collecting heat. Of the different methods of exciting heat, the following are the most usual: —

1. *Percussion or Collision.* This method of producing heat is the simplest, and therefore it is generally made use of, in the common purposes of life, for obtaining fire.

When a piece of hardened steel is struck with a flint, some particles of the metal are scraped away from the mass, and so violent is the heat which follows the stroke, that it melts and vitrifies them. If the fragments of steel are caught upon paper, and viewed with a microscope, most of them will be found perfect spherules, and very highly polished. Their sphericity demonstrates that they have been in a fluid state, and the polish upon their surface shows them to be vitrified.

No heat, however, has been observed to follow the percussion of liquids, nor of the softer kind of bodies which yield to a slight impulse.

2. *Friction.* Heat may likewise be excited by mere friction. This practice is still retained in some parts of the world. The natives of New Holland are said to produce fire in this manner with great facility, and spread it in a wonderful manner. For that purpose, they take two pieces of dry wood; one is a stick about eight or nine inches long, and the other piece is flat; the stick they bring to an obtuse point at one end, and pressing it upon the other piece, they turn it very nimbly, by holding it between both hands, as we do a chocolate-mill, often shifting their hands up, and then moving down upon it, in order to increase the pressure as much as possible. By this method they get fire in a few minutes, and from the smallest spark they increase it with great speed and dexterity.

If the irons at the axis of a coach-wheel are applied to each other, without the interposition of some unctuous matter to keep them from immediate contact, they will become so hot, when the carriage runs swiftly along, as to set the wood on fire; and the fore-wheels, being smallest, and making most revolutions in a given time, will be most in danger.

The same will happen to mill-work, or to any other machinery.

It is no uncommon practice, in this country, for blacksmiths to use a plate of iron as an extemporaneous substitute for a tinder-box; for it may be hammered on an anvil till it becomes red hot, and will fire a brimstone match. A strong man, who strikes quick, and keeps turning the iron, so that both sides may be equally exposed to the force of the hammer, will perform this in less time than would be expected.

If, in the coldest season, one dense iron plate be laid on another, and pressed together by a weight, and then rubbed upon each other by reciprocal motions, they will gradually grow so hot as, in a short time, to emit sparks, and at last become ignited.

It is not necessary that the substances should be very hard; a cord rubbed backwards and forwards swiftly against a post or a tree, will take fire.

Count Rumford and Professor Pictet have made some very ingenious and valuable experiments concerning the heat evolved by friction.

3. *Chemical Action.* To this belongs the heat produced by combustion. There are, besides this, many chemical processes wherein rapid chemical action takes place, accompanied with a development of heat, or fire, and flame.

4. *Solar Heat.* It is well known that the solar rays, when collected by a mirror, or lens, into a focus, produce the most astonishing effects.

Dr. Herschel has discovered that there are rays emitted from the sun which have not the power of illuminating or producing vision: and that these are the rays which produce the heat of the solar light.

Consequently, heat is emitted from the sun in rays, but these rays are not the same with the rays of light.

5. *The Electric Spark, and Galvanism.* The effects of electricity are too well known, in this point of view, to need any description.

Galvanism has of late become a powerful instrument for the purpose of exciting heat. Not only easily inflammable substances, such as phosphorus, sulphur, &c. have been fired, but likewise gold, silver, copper, tin, and the rest of the metals, have been burnt by means of galvanism.

General Effects of Heat. The first and most obvious effect which heat produces on bodies, is its expansive property. Experience has taught us that, at all times, when bodies become hot, they increase in bulk. The bodies experience a dilatation which is greater in proportion to the accumulation of caloric, or, in other words, to the intensity of the heat. This is a general law, which holds good as long as the bodies have suffered no change, either in their combination or in the quantity of their chemical principles.

This power, which heat possesses, consists, therefore, in a constant tendency to separate the particles of bodies. Hence philosophers consider heat as the *repulsive power* which acts upon all bodies whatever, and which is in constant opposition to the power of attraction.

The phænomena which result from these mutual actions, seem, as it were, the secret springs of nature. Heat, however, does not expand all bodies equally, and we are still ignorant of the laws which it follows.

1. *Expansion of Fluid Bodies.* Take a glass globe, with a long slender neck (called a bold head); fill it up to the neck with water, ardent spirit, or any other fluid which may be coloured with red or black ink, in order to be more visible, and then immerse the globe of the instrument in a vessel of hot water; the included fluid will instantly begin to mount into the neck. If it be taken out of the water and brought near the fire, it will ascend more and more, in proportion as it becomes heated; but, upon removing it from the source of heat, it will sink again: a clear proof that caloric dilates it, so as to make it occupy more space when hot than when cold. These experiments may, therefore, serve as a demonstration that heat expands *fluid* bodies.

2. *Expansion of Aeriform Bodies.* Take a bladder partly filled with air, the neck of which is closely tied, so as to prevent the inclosed air from escaping, and let it be held near a fire. The air will soon begin to occupy more space, and the bladder will become gradually distended; on continuing the expansion of the air, by increasing the heat, the bladder will burst with a loud report.

3. *Expansion of Solid Bodies.* If we take a bar of iron, six inches long, and put it into a fire till it becomes red hot, and then measure it in this state accurately, it will be found 1-20th of an inch longer than it was before; that is about 120th part of the whole. That the metal is proportionally expanded in breadth, will be seen by trying to pass it through an aperture which is fitted exactly when cold, but which will not admit it when red-hot. The bar is, therefore, increased in length and diameter.

To discover the minutest changes of expansion by heat, and the relative proportions thereof, instruments have been contrived, called *Pyrometers,* the sensibility of which is so delicate as to show an expansion of 1-100,000th of an inch.

It is owing to this expansion of metals, that the motion of time-pieces is rendered erroneous; but the ingenuity of artists has discovered methods of obviating this inaccuracy, by employing the greater expansion of one metal to counteract the expansion of another; this is effected in what is called the gridiron pendulum. Upon the same principle, a particular construction of watches has been contrived.

The expansion of metals is likewise one of the principal reasons that clocks and watches vary in winter and summer, when worn in the pocket or exposed to the open air, or when carried into a hotter or a colder climate. For the number of the vibrations of the pendulum is always in the sub-duplicate ratio of its length, and as the length is changed by heat and cold, the times of vibration will be also changed. The quantity of alteration, when considered in a single vibration, is exceedingly small, but when they are often repeated, it will be very sensible. An alteration of one thousandth part in the time of a single vibration of a pendulum which beats seconds, will make a change of eighty-six whole vibrations in twenty-four hours.

As different metals expand differently with the same degree of heat; those musical instruments, whose parts are to maintain a constant true proportion, should never be strung with different metals. It is on this account that harpsichords, &c. are out of tune by a change of temperature.

Bodies which are brittle, or which want flexibility, crack or break if suddenly heated. This likewise depends upon the expansive force of heat, stretching the surface to which it is applied, while the other parts, not being equally heated, do not expand in the same ratio, and are therefore torn asunder or break. Hence thin vessels stand heat better than thick ones. The same holds, when they are suddenly cooled.

Measurement of Heat. Upon the expansive property of heat, which we have considered before, is founded its artificial measurement. Various means have been employed to assist the imperfection of our sensations in judging of the different degrees of heat, for our feelings unaided afford but very inaccurate information concerning this matter; they indicate the presence of *heat,* only when the bodies presented to them are *hotter* than the actual temperature of our organs of feeling. When those bodies are precisely of the same temperature with our body, which we make the standard of comparison, we then are not sensible of the presence of heat in them.

When their temperature is less than that of our bodies, their contact gives us what is called the sensation of cold.

The effects of heat upon material bodies in general, which are easily visible to us, afford more precise and determinate indications of the intensity, than can be derived from our feelings alone. The ingenuity of the philosopher and artist has therefore furnished us with instruments of measuring the relative heat or temperature of bodies. These instruments are called *Thermometers* and *Pyrometers*. By these, all degrees are measurable, from the slightest to that of the most intense heat. See *Thermometer* and *Pyrometer*.

Exceptions to the Expansion by Heat. Philosophers have noticed a few exceptions to the law of heat expanding bodies. For instance; water, when cooled down within about 7° of the freezing point, instead of contracting on the farther deprivation of heat, actually expands.

Another seeming exception is manifested in alumine, or clay; others occur in the case of cast-iron, and a few other metals. Alumine contracts on being heated, and cast-iron, bismuth, &c. when fully fused, are more dense than when solid; for as soon as they become so, they decrease in density, they expand in the act of cooling, and hence the sharpness of figures upon iron which has been cast in moulds, compared to that of many other metals.

Some philosophers have persuaded themselves that these exceptions are only *apparent*, but not really true. They say when water freezes, it assumes a crystalline form, the crystals cross each other and cause numerous vacuities, and thus the ice occupies more space. The same is the case with fused iron, bismuth, and antimony. The contraction of clay is considered owing to the loss of water, of which it loses a part at every increased degree of temperature hitherto tried; there is, therefore, a loss of matter, and a reduction of volume must follow; but others assert, that this only happens to a certain extent.

Mr. Tilloch has published a brief examination of the received doctrines respecting heat and caloric, in which these truths are more fully considered, together with many other interesting facts relative to the received notions of heat.

Equal Distribution of Heat. If a number of bodies of different temperatures are placed in contact with each other, they will all at a certain time acquire a temperature which is intermediate; the caloric of the hottest body will diffuse itself among those which are heated in a less degree, till they have all acquired a certain mean temperature. Thus, if a bar of iron, which has been made red-hot, be kept in the open air, it does not retain the heat which it had received, but becomes gradually colder and colder, till it arrives at the temperature of the bodies in its neighbourhood. On the other hand, if we cool down the iron bar by keeping it for some time covered with snow, and then carry it into a warm room, it does not retain its low temperature, but becomes gradually hotter, till it acquires the temperature of the room. It is therefore obvious, that in the one instance the temperature is lowered, and in the other it is raised.

These changes of temperature occupy a longer or a shorter time, according to the nature of the body, but they always take place at last. This law itself is, indeed, familiar to every one: when we wish to heat a body, we carry it towards the fire: when we wish to cool it, we surround it by cold bodies.

Propagation of Heat. We have seen, that when bodies of higher temperature than others are brought into contact with each other, the heat is propagated from the first to the second, or the colder body deprives the warmer of its excess of heat. We shall now see that some bodies do so much more quickly than others. Through some bodies caloric passes with undiminished velocity, through others its passage is prodigiously retarded.

This disposition of bodies, of admitting under equal circumstances the refrigeration of a heated body within a shorter or a longer time, is called *the power of conducting heat*; and a body is said to be a *better* or *worse conductor of heat*, as it allows the refrigeration to go on quicker or slower. Those bodies, therefore, which possess the property of letting heat pass with facility, are called *good conductors*, those through which it passes with difculty are called *bad conductors*, and those through which it is supposed not to pass at all, are called *non-conductors*; thus we say, in common language, some bodies are *warm*, or capable of preserving warmth, and from this arises the great difference in the sensation excited by different bodies, when applied at the same temperature to our organs of feeling. Hence, if we immerse our hand in mercury, we feel a greater sensation of cold than when we immerse it in water, and a piece of metal appears to be much colder than a piece of wood, though their temperatures, when examined by means of the thermometer, are precisely the same.

It is probable that all solids conduct heat in some degree, though they differ very much in their conducting power. Metals are the best conductors of heat; but the conducting powers of these substances are by no means equal. Stones seem to be the next best conductors. Glass conducts heat very slowly; wood and charcoal slower; feathers, silk, wool, and hair, are still worse conductors than any substance yet mentioned.

The best conductors of electricity and galvanism are also the best conductors of heat.

Experiment.—Take a number of straight wires, of equal diameters and lengths, but of different metals; for instance, gold, silver, copper, iron, &c.; cover each of them with a thin coat of wax, and plunge their extremities into water, kept boiling. The melting of the coat of wax will show that caloric is more

quickly transmitted through some metals than others.

It is on this account also, that the end of a glass rod may be kept red-hot for a long time, or even melted, without any inconvenience to the hand which holds the other extremity; though a similar metallic rod, heated in the same manner, would very soon become too hot to be held.

Liquid and Aëriform Bodies convey Heat by an actual Change in the Situation of their Particles. Count Rumford was the first who proved that fluids in general, and aëriform bodies, convey heat on a different principle from that observed in solids. This opinion is pretty generally admitted, though various ingenious experiments have been made by different philosophers to prove the contrary. In water, for instance, the Count has proved that caloric is propagated principally in consequence of the motion which is occasioned in the particles of that fluid.

All fluids are considered by him, strictly speaking, in a similar respect as *non-conductors* of caloric. They can receive it, indeed, from other substances, and can give it to other substances, but no particle can either receive it from or give it to another particle of the same kind. Before a fluid, therefore, can be heated or cooled, every particle must go individually to the substance from which it receives or to which it gives out caloric. Heat being, therefore, only propagated in fluids, in consequence of the internal motion of their particles, which transport the heat; the more rapid these motions are, the more rapid is the communication of heat. The cause of these motions is the change in the specific gravity of the fluid, occasioned by the change of temperature; and the rapidity is in proportion to the change of the specific gravity of the liquid by any given change of temperature. The following experiment may serve to illustrate this theory:—

Take a thin glass tube, eight or ten inches long, and about an inch in diameter. Pour into the bottom part, for about the depth of one inch, a little water coloured with Brazil-wood, or litmus, and then fill up the tube with common water, extremely gently, so as to keep the two *strata* quite distinct from each other. Having done this, heat the bottom part of the tube over a lamp; the coloured infusion will then ascend, and gradually tinge the whole fluid; on the contrary, if the heat be applied above, the water in the upper part of the tube may be made to boil, but the colouring matter will remain at the bottom undisturbed. The heat cannot act downwards to make it ascend.

By thus being able to make the upper part of a fluid boil without heating the bottom part, water may be kept boiling for a considerable time in a glass tube over ice, without melting it.

Other experiments, illustrating the same principle, may be found in Rumford's Essays, especially the 7th; 1797.

To this indefatigable philosopher we are wholly indebted for the above facts: he was the first who taught us that air and water were nearly non-conductors. The results of his experiments, which are contained in the above Essay, are highly interesting; they also show that the conducting power of fluids is impaired by the admixture of fibrous and glutinous matter.

Count Rumford proved that ice melted more than 80 times slower, when boiling-hot water stood on its surface, than when the ice was placed to swim on the surface of the hot water. Other experiments showed that water, only eight degrees of Fahrenheit above the freezing point, or at the temperature of forty degrees, melts as much ice, in any given time, as an equal volume of that fluid at any higher temperature, provided the water stands on the surface of the ice. Water at the temperature of 41°, is found to melt more ice, when standing on its surface, than boiling water. It appears, however, that liquids are not, as he supposes, complete non-conductors of caloric: because if heat be applied at top, it is capable of making its way downwards, through water for example, though very imperfectly and slowly.

It becomes further evident, from the Count's ingenious experiments, that of the different substances used in clothing, hares' fur and eider-down are the warmest; next to these, beavers' fur, raw silk, sheep's wool, cotton wool, and, lastly, lint or the scrapings of fine linen. In fur, the air interposed among its particles is so engaged as not to be driven away by the heat communicated thereto by the animal body; not being easily displaced, it becomes a barrier to defend the animal body from the external cold. Hence it is obvious that those skins are warmest which have the finest, longest, and thickest fur; and that the furs of the beaver, otter, and other like quadrupeds, which live much in the water, and the feathers of water-fowl, are capable of confining the heat of those animals in winter, notwithstanding the coldness of the water which they frequent. Bears, and various other animals, inhabitants of cold climates, which do not often take the water, have their fur much thicker on their backs than on their bellies.

The snow which covers the surface of the earth in winter, in high latitudes, is doubtless designed as a garment to defend it against the piercing winds from the polar regions, which prevail during the cold season.

Without dwelling farther upon the philosophy of this truth, we must briefly remark that the happy application of this law, satisfactorily elucidates some of the most interesting facts of the economy of nature.

Theory of Caloric of Fluidity, or Latent Heat. There are some bodies which, when submitted to the action of caloric, dilate to such a degree, and the power of aggregation subsisting among their particles is so much destroyed and removed to such a distance by

the interposition of caloric, that they slide over each other in every direction, and therefore appear in a fluid state. This phænomenon is called *fusion*. Bodies thus rendered fluid by means of caloric, are said to be *fused*, or *melted*; and those that are subject to it, are called *fusible*.

The greater number of solid bodies may, by the application of heat, be converted into fluids. Thus metals may be fused; sulphur, resin, phosphorus, may be melted; ice may be converted into water, &c.

Those bodies which cannot be rendered fluid by any degree of heat hitherto known, are called *infusible*.

If the effects of heat, under certain circumstances, be carried still further than is necessary to render bodies fluid, vaporisation begins; the bodies then become converted into the vaporous or *gaseous state*. Vaporisation, however, does not always require a previous fusion. Some bodies are capable of being converted into the vaporous state, without previously becoming fluid, and others cannot be volatilised at any temperature hitherto known: the latter are termed *fixed*.

Fluidity is therefore by no means essential to any species of matter, but always depends on the presence of a quantity of caloric. Solidity is the natural state of all bodies, and there can be no doubt that every fluid is capable of being rendered solid by a due reduction of temperature; and every solid may be fused by the agency of caloric, if the latter does not decompose them at a temperature inferior to that which would be necessary for their fusion.

Caloric of Fluidity. Dr. Black was the first who proved that, whenever caloric combines with a solid body, the body becomes heated only, until it is rendered fluid; and that, while it is acquiring the fluid state, its temperature remains stationary, though caloric is continued to be added to it. The same is the case when fluids are converted into the aëriform or vaporous state.

From these facts, the laws of latent heat have been inferred. The theory may be illustrated by means of the following experiments:—

If a lump of ice, at a low temperature, suppose at 22°, be brought into a warm room, it will become gradually less cold, as may be discovered by means of the thermometer. After a very short time, it will reach the temperature of 32°, (the freezing point); but there it stops. The ice then begins to melt; but the process goes on very slowly. During the whole of that time its temperature continues at 32°; and as it is constantly surrounded by warm air, we have reason to believe that caloric is constantly entering into it; yet it does not become hotter till it is changed into water. Ice, therefore, is converted into water by a quantity of caloric uniting with it.

It has been found by calculation, that ice in melting absorbs 140° of caloric, the temperature of the water produced still remaining at 32°.

This fact may be proved in a direct manner.

Take one pound of ice, at 32°, reduced to a coarse powder; put it into a wooden bowl, and pour over it one pound of water, heated to 172°; all the ice will become melted, and the temperature of the whole fluid, if examined by a thermometer, will be 32°: 140° of caloric are therefore lost, and it is this quantity which was requisite to convert the ice into water. This experiment succeeds better, if, instead of ice, fresh-fallen snow be employed.

This caloric has been called *latent caloric*, because its presence is not measurable by the thermometer: also, more properly, caloric of fluidity.

Dr. Black has also ascertained by experiment, that the fluidity of melted wax, tallow, spermaceti, metals, &c. is owing to the same cause; and Landriani proved, that this is the case with sulphur, alum, nitrate of potash, &c.

We consider it therefore as a general law, that whenever a solid is converted into a fluid, it combines with caloric, and that is the cause of fluidity.

Conversion of Solids and Fluids into the Aëriform or Gaseous state. We have seen before, that, in order to render solids fluid, a certain quantity of caloric is necessary, which combines with the body, and therefore cannot be measured by the thermometer; we shall now endeavour to prove, that the same holds good in respect to the conversion of solids or fluids into the vaporous or gaseous state.

Take a small quantity of carbonate of ammonia, introduce it into a retort, the neck of which is directed under a cylinder filled with mercury, and inverted in a basin of the same fluid. On applying heat to the body of the retort, the carbonate of ammonia will be volatilised, it will expel the mercury out of the cylinder, and become an invisible gas, and would remain so, if its temperature was not lowered.

The same is the case with benzoic acid, camphire, and various other substances.

All fluids may, by the application of heat, be converted into an aëriform elastic state.

When we consider water in a boiling state, we find that this fluid, when examined by the thermometer, is not hotter after boiling several hours, than when it began to boil, though to maintain it boiling a brisk fire must necessarily be kept up. What then, we may ask, becomes of the wasted caloric? It is not perceptible in the water, nor is it manifested by the steam; for the steam, if not compressed, upon examination, is found not to be hotter than boiling water. The caloric is therefore absorbed by the steam; and although what is so absorbed, is absolutely necessary for the conversion of water into the form of steam, it does not increase its temperature, and is therefore not appreciable by the thermometer.

The conclusion is further strengthened by the heat given out by steam on its being condensed by cold. This is particularly manifested in the condensation of this fluid in the process of distilling, where, upon examining the refrigeratory, it will be found that a much greater quantity of caloric is communicated to it, than could possibly have been transmitted by the caloric which was sensibly acting before the condensation. This may be easily ascertained by observing the quantity of caloric communicated to the water in the refrigeratory of a still, by any given quantity of liquid that passes over.

1. The boiling point, or the temperature at which the conversion of fluids into gases takes place, is different in different fluids, but constant in each, provided the pressure of the atmosphere be the same.

Put any quantity of sulphuric æther into a Florence flask, suspend a thermometer in it, and hold the flask over an Argand's lamp, the æther will immediately begin to boil, and the thermometer will indicate 98°, if the æther has been highly rectified.

If highly rectified ardent spirit is heated in a similar manner, the thermometer will rise to 176°, and there remain stationary.

If water is substituted, it will rise to 212°.

If strong nitrous acid of commerce be made use of, it will be found to boil at 248°; —sulphuric acid and linseed-oil at 600°; —mercury at 656°, &c.

2. The boiling point of fluids is raised by pressure.

Mr. Watt heated water under a strong pressure to 400°. Yet still, when the pressure was removed, only part of the water was converted into vapour, and the temperature of this vapour, as well as that of the remaining fluid, was no more than 212°. There was therefore 188° of caloric suddenly lost. This caloric was carried off by the steam. Now as only about one fifth of the water was converted into steam, that steam must contain not only its own 188°, but also the 188° lost by each of the other four parts; that is to say, it must contain 188° × 5, or about 940°. Steam, therefore, is water combined with at least 940° of caloric, the presence of which is not indicated by the thermometer.

3. When pressure is removed from the surface of bodies, their conversion into the gaseous state is greatly facilitated, or their boiling point is lowered.

In proof of this the following experiments may serve:

Let a small bottle be filled with highly rectified sulphuric æther, and a piece of wetted bladder be tied over its orifice around its neck. Transfer it under the receiver of an air-pump, and take away the superincumbent pressure of the air in the receiver. When the exhaustion is complete, pierce the bladder by means of a pointed sliding wire, passing through a collar of leather which covers the upper opening of the receiver. Having done this, the æther will instantly begin to boil, and become converted into an invisible gaseous fluid.

Take a small retort or Florence flask, fill it one half or less with water, and make it boil over a lamp; when kept briskly boiling for about five minutes, cork the mouth of the retort as expeditiously as possible, and remove it from the lamp. The water, on being removed from the source of heat, will keep boiling for a few minutes; and when the ebullition begins to slacken, it may be renewed by dipping the retort into cold water, or pouring cold water upon it.

The water, during boiling, becomes converted into vapour; this vapour expels the air of the vessel, and occupies its place; on diminishing the heat, it condenses; when the retort is stopped, a partial vacuum is formed; the pressure becomes diminished, and a less degree of heat is sufficient to cause an ebullition.

For the same reason, water may be made to boil under the exhausted receiver at 94° Fahr. or even at a lower degree; alkohol at 56°; and æther at —20°.

On the conversion of fluids into gases is founded the following experiment, by which water is frozen by means of sulphuric æther:

Take a thin glass tube four or five inches long and about two or three eighths of an inch in diameter, and a two-ounce bottle furnished with a capillary tube fitted to its neck. In order to make ice, pour a little water into the tube, taking care not to wet the outside, nor to leave it moist. Having done this, let a stream of sulphuric æther fall through the capillary tube upon that part of it containing the water, which by this means will be converted into ice in a few minutes; and this it will do even near a fire, or in the midst of summer.

If the glass tube, containing the water, be exposed to the brisk thorough air, or free draught of an open window, a large quantity of water may be frozen in a shorter time; and if a thin spiral wire be introduced previous to the congelation of the water, the ice will adhere to it, and may thus be drawn out conveniently.

A person might be easily frozen to death during very warm weather, by merely pouring upon his body for some time sulphuric æther, and keeping him exposed to a thorough draught of air.

Artificial Refrigeration. The cooling or refrigeration of rooms in the summer season, by sprinkling them with water, is on the principle of evaporation.

The method of making ice artificially in the East Indies, depends on the same principle. The ice-makers at Benares dig pits in large open plains, the bottom of which they strew with sugar-canes or dried stems of maize or Indian corn. Upon this bed they place a number of unglazed pans, made of so porous an earth that the water penetrates through their whole substance. These pans are filled towards evening, in the winter season, with

water that has boiled, and left in that situation till morning, when more or less ice is found in them, according to the temperature and other qualities of the air; there being more formed in dry and warm weather than in that which is cloudy, though it may be colder to the human body.

Every thing in this process is calculated to produce cold by evaporation: the beds on which the pans are placed, suffer the air to have a free passage to their bottoms; and the pans constantly oosing out water to their external surface, are cooled by the evaporation of it.

In Spain, they use a kind of earthen jars, called buxaros, which are only half-baked, the earth of which is so porous, that the outside is kept moist by the water which filters through it, and though placed in the sun, the water in the jar becomes as cold as ice.

It is a common practice in China to cool wine, or other liquors, by wrapping the bottle in a wet cloth, and hanging it up in the sun. The water in the cloth becomes converted into vapour, and thus cold is produced.

The Blacks in Senegambia have a similar method of cooling water by filling tanned leather bags with it, which they hang up in the sun; the water oozes, more or less, through the leather, so as to keep the outward surface wet, which, by its quick and continued evaporation, cools the water remarkably.

The winds on the borders of the Persian Gulf are often so scorching, that travellers are suddenly suffocated unless they cover their heads with a wet cloth; if this be too wet, they immediately feel an intolerable cold, which would prove fatal if the moisture was not speedily dissipated by the heat.

Condensation of Vapour. If a cold vessel is brought into a warm room, particularly where many people are assembled, the outside of it will soon become covered with a sort of dew.

Before some changes of weather, the stone pavements, the walls of a house, the balustrades of staircases, and other solid objects, feel clammy and damp.

In frosty nights, when the air abroad is colder than the air within, the dampness of this air, for the same reason, settles on the glass panes of the windows, and is there frozen into curious and beautiful figures.

Thus *fogs* and *dews* take place, and in the higher regions clouds are formed from the condensed vapour. The still greater condensation produces *mists* and *rain*.

Capacity of Bodies for containing Heat. The property which different bodies possess, of containing at the same temperature, and in equal quantities, either of mass or bulk, unequal quantities of heat, is called their capacity for heat. The capacities of bodies for heat are therefore considered as great or small, in proportion as their temperatures are either raised by the addition, or diminished by the deprivation, of equal quantities of heat, in a less or a greater degree.

In homogeneous bodies, the quantities of caloric which they contain are in the ratio of their temperature and mass: when, therefore, equal quantities of water, of oil, or of mercury, of unequal temperatures, are mingled together, the temperature of the whole will be the *arithmetical* mean between the temperatures of the two quantities that had been mixed together. It is a self-evident truth that this should be the case: for the particles of different portions of the same substance being alike, their effects must be equal. For instance: —

Mix a pound of water at 172° with a pound at 32°, half the excess of heat in the hot water will quit it to go over into the colder portion; thus the hot water will be cooled 70°, and the cold will receive 70° of temperature; therefore, 172—70, or 32 + 70 = 102, will give the heat of the mixture. To attain the arithmetical mean very exactly, several precautions, however, are necessary.

When heterogeneous bodies of different temperatures are mixed together, the temperature produced is never the arithmetical mean of the two original temperatures.

In order to ascertain the comparative quantities of heat of different bodies, equal weights of them are mingled together; the experiments for this purpose being in general more easily executed than those by which they are compared from equal bulks.

Thus, if one pound of mercury, heated to 110° Fahr., be added to one pound of water of 44°, the temperature of the blended fluids will not be changed to 77°, as it would be if the surplus of heat were divided among those fluids in the proportion of their quantities. It will be found, on examination, to be only 47°.

On the contrary, if the pound of mercury be heated to 44°, and the water to 110°, then, on stirring them together, the common temperature will be 107°.

Hence, if the quicksilver loses by this distribution, 63° of caloric, an equal weight of water gains only 3° from this loss of 63° of heat. And, on the contrary, if the water loses 3°, the mercury gains 63°.

When, instead of comparing the quantities of caloric which equal *weights* of different bodies contain, we compare the quantities contained in equal *volumes*, we still find that an obvious difference takes place. Thus it is found by experiment, that the quantity of caloric necessary to raise the temperature of a given volume of water any number of degrees, is, to that necessary to raise an equal volume of mercury, the same number of degrees as 2 to 1. This is, therefore, the proportion between the comparative quantities of caloric which these two bodies contain, estimated by their volumes; and similar differences exist with respect to every other kind of matter.

From the nature of the experiments by which the quantities of caloric which bodies contain are ascertained, it is evident that we discover merely the *comparative*, not the *ab-*

solute quantities. Hence water has been chosen as a standard, to which other bodies may be referred; its capacity is stated as the arbitrary term of 1000, and with this the capacities of other bodies are compared.

It need not be told that pains have been taken to estimate, on these experiments, that portion of heat which diffuses itself into the air, or into the vessel where the mercury and water are blended together. As, however, such valuations cannot be made with complete accuracy, the numbers stated above are only an approximation to truth.

Radiation of Caloric. Caloric is thrown off, or radiates from heated bodies, in right lines, and moves through space with inconceivable velocity. It is retarded in its passage by atmospheric air, by colourless fluids, glass, and other transparent bodies.

If a glass mirror be placed before a fire, the mirror transmits the rays of light, but not the rays of heat.

If a plate of glass, talc, or a glass vessel filled with water, be suddenly interposed between the fire and the eye, the rays of light pass through it, but the rays of caloric are considerably retarded in its passage; for no heat is perceived until the interposed substance is saturated with heat, or has reached its *maximum*. It then ceases to intercept the rays of caloric, and allows them to pass as freely as the rays of light.

It has been lately shown by Dr. Herschel, that the rays of caloric are refrangible, but less so than the rays of light; and the same philosopher has also proved by experiment, that it is not only the rays of caloric emitted by the sun, which are refrangible, but likewise the rays emitted by fires, candles, heated iron, and even by hot water.

Whether the rays of caloric are differently refracted, in different mediums, has not yet been ascertained. We are certain, however, that they are refracted by all transparent bodies which have been employed as burning-glasses.

The rays of caloric are also reflected by polished surfaces, in the same manner as the rays of light. This was long ago noticed by Lambert, Saussure, Scheele, Pictet, and lately by Dr. Herschel.

Professor Pictet placed two concave metallic mirrors opposite to each other, at the distance of about twelve feet. When a hot body, an iron bullet for instance, was placed in the focus of the one, and a mercurial thermometer in that of the other, a substance radiated from the bullet; it passed with incalculable velocity through the air, it was reflected from the mirrors, it became concentrated, and influenced the thermometer placed in the focus, according to the degree of its concentration.

An iron ball, two inches in diameter, heated so that it was not luminous in the dark, raised the thermometer not less than ten and a half degrees, of Réaumur's scale, in six minutes.

A lighted candle occasioned a rise in the thermometer nearly the same.

A Florence flask, containing two ounces and three drachms of boiling water, raised Fahrenheit's thermometer three degrees. He blackened the bulb of his thermometer, and found that it was more speedily influenced by the radiation than before, and that it arose to a greater height.

M. Pictet discovered another very singular fact; namely, the *apparent radiation of cold.* When, instead of a heated body, a Florence flask full of ice or snow is placed in the focus of one of the mirrors, the thermometer placed in the focus of the other immediately descends, and ascends again whenever the cold body is removed.

This phænomenon may be explained on the supposition, that from every body at every temperature caloric radiates, but in less quantity as the temperature is low; so that in the above experiment, the thermometer gives out more caloric by radiation, than it receives from the body in the opposite focus, and therefore its temperature is lowered. Or, as Pictet has supposed, when a number of bodies near to each other have the same temperature, there is no radiation of caloric, because in all of them it exists in a state of equal tension; but as soon as a body at an inferior temperature is introduced, the balance of tension is broken, and caloric begins to radiate from all of them, till the temperature of that body is raised to an equality with theirs. In the above experiment, therefore, the placing the snow or ice in the focus of the mirror causes the radiation of caloric *from* the thermometer, and hence the diminution of temperature which it suffers.

These experiments have been since repeated by Dr. Young and Professor Davy, at the theatre of the Royal Institution. These gentlemen inflamed phosphorus by reflected caloric; and proved that the heat thus excited was very sensible to the organs of feeling.

It is therefore evident, that caloric is thrown off from bodies in rays, which are invisible, or incapable of exciting vision, but which are capable of exciting heat.

These invisible rays of caloric are propagated in right lines, with extreme velocity; and are capable of the laws of reflection and refraction.

The heating agency, however, is different in the different coloured rays of the prismatic spectrum. According to Dr. Herschel's experiments, it follows inversely the order of the refrangibility of the rays of light: the least refrangible possessing it in the greatest degree.

Sir Henry Englefield has lately made a series of experiments on the same subject, from which we learn that a thermometer, having its ball blackened, rose, when placed in the *blue* ray of the prismatic spectrum, in 3′ from 55° to 56°; in the *green*, in 3′ from 54° to 58°; in the *yellow*, in 3′ from 56° to 62°; in the *full red*, in 2½′ from 56° to 72°; in the *confines of the red*, in 2½′ from 58° to

Mixtures.	*Thermometer sinks.*
Muriate of ammonia - - 5 parts Nitrate of potash - - - 5 Water - - - - - 16	From 50° to 10°.
Muriate of ammonia - - 5 parts Nitrate of potash - - - 5 Sulphate of soda - - - 8 Water - - - - - 16	From 50° to 4°.
Sulphate of soda - - - 3 parts Diluted nitric acid - - - 2	From 50° to —3°.
Sulphate of soda - - - 8 parts Muriatic acid - - - 5	From 50° to 0°.
Snow - - - - - 1 part Muriate of soda - - - 1	From 32° to 0°.
Snow, or pounded ice - - 12 parts Muriate of soda - - - 1	From 0° to —5°.
Snow, or pounded ice - - 12 parts Muriate of soda - - - 5 Muriate of ammonia and nitrate of potash - - - - 5	From —5° to —18°.
Snow, or pounded ice - - 12 parts Muriate of soda - - - 5 Nitrate of ammonia - - 5	From —18° to —25°.
Snow - - - - - 3 parts Diluted nitric acid - - - 2	From 0° to —46°.
Muriate of lime - - - 3 parts Snow - - - - - 2	From 32° to —50°.
Potash - - - - - 4 parts Snow - - - - - 3	From 32° to —51°.
Snow - - - - - 8 parts Diluted sulphuric acid - - 3 Diluted nitric acid - - - 3	From —10° to —56°.
Snow - - - - - 1 part Diluted sulphuric acid - - 1	From 20° to —60°.
Muriate of lime - - - 2 parts Snow - - - - - 1	From 0° to —66°.
Muriate of lime - - - 3 parts Snow - - - - - 1	From —40° to —73°.
Diluted sulphuric acid - - 10 parts Snow - - - - - 8	From —68° to —91°.
Nitrate of ammonia - - 1 part Water - - - - - 1	From 50° to 4°.
Nitrate of ammonia - - 1 part Carbonate of soda - - - 1 Water - - - - - 1	From 50° to —7°.
Sulphate of soda - - - 6 parts Muriate of ammonia - - 4 Nitrate of potash - - - 2 Diluted nitric acid - - - 4	From 50° to —10°.
Sulphate of soda - - - 6 parts Nitrate of ammonia - - 5 Diluted nitric acid - - - 4	From 50° to —14°.
Phosphate of soda - - - 9 parts Diluted nitric acid - - - 4	From 50° to —12°.
Phosphate of soda - - - 9 parts Nitrate of ammonia - - 6 Diluted nitric acid - - - 4	From 50° to —21°.
Sulphate of soda - - - 5 parts Diluted sulphuric acid - - 4	From 50° to 3°.

$73\frac{1}{2}°$; and *quite out of the visible light*, in $2\frac{1}{2}'$ from 61° to 79°.

Between each of the observations, the thermometer was placed in the shade so long as to sink it below the heat to which it had risen in the preceding observation; of course, its rise above that point could only be the effect of the ray to which it was exposed. It was continued in the focus long after it had ceased to rise; therefore the heats given are the greatest effects of the several rays on the thermometer in each observation. A thermometer placed constantly in the shade near the apparatus, was found scarcely to vary during the experiments.

Sir Henry made other experiments with thermometers with naked balls, and with others whose balls were painted white, for which we refer the reader to the interesting paper of the Baronet, from which the above experiments are transcribed.

Production of Artificial Cold, by means of Frigorific Mixtures.—A number of experiments have been lately made by different philosophers, especially by Pepys, Walker, and Lowitz, in order to produce artificial cold. And as these methods are often employed in chemistry, with a view to expose bodies to the influence of very low temperatures, we have enumerated in a tabular form, on the preceding page, the different substances which may be made use of for that purpose, and the degrees of cold which they are capable of producing.

To produce the effects stated in the table, the salts must be reduced to powder, and contain their full quantity of water of crystallisation. The vessel in which the freezing mixture is made, should be very thin, and just large enough to hold it, and the materials should be mixed together as expeditiously as possible, taking care to stir the mixture at the same time with a rod of glass or wood.

In order to obtain the full effect, the materials ought to be first cooled to the temperature marked in *the table*, by introducing them into some of the other frigorific mixtures, and then mingling them together in a similar mixture. If, for instance, we wish to produce—46°, the snow and diluted nitric acid ought to be cooled down to 0° by putting the vessel which contains each of them into the fifth freezing mixture in the above table, before they are mingled together. If a more intense cold be required, the materials to produce it are to be brought to the proper temperature by being previously placed in the second freezing mixture.

This process is to be continued till the required degree of cold has been procured.

CALORI'METER. An instrument by which the whole quantity of absolute heat existing in a body in chemical union can be ascertained.

CALP. An argillo-ferruginous limestone.

CA'LTHA. (*a, æ.* f.; Καλθα, corrupted from χαλχα, yellow: from whence, says Vossius, come *calthula, caldula, caledula, calendula.*) 1. The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Polygynia*. The marigold.

2. The pharmacopœial name of the wild marigold. See *Caltha arvensis.*

Caltha arvensis. *Calendula arvensis. Caltha vulgaris.* The wild marigold. It is sometimes preferred to the garden marigold. The juice is given, from one to four ounces, in jaundice, and depraved state of the fluids and solids; and the leaves are commended as a salad for children afflicted with scrophulous humours.

Caltha palustris. *Populago.* Common single marsh marigold. It is said to be caustic and deleterious: but this may be questioned. The young buds of this plant make, when properly pickled, very good substitutes for capers.

Caltha vulgaris. See *Caltha arvensis.*

Ca'lthula. See *Caltha.*

CALTROPS. See *Trapa natans.*

CALU'MBA. (*a, æ.* f.; so called because it comes from Colomba, in Ceylon.) The name now adopted by the London college of physicians for the root of the *Cocculus palmatus* of De Candolles, in his *Systema Naturæ.* It was formerly called *Colombo, Calomba,* and *Colamba.* This root is imported from Colomba, in Ceylon, in circular, brown knobs, wrinkled on their outer surface, yellowish within, and consisting of cortical, woody, and medullary laminæ. Its smell is aromatic; its taste pungent, and very bitter. From Dr. Percival's experiments on the root, it appears that rectified spirit of wine extracts its virtues in the greatest perfection. The watery infusion is more perishable than that of other bitters. An ounce of the powdered root, half an ounce of orange peel, two ounces of brandy, and fourteen ounces of water, macerated twelve hours without heat, and then filtered through paper, afford a sufficiently strong and tolerably pleasant infusion. The extract made first by spirit and then with water, and reduced by evaporation to a pillular consistence, is found to be equal, if not superior in efficacy, to the powder. As an antiseptic, Calumba root is inferior to the bark; but, as a corrector of putrid bile, it is much superior to the bark; whence also it is probable, that it would be of service in the West India yellow fever. It also restrains alimentary fermentation, without impairing digestion; in which property it resembles mustard. It does not appear to have the least heating quality, and therefore may be used in phthisis pulmonalis, and in hectic cases, to strengthen digestion. It occasions no disturbance, and agrees very well with a milk diet, as it abates flatulence, and is indisposed to acidity. The London, Edinburgh, and Dublin colleges, direct a tincture of Calumba root. The dose of the powdered root is as far as half a drachm, which, in urgent cases, may be repeated every third or fourth hour.

CA'LVA. (*a, æ.* f.; from *calvus,* bald.)

The scalp or upper part of the cranium or top of the head; so called, because it often grows bald first.

CALVA'RIA. (*a, æ.* f.; from *calvus*, bald.) The upper part of the cranium which becomes soon bald. It comprehends all above the orbits, temples, ears, and occipital eminence.

CALVI'TIES. (*es, ei.* f.; from *calvus*, bald.) *Calvitium.* Baldness; want or loss of hair, particularly upon the sinciput. See *Baldness.*

CALX. (*Calx, cis.* fœm.; from *kalah*, to burn. Arabian.) 1. Chalk. See *Limestone.*

2. Lime. See *Lime.*

3. (*Calx, cis.* m.) The heel. See *Calcaneum.*

CALX ANTIMONII. See *Antimonii oxydum.*

CALX CUM KALI PURO. See *Potassæ cum calce.*

Calx cum potassâ. See *Potassa cum calce.*

CALX HYDRARGYRI ALBA. See *Hydrargyrum præcipitatum album.*

Calx, metallic. A metal which has undergone the process of calcination, or combustion, or any other equivalent operation.

CALX VIVA. Lime. The London College directs it to be prepared thus:—Take of limestone one pound: break it into small pieces, and heat it in a crucible, in a strong fire, for an hour, or until the carbonic acid is entirely driven off; so that on the addition of acetic acid, no bubbles of gas shall be extricated. Lime may be made by the same process from oyster-shells previously washed in boiling water, and cleared from extraneous matters.

CALYCANTHEMÆ. (From *calyx*, the flower-cup, and *ανθος*, the flower.) The name of an order in Linnæus's fragments of a natural method, consisting of plants which, among other characteristics, have the corolla and stamina inserted into the calyx.

CALYCIFLORÆ. (From *calyx*, and *flos*, a flower.) The name of an order in Linnæus's fragments of a natural method, consisting of plants which have the stamina inserted into the calyx.

CALYCINUS. (From *calyx*, the flower-cup.) *Calycinalis.* Calycine: belonging to the calyx of a flower; applied to the nectary, *nectarium calycinum*, it being a production of the calyx; as in *Tropæolum majus*, the garden nasturtium.

CALYCULA'TUS. (From *calyculus*, a small calyx.) Calyculate: having a double calyx, or smaller ones. Applied to a *perianthium* when there are lesser ones, like scales, about its base; as in *Dianthus caryophyllus.*

Semina calyculata are those which are enclosed in a hard bone-like calyx, as those of the *Coix lachryma*, or Job's tears.

CALY'CULUS. (*us, i.* m.; a little bud. Diminutive of *calyx.*) A little calyx.

I. The membranaceous margin surrounding the apex of a seed.

The *varieties* are,

1. *Calyculus integer*, the margin perfect, not incised; as in *Tanacetum vulgare*, and *Dipsacus laciniatus.*

2. *C. paleaceus*, with chaffy scales; as in *Helianthus annuus.*

3. *C. aristatus*, having two or three awns at the top; as in *Tagetes patula*, and *Bidens tripartita.*

4. *C. rostratus*, the style of the germ remaining; as in *Sinapis* and *Scandix cerefolium.*

5. *C. cornutus*, horned, the rostrum bent; as in *Nigella damascena.*

6. *C. cristatus*, a dentate, or incised membrane on the top of the seed; as in *Hedysarum crista galli.*

II. A little calyx exterior to another proper one.

CALY'PTER. (From *καλυπτω*, to hide.) A fleshy excrescence covering the hæmorrhoidal vein. In this sense obsolete.

CALYP'TRA. (*a, æ.* f.; from *καλυπτω*, to cover.) I. The veil, or covering of mosses. A kind of membraneous hood placed on their capsule or fructification, like an extinguisher on a candle, well seen in *Bryum cæspitosum.* Linnæus considered it as a calyx, but other botanists, especially Schreber and Smith, reckon it to be a sort of corolla. It is either,

1. *Acuminate*, pointed; as in *Minium* and *Bryum.*

2. *Caducous*, falling off yearly; as in *Bauxhaumia.*

3. *Conical*; as in most mosses.

4. *Smooth*; as in *Hypnum.*

5. *Smooth*, without any inequalities; as in *Splanchnum.*

6. *Oblong*; as in *Minium.*

7. *Villous*; as in *Polytrichum.*

8. *Complete*, surrounding the whole of the top of the capsule.

9. *Dimidiate*, covering only half the capsule; as in *Bryum androgynum.*

10. *Dentate*, toothed in the margin; as in *Eucalypta ciliata.*

In many genera it is wanting.

II. The name in Tournefort, and writings of former botanists, for the proper exterior covering or coat of the seed, which falls off spontaneously.

CALYPTRATUS. (From *calyptra*, the veil, or covering of mosses.) Calyptrate: having a covering like the calyptra of mosses.

CALYX. (*yx, icis.* f.; *καλυξ*; from *καλυπτω*, to cover.) *Calix.* I. The flower-cup, or empalements, the external covering of the flower, for the most part green, and surrounding the corolla, or gaudy part.

There are five *genera* of calyces, or flower-cups.

1. *Perianthium.* 2. *Involucrum.*
3. *Amentum.* 4. *Spatha.*
5. *Gluma.* 6. *Perichætium.*
7. *Volva.*

II. The membrane which covers the papillæ in the pelvis of the human kidney.

CA'MARA. (*a, æ.* f.; from *καμαρα*, a vault.) *Camarium.* 1. The fornix of the brain.

2. The vaulted part of the auricle of the heart.

3. A chamber; applied to a part of the eye filled with a fluid. See *Chamber*.

CAMA'RIUM. (*um, i.* n.; from καμαρα, a vault.) A vault.

CAMARO'MA. (From καμαρα, a vault.) *Camarosis. Camaratio.* A fracture of the skull, in the shape of an arch or vault.

CA'MBIUM. (*um, i.* n.; from *cambio*, to exchange.) 1. The nutritious humour which is changed into the materials of which the body is composed.

2. The gelatinous substance, or matter of organisation which Du Hamel and Mirbel suppose produces the young bark, and new wood of plants.

CAMBO'DIA. See *Stalagmitis*.

CAMBO'GIA. (*a, æ.* f.; so called, because it comes from the province of *Cambaya*, in the East Indies.) See *Stalagmitis*.

CAMBOGIA GUTTA. See *Stalagmitis*.

CAMBO'GIUM See *Cambogia*.

CAMBRO-BRITANNICA. See *Rubus Chamæmorus*.

CAMBU'CA. *Cambuta membrata*. So Paracelsus calls the venereal cancer. By some it is described as a bubo, an ulcer, an abscess on the pudenda; also a boil in the groin. Obsolete.

CA'MBUI. The American myrtle of Piso and Margrave, said to be astringent.

Camel's hay. See *Andropogon*.

CAMELEON. Chamælion.

1. In *Zoology*, an animal of the lizard tribe; the *lacerta* of Linnæus. Its supposed power of changing its colour at pleasure, and assimilating to that of any situation or object near to it, is of great antiquity. It is wonderful that it was never used in medicine.

2. In *Mineralogy*, when pure potash and black oxide of manganese are fused together in a crucible, a compound is formed, whose solution in water, at first green, passes spontaneously through the whole series of coloured rays to the red. From this latter tint, the solution may be made to retrograde in colour to the original green, by the addition of potash, or it may be rendered altogether colourless, by adding either sulphureous acid or chlorine to the solution, in which case there may or may not be a precipitate, according to circumstances.

CAMELINA. (From καμηλος, a camel: so called, because camels are fond of it.) See *Erysimum*.

CA'MERA. (*a, æ.* f.) A chamber or cavity. The chambers of the eye are termed *cameræ*. See *Chamber*.

CAMERA'TIO. See *Camaroma*.

CAMES. *Camet*. Silver.

CAMI'NGA. See *Canella alba*.

CA'MINUS. A furnace and its chimney. In Rulandus it signifies a bell.

CAMI'SIA FŒTUS. (From the Arabic term *kamisah*, an under garment.) The shirt of the fœtus. See *Chorion*.

CAMMARUS. The Lobster. See *Cancer gammarus*.

CA'MMORUM. (*um. i.* n.; Καμμορον, *quia homines*, κακῳ μορῳ: because, if eaten, it brings men to a miserable end.) See *Aconitum napellus*.

CAMOMI'LLA. Corrupted from *chamæmelum*.

CAMPA'NA. (*a, æ.* f.; so called because Paulinus, the bishop of Nola, in Campania, first used bells for religious purposes.) A bell. In *Chemistry*, a receptacle like a bell, for making sulphuric acid; thus, the oleum sulphuris per campanum.

CAMPANACEÆ. Bell-shaped flowers. The name of an order of Linnæus's natural method.

CAMPANACEUS. (From *campana*, a bell.) Bell-shaped.

CAMPANIFORMIS. Bell-shaped; applied to the corolla and nectaries of plants.

CAMPA'NULA. (*a, æ.* f.; a diminutive of *campana*, a bell: named from its shape.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*. The bell-flower.

CAMPANULA TRACHELEUM. The Great Throat-wort: called also, *Trachelium*, and *Cervicaria*. By some recommended against inflammatory affections of the throat and mouth.

CAMPAN'ULATUS. (From *Campanula*, a little bell.) Bell-shaped: applied to many parts of plants, particularly to the corolla and nectary of plants, as in *Campanula*. See *Corolla* and *Nectarium*.

CA'MPE. (From καμπτω, to bend.) A flexure or bending. It is also used for the ham, and a joint, or articulation.

CAMPEACHY. (*Campeachiensis*; the name of the town, in New Spain, where the tree which affords the Campeachy wood grows.) See *Hæmatoxylon campechianum*.

CAMPECHIANUS. (Because brought from Campeachy, in the bay of Honduras.) Campeachian. See *Hæmatoxylon campechianum*.

CAMPER, PETER, was born at Leyden in 1722, where he studied under Boerhaave, and took his degree in medicine. He died in 1789 of a pleurisy. He published some improvements in midwifery and surgery, but anatomy appears to have been his favourite pursuit. He finished two parts of a work of considerable magnitude and importance, in which the healthy and morbid structure of the arm, and of the pelvis, are exhibited in very accurate plates, from drawings made by himself: which he appears to have purposed extending to the other parts of the body. There are also some posthumous works of Camper possessing great merit, partly on subjects of natural history, partly evincing the connection between anatomy and painting; in which latter, judicious rules are laid down for exhibiting the diversity of features in persons of various countries and ages, and repre-

senting the different emotions of the mind in the countenance; also for delineating the general forms of other animals, which he shows to be modified according to their economy.

CAMPESTRIS. Of or belonging to the field: applied as a trivial name to many plants, which are common in the fields.

CAMPHIRE. The proper name for the substance now universally called *camphor*. See *Laurus camphora*.

CA'MPHORA. (*a*, *æ*, f.; from *Camphura*. Arabian. The ancients meant by camphire what now is called asphaltum, or Jews' pitch; καφουρα.) Camphor, or camphire. See *Laurus camphora*.

Camphoræ flores compositi. Camphire sublimed with benzoin.

Ca'mphoræ flos. The subtle substance which first ascends in subliming camphire. It is nothing more than the camphire.

Camphoræ linimentum. See *Linimentum*.

CA'MPHORAS. (*as*, *atis*. f.; so called, because the camphoric acid is its principal constituent.) A camphorate. A salt formed by the union of the camphoric acid with a salifiable base; thus, *camphorate of alumine*, *camphorate of ammonia*, &c.

CAMPHORA'TA. See *Camphorosma*.

Camphoratum oleum. See *Linimentum camphoræ*.

CAMPHORA'TUS. Camphorated: having camphire in its composition.

CAMPHORIC. (*Camphoricus*, from *camphora*, camphire.) Belonging to camphire.

Camphoric acid. *Acidum camphoricum*. An acid obtained by distilling nitric acid eight times following from camphire. It has a slightly acid, bitter taste, and reddens infusion of litmus. It combines with the earthy, alkaline, and metallic bases, and forms salts called camphorates.

CAMPHORO'SMA. (*a*, *æ*. f.; from *camphora*, and οσμη, smell: so called from its smelling of camphire.) Camphor-smelling.

1. The name of a genus of plants in the Linnæan system. Class, *Tetandria*; Order, *Monogynia*.

2. The pharmacopœial name of the camphorata. See *Camphorosma Monspeliensis*.

Camphorosma monspeliensis. The systematic name of the plant called *camphorata* in the pharmacopœias. Stinking ground-pine. *Chamæpeuce*, *Camphorata hirsuta*, *Camphorosma Monspeliaca*. This plant, *Camphorosma—foliis hirsutis linearibus*, of Linnæus, took its name from its smell resembling so strongly that of camphire: it has been exhibited internally, in form of decoction, in dropsical and asthmatic complaints, and by some is esteemed in fomentations against pain. It is rarely, if ever, used in modern practice.

Ca'mpter. (From καμπlω, to bend.) An inflexion or incurvation.

Ca'mpulum. (From καμπτω, to twist about.) A distortion of the eyelids.

CAMPYLO'TIS. (*is*, *is*. f.; from καμπυλος, bent.) A preternatural incurvation, or recurvation of a part; also a distortion of the eyelids.

CA'MPYLUM. See *Campylotis*.

Ca'nabil. A sort of medicinal earth.

Canabi'na aquatica. See *Bidens*.

Ca'nabis. See *Cannabis*.

Ca'nada balsam. See *Pinus balsamea*.

Canada maidenhair. See *Adianthum pedatum*.

CANADE'NSIS. (From *Canada*, a province in America.) Canadian. See *Pinus balsamea*.

CANALICULA'TUS. Canaliculate, or channelled; having a long furrow: applied to leaves, pods, &c.; as the leaf of the *Plantago maritima*.

CANALI'CULUS. (Diminutive of *canalis*, a channel.) A little canal. See *Canalis arteriosus*.

CANA'LIS. (*is*, *is*. m.; from χανος, an aperture, or rather from *canna*, a reed.) A canal. 1. Applied to many parts of the body; as *canalis nasalis*, &c.

2. The hollow of the spine.

3. A hollow round instrument like a reed, for embracing and holding a broken limb.

Canalis arteriosus. A blood-vessel peculiar to the fœtus; called also, *Canaliculus arteriosus* and *Canalis Botalii*, disappearing after birth; through which the blood passes from the pulmonary artery into the aorta.

Canalis nasalis. A canal going from the internal canthus of the eye downwards into the nose: it is situated in the superior maxillary bone, and is lined with the pituitary membrane continued from the nose.

Canalis petitianus. A triangular cavity, naturally containing a moisture between the two laminæ of the hyaloid membrane of the eye, in the anterior part, formed by the separation of the anterior lamina from the posterior. It is named after its discoverer, Petit.

Canalis semicircularis. The semicircular canal. There are three in each ear, placed in the posterior part of the labyrinth. They open by five orifices into the vestibulum. See *Ear*.

Canalis semispetros. The half bony canal of the ear.

Canalis venosus. A canal peculiar to the fœtus, disappearing after birth, that conveys the maternal blood from the *porta* of the liver to the ascending *vena cava*.

CANA'RY BALM. See *Dracocephalum*.

Ca'ncamum Græcorum. See *Hymenæa*.

CANCELLA'TUS. Latticed; having a reticulated appearance.

CANCE'LLI. (*i*, *orum*. pl. m.) Lattice-work; applied to the reticular substance in bones.

CANCE'LLUS. (*us*, *i*. m.; a diminutive of *cancer*, a crab.) See *Cancer cancellus*.

CA'NCER. (*Cancer*, *cri*. m.; from καρκινος.) I. The name of a genus of crustaceous animals, in which Linnæus comprises

all the species of crabs, lobsters, and shrimps, except the two genera *Monoculus* and *Oniscus*. The following species only are to be noticed here: —

1. Cancer maenas. This is our most common crab. It is found all around Europe.

2. Cancer pagurus. This is the crab usually found at our tables. It inhabits most of the rocky shores of England, and other countries of Europe, and is said to be in the highest perfection about Christmas. The flesh is much esteemed, as being more palatable and wholesome than that of any other kind of crab.

3. Cancer gammarus. The common lobster. This is frequent in all the northern parts of Europe. It inhabits all the rocky shores of our island, but is the most abundant with us in the northern extremity of Scotland, and far more frequent on the coast of Norway. The fish of the lobster is delicious, and that of the claw the most tender and easy of digestion.

4. Cancer fluviatilis. The common craw-fish. This is very generally eaten by those who cannot obtain the lobster.

5. Cancer squilla. The prawn. A delicious fish, when fresh and not salted.

6. Cancer crangon. The shrimp. A delicious small fish, common on our shores.

7. Cancer ruricola. The great land crab of the Bahama islands, the economy of which has attracted the notice of so many, and which is so well detailed by Sloane. This is eaten in many of the sugar islands, and forms no inconsiderable part of the food of the poor negroes.

8. Cancer cæmentarius. Very common in the rivers of Chili, but not better than our craw-fish, though somewhat longer.

9. Cancer talicuna. The flesh of this is very good, and it is much eaten by the inhabitants of Chili, on the coast of which it is found.

10. Cancer latro. This inhabits the holes and corners of rocks in India. It crawls out in the night, in search of nuts and nourishment. The Indians eat the flesh of this kind of hermit crab, after taking out the entrails, which they think poisonous.

11. Cancer tranquebaricus. This is found at Tranquebar, and is generally eaten by the Indians.

12. Cancer astacus. The crab-fish from which the claws and eyes are selected for medical use. The eyes are concretions in the stomach. They are carbonates of lime, and exhibited against acidity in the same way as prepared chalk.

II. The common name of the crab fish. See *Cancer Astacus*.

III. (From καρκινος, a crab; so called by the ancients, because it exhibited large blue veins like crab's claws.) The name of a disease, likewise called *Carcinoma, Carcinos*, by the Greeks. It is a painful scirrhous tumour, terminating in a fatal ulcer. Any part of the body may be the seat of cancer, though the glands are most subject to it. It is distinguished, according to its stages, into *occult* and *open*; by the former is meant its scirrhous state, which is a hard tumour that sometimes remains in a quiet state for many years. When the cancerous action commences in it, it is attended with frequent shooting pains: the skin that covers it becomes discoloured, and ulceration sooner or later takes place: when the disease is nominated *open* cancer. Mr. Pearson says, "When a malignant scirrhous or a watery excrescence hath proceeded to a period of ulceration, attended with a constant sense of ardent and occasionally shooting pains, is irregular in its figure, and presents an unequal surface; if it discharges sordid, sanious, or fœtid matter; if the edges of the sore be thick, indurated, and often exquisitely painful, sometimes inverted, at other times retorted, and exhibit a serrated appearance; and should the ulcer in its progress be frequently attended with hæmorrhage, in consequence of the erosion of blood-vessels; there will be little hazard of mistake in calling it a cancerous ulcer." In men, a cancer most frequently seizes the tongue, mouth, or penis; in women, the breasts or the uterus, particularly about the cessation of their periodical discharges; and in children, the eyes.

The following description of Scirrhus and Cancer, from the above writer, will serve to elucidate the subject. A hard unequal tumour, that is indolent and without any discolouration in the skin, is called a scirrhous; but when an itching is perceived in it, which is followed by a pricking, shooting, or lancinating pain, and a change of colour in the skin, it is usually denominated a cancer. It generally is small in the beginning, and increases gradually; but though the skin changes to a red or livid appearance, and the state of the tumour from an indolent to a painful one, it is sometimes very difficult to say when the scirrhus really becomes a cancer, the progress being quick or slow according to concurring causes. When the tumour is attended with a peculiar kind of burning, shooting pains, and the skin hath acquired the dusky purple or livid hue, it may then be deemed the malignant scirrhous or *confirmed cancer*. When thus far advanced in women's breasts, the tumour sometimes increases speedily to a great size, having a knotty unequal surface; more glands becoming obstructed, the nipple sinks in, turgid veins are conspicuous, ramifying around, and resembling a crab's claws. These are the characteristics of an occult cancer on the external parts; and we may suspect the existence of one internally, when such pain and heat as has been described, succeed in parts where the patient hath before been sensible of a weight and pressure, attended with obtuse pain. A cancerous tumour never melts down in suppuration, like an inflammatory one; but when it is ready to break open, especially in the

breast, it generally becomes prominent in some minute point, attended with an increase of the peculiar kind of burning, shooting pain, felt before at intervals, in a less degree and deeper in the body of the gland. In the prominent part of the tumour, in this state, a corroding ichor sometimes transudes through the skin, soon forming an ulcer: at other times a considerable quantity of a thin lymphatic fluid, tinged with blood from eroded vessels, is found on it. Ulcers of the cancerous nature discharge a thin, fœtid, acrid sanies, which corrodes the parts, having thick, dark-coloured, retorted lips; and fungous excrescences frequently rise from these ulcers, notwithstanding the corrosiveness of the discharge. In this state they are often attended with excruciating, pungent, lancinating, burning pains, and sometimes with bleeding.

Though a scirrhus may truly be deemed a cancer, as soon as pain is perceived in it, yet every painful tumour is not a cancer; nor is it always easy to say whether a cancer is the disorder or not. Irregular hard lumps may be perceived in the breast; but on examining the other breast, where no uneasiness is perceived, the same kind of tumours are sometimes found, which renders the diagnostic uncertain. Yet in every case after the cessation of the catamenia, hard unequal tumours in the breast are suspicious; nor, though without pain, are they to be supposed indolent or innoxious.

A very important question exists with respect to this disease — whether it be a constitutional or a local; whether an hereditary or merely an occasional disease. Much has been said, and well said, on both sides. Till of late years the disease was generally regarded as a constitutional affection. Dr. Baillie and Mr. Abernethy concur in regarding it as a local affection alone. If the disease be merely local, it is difficult, and perhaps insuperably difficult, to say why a blow on a conglomerate gland, as the breast for example, should sometimes produce a cancer, but more generally not: or what that power is that excites the cancerous action in one person, from which another, or perhaps a hundred others, remains free, upon an application of the very same injury to the very same organ. A blow on the knee often produces a white swelling; but ten thousand children receive blows on the knee without any such effect following. In this case, says Dr. Good, we resolve the difference of the result, without a controversy, into the presence or absence of a scrofulous constitution; and without this view of the subject, we should find ourselves at a loss for an answer. And unless, continues the same author, we apply the same reasoning to cancer, we shall ever, I fear, remain at an equal loss. The cases, moreover, in which cancerous tumours are found in other parts of the body, after one, or more than one, has been extirpated, lead us, by an easy thread, to the same conclusion, provided the tumour has been removed in an early stage of the disease, and before ulceration has taken place; for it is possible that the specific matter of a cancer, generated and matured locally, may be absorbed and deposited on the organs which are afterwards affected. But if the extirpation have taken place before the formation of the specific matter, it is not easy, except by a constitutional taint, to account for any subsequent appearances. It is still stronger in proof of an hereditary predisposition, that various members of the same family have exhibited the same disease, either simultaneously, or in succession; and that the descendants of those who have been afflicted with it, seem to have more frequently suffered from it than others. It is not necessary to advance individual instances in support of these positions. The same remark has been made upon a general survey of the disease in most ages: and the doctrine of an hereditary influence has, in consequence, descended to us, as a result of such remarks, from the time of the Greeks and Romans. The truth seems to be, that cancer, like gout, is dependent upon a peculiar diathesis, or state of the constitution, which disposes a scirrhous tumour, or any other occasional cause, to produce a cancerous ulceration, and consequently to generate the specific matter of cancer; which matter, once absorbed into the system, even though, by a removal of the local affection, and the influence of a healthy habit, it should remain dormant or be kept in subjection, may augment the original predisposition, and transmit a seminium to the future race. How far a predisposition to cancer, whether original or derived, may manifest itself by external signs, is not yet generally determined. Such an outward character is by no means constant in the list of hereditary diseases. It is, perhaps, generally visible in those that affect the mind; but far less so in those that affect the body. In phthisis, the predominant diathesis has a striking exterior: in scrofula, the outward and visible sign is far less distinct, though such a sign seems to prevail generally: in gout, there is no specific exterior that we can depend on. Dr. Parr, however, has conceived that cancer has its outward character as well as phthisis, and that it is indelibly marked in the complexion: "for we have found," says he, "cancers more frequent in the dark cadaverous complexions than in the fairer kind. The complexion we mean is distinct from the darkness of the atrabilious or melancholic habits: a blue tint seems mixed with the brown, and is chiefly conspicuous under the eyes, and in the parts usually fair. This may, perhaps, be a refinement without foundation, but we think we have often observed it. There is certainly no constitutional symptom by which it can be predicted, if, in women, a scanty and dark coloured catamenial discharge be not a prognostic of the future disease. Cancer has certainly been traced in females of the same family; and those who have escaped, suffer from irregular anomalous

pains, and different, often unaccountable, complaints." The picture thus ingeniously drawn is worth bearing in mind.

Cancer has also been imagined, by many practitioners of high respectability, to be contagious: of whom we may mention Bierchen, Sinnert, and Gooch: but there seems no sufficient ground for the continuance of such an opinion. Inoculation has been said to have produced the complaint; but, like many other specific acrimonies, it does not act very readily in this way, even if it act at all; for Alibert, in his "Maladies de la Peau," &c. affirms, that he inoculated both himself and several of his pupils, without any other effect than that of local inflammation; and that even this did not always ensue. It has been swallowed by dogs without mischief.

In general, a cure is rarely effected of this disease, but by the knife or a caustic: yet the progress of the complaint may perhaps be arrested; and we are often able, without cutting, to render it at least tolerable for a series of years. In an early stage of the disease, relief may often be obtained by topical bleeding, as with leeches; and topical refrigerant applications, as saturnine lotions, or sheet-lead in very thin layers, as the linings of tea-packages, an application which has of late been brought forward as something new, but which was employed long ago, and may be found recommended in many of the older journals of established reputation. The diet should be limited to the mildest nutriment, and wine be sedulously avoided. At this period, indeed, whatever can prevent or lessen inflammation should be seriously studied, and adhered to.

As the disease advances, and assumes more of a chronic character, the activity of the smaller vessels may be gently urged in order to relieve or prevent congestion; and, where the irritation is not great, we may by degrees apply gentle stimulants also externally, and let the saturnine lotion be superseded by the acetated solution of ammonia, or an illination of the surrounding parts with mercurial ointment combined with a small portion of camphire.

The internal medicines which have been chiefly trusted to for the cure of this disease, are the lurid and umbellate narcotics, and the mineral tonics: the former, apparently for the purpose of taking off irritation, and, in some instances, correcting the specific acrimony; and the latter, for supporting the living power, and thus enabling the system to obtain a triumph over the disease by its own instinctive or remedial energy.

Of the first class, the chief have been the belladonna and hemlock, and particularly the latter, which appears to have been most promising. When Stoerck, of Vienna, published his work upon the successful exhibition of hemlock in cases of confirmed cancer, many of which were vouched for by the Baron Van Swieten, every practitioner was eager for examples upon which to try the experiment for himself. Solanum was just sinking into disrepute from its numerous failures, and corrosive sublimate was the medicine chiefly confided in. Conium, or cicuta, was now tried upon a large scale, in every stage and modification of the disease; and the general opinion is, that it is entitled to a certain degree of merit. In recent states of the disease, where there is no ulceration, or none of any depth, it occasionally has produced a favourable termination. But in inveterate cases, where the cancerous ulcer had made considerable progress, its benefit is very questionable: it operates often for a very few days like a charm, diminishes the pains, and improves the discharge: but suddenly it fails to do the slightest good any longer, unless the dose were very largely increased; upon which a like beneficial effect follows, but, unfortunately, of equally transient duration. In many instances, again increased; and continued.

Fothergill was friendly to its use; and Bell and Fearon recommended it both externally and internally, alone or in combination with opium. Cullen speaks well of it.

Of the other narcotics, chiefly of the solanaceous order, that have been employed, it is hardly worth while to speak particularly. The same uncertainty has accompanied their use: and some of them, as aconite and dulcamara, have been rather supposed to effect whatever temporary benefit has flowed from their employment, by the general disturbance they produce in the system, whereby a transient stop is put to every other anomalous action, than by their sedative power.

Of the metallic oxides that have been brought into use, the only ones it is necessary to notice, are those of mercury, iron, and arsenic. The first has been uniformly found mischievous when carried to the extent of salivation. It has more generally been employed as a gentle stimulant or alterant. Many practitioners have preferred the corrosive sublimate in small doses; but the submuriate is a far better preparation. And even this is given with more advantage in the form of Plummer's, or the compound calomel pill, than alone: a form that conveniently unites a mild stimulant with a mild relaxant. To this, if the pain be acute, should be added a small quantity of opium; at the same time carefully guarding the bowels against constipation by any convenient aperient, if the pill itself should not prove sufficient.

Iron has been tried in almost every state of combination, and there is reason to believe that in some of these it has proved beneficial. The ferrum ammoniatum appears to have been the most successful, and is still the most popular. Dr. Denman was particularly attached to this metal, in whatever form administered; and broadly affirms, that, after having employed almost all the medicines recommended for this disease in every different stage, he has never found any of them

possess the pretensions of iron; and that the rest may be generally regarded as totally unavailing. Its greatly stimulant power rather recommends it to us on the present occasion than proves an objection; for it is the kind of stimulus we stand in need of to excite a new local action. It is said to produce a very speedy mitigation of pain, an improved discharge, and a less fœtid smell; and, even in hopeless cases, to render the disease less malignant and distressing: unfortunately, however, its effects, like those of conium, have rarely been found permanent; and it has closed its career as a palliative rather than as an antidote.

But of all the medicines of this class, arsenic has acquired the highest and most extensive reputation. This is a strictly oriental remedy, employed for every impurity of the blood. It has formed the basis of almost all the secret remedies for cancer which have at any time been current, whether external or internal, from that of Fuschius, in the fourteenth century, who united it with soot and serpentary, to that of Richard Guy, who wrote upon the disease in the middle of the last century, and whose boasted arcanum was found to be a composition of arsenic, sulphur, hog's fennel, and crow-foot.

Of the real effects of arsenic, as of several of the preceding medicines, we labour under great obscurity from the discrepant reports which have been communicated.

It is not till lately, that any very convenient form has been devised for trying its virtues without a risk of mischief; but the arsenical solution of the London College has given us a preparation of this kind. Yet even with this advantage we cannot boast of any certain success in the use of arsenic. It acts very differently on different constitutions, though, generally speaking, it proves beneficial, and in some cases may produce a radical cure. But more commonly, like the preparations of hemlock and iron, it unfortunately loses its effect as soon as the habit has become accustomed to its influence; and the cancerous taint, or cancerous action, resumes its victorious career.

The list of external applications is still more numerous than that of internal. We have already glanced at the local treatment before ulceration has taken place. After this period, sedative applications do not succeed, and moderate stimulants alone seem best to afford relief. Yet a cure is rarely to be effected except by a caustic or knife. When the poison was supposed to be of an acid character, a solution of the alkalies was employed to correct it. It was afterwards conceived to be of an alkaline nature; and various acids, and particularly the carbonic acid gas, were regarded as the best antagonists. For the same purpose, a lotion of muriatic acid diluted with three or four times its weight of water, the gastric juice of animals, and poultices of carrots or charcoal, have, of late years, been in more general reputation.

All these have a considerable influence in correcting the oppressive fetor, and keeping the sore clean; but whether they go beyond this has been doubted. Yet even this is of great importance, since such an effect must necessarily give some check to the spread of the ulceration, afford solace to the patient, and probably improve the nature of the discharge itself. And hence many writers have been sanguine enough to expect an entire cure from such processes; and others have given accounts of such cures *nearly* accomplished; but which seem seldom, if ever, to have been rendered complete.

Fomentations of hemlock, and various other narcotics, have been also had recourse to, and sometimes tepid baths of the same, in which the patient has been ordered to sit for twenty minutes at a time; and temporary benefit has sometimes followed the use of these means.

One of the best detergents appears to be arsenic, finely levigated and sufficiently reduced in strength by an union with calamine or some other ingredient. It is also one of the best caustics, in a simple or more concentrated state, and was freely employed as such by Mr. Justamond.

We have already observed that sheets of lead, among other preparations of this metal, have been applied to cancer, and bound over it with some degree of pressure. But a pressure of a much severer kind, together with the use of the same metallic sheeting, has of late years been employed by Mr. Young, and apparently in many cases with a very salutary effect, so far as relates to checking the spread of the disease, a diminution of the tumour, and an improvement of the nature of the discharge. The plan, however, has failed in many instances; and how far it may have produced in any instance a decided cure, may be questioned. The sheet-lead is applied with a considerable tenseness of compression, by means of plaster-straps, tin-plates, folded linen, and appropriate rollers. The force employed, however, is less severe at first, but progressively increased; and the change of action is with much more reason ascribed to the sedative effect of the mechanical pressure than to that of the lead.

After all, when the cancerous character of the tumour is once decidedly established, there is little dependence to be placed upon any plan but that of extirpation by a caustic or the knife. The knife is the preferable instrument, where the organ is large and extensively affected. Mr. Bell advises an early performance of the operation; Mr. Pearson, that we should wait till the extent of the disease has fully unfolded itself, so that no morbid part may be left behind. Yet some parts may be doubtful, even at last; and, wherever there is the least suspicion of this, they should unquestionably be removed along with the more decided portion of the morbid structure.

Even this remedy, however, can only apply to exterior organs. In all other instances the

practice is melancholy from the first. The die is cast almost, if not altogether, irrecoverably: and all we can hope to accomplish is to postpone the fatal result, to mitigate the sufferings of the day, and soften the harsh passage to the tomb.

Cancer cancellus. A species of crayfish, called Bernard the hermit, and the wrong heir; supposed to cure rheumatism, if rubbed on the part.

Cancer gammarus. See *Cancer*.

Cancer munditorium. A peculiar ulceration of the scrotum of chimney-sweepers.

Cancer ossis. See *Spina ventosa*.

Ca'nchrys. Parched barley. — *Galen*.

Cancre'na. Paracelsus uses this word instead of gangræna.

Cancro'rum chelæ. Crab's claws. See *Carbonas calcis*, and *Cancer astacus*.

Cancrorum lapides. See *Cancer astacus*.

Cancrorum oculi. See *Carbonas calcis*, and *Cancer astacus*.

CA'NCRUM. (*um. i.* n.; from *cancer*, a spreading ulcer.) The canker.

Cancrum oris. Canker of the mouth; the common name for ulcerated gums, and ulcers inside the cheeks. See *Stomacace*.

CANDE'LA. (*a, æ.* f.; from *candeo*, to shine.) A candle.

Candela fumalis. A candle made of odoriferous powders and resinous matters, to purify the air and excite the spirits.

Candela medicata. A bougie.

Candela regia. See *Verbascum*.

CANDELA'RIA. (*a, æ.* f.; from *candela*, a candle: so called from the resemblance of its stalks to a candle.) See *Verbascum*.

Candy carrot. See *Athamanta cretensis*.

Cane'la. Sometimes used by the ancients for cinnamon, or rather cassia.

CANE'LLA. (*a, æ.* f.; diminutive of *canna*, a reed: so named because the pieces of bark are rolled up in the form of a reed.) The name of a genus of plants in the Linnæan system. Class, *Dodecandria*; Order, *Monogynia*. The canella-tree.

Canella alba. The pharmacopœial name of the laurel-leaved canella. See *Wintera aromatica*.

Canella cubana. See *Canella alba*.

Canellæ malabaricæ cortex. See *Laurus cassia*.

Canelli'fera malabarica. See *Laurus cassia*.

Caneon. (From κανvη, because it was made of split cane.) A sort of tube or instrument, mentioned by Hippocrates, for conveying the fumes of antihysteric drugs into the womb.

Ca'niceus. (From *canis*, a dog: so called by the ancients because it was food for dogs.) Applied to coarse meal. Hence *panis caniceus* means very coarse bread.

CANICI'DA. (*a, æ.* f.; from *canis*, a dog, and *cædo*, to kill: so called, because dogs are destroyed by eating it.) Dog's bane. See *Aconitum*.

CANICI'DIUM. (*um, i.* n.; from *canis*, a dog, and *cædo*, to kill.) The dissection of dogs, for the purpose of illustrating physiology.

CANICULA'RIS. (From *canicula*, the dog's-star.) See *Dog's-days*.

Canina appetentia. See *Bulimia*.

Canina brassica. See *Mercurialis*.

Canina lingua. See *Cynoglossum*.

Canina malus. The fruit of the *Atropa mandragora*.

Canina rabies. See *Hydrophobia*.

CANINE. (*Caninus*, from *canis*, a dog.) Whatever partakes of, or has any relation to, the nature of a dog.

Canine appetite. See *Bulimia*.

Canine madness. See *Hydrophobia*.

Canine teeth. The four eye-teeth are so called, from their resemblance to those of the dog. See *Teeth*.

Caninus. The name of a muscle, because it is near the canine tooth. See *Levator anguli oris*.

Caninus sentis. See *Rosa canina*.

Caniru'bus. (From *canis*, and *rubus*, a bramble.) See *Rosa canina*.

CA'NIS. (*is, is.* m.) A dog. A genus of the *Mammalia* order, *feræ*, that has several species, of which the *Canis familiaris* is one esteemed for domestic life. Many productions of nature, and parts of them, are named after this animal, from their real or supposed resemblance, and from other circumstances connected with it; as dog-tooth, dog-rose, dog-madness, &c. See *Album græcum*.

Canis interfector. See *Veratrum*.

Canis ponticus. See *Castor*.

CANITIES. (From *canus*, grey-headed.) Greyness of the hairs, or grey-headed.

CANNA. (*a, æ.* f.; Hebrew.)

1. A reed or hollow cane.

2. The fibula, from its resemblance to a reed.

Canna fistula. See *Cassia fistula*.

Canna indica. See *Sagittaria*.

Canna major. The tibia.

Canna minor cruris. The fibula.

CANNABI'NA. (*a, æ.* f.; from *canna*, a reed, named from its reed-like stalk.) This term is now applied specifically in some genera. See *Bidens* and *Datisca*.

CA'NNABIS. (*is, is.* f.; from κανvα, a reed. Κανvαϐοι are foul springs, wherein hemp, &c. grow naturally. Or from *kanaba*, from *kanah*, to mow. Arabian.) Hemp.

1. The name of a genus of plants in the Linnæan system. Class, *Diœcia*; Order, *Pentandria*.

2. The pharmacopœial name of the hemp-plant. See *Cannabis sativa*.

Cannabis sativa. The systematic name of the hemp-plant. It has a rank smell of a narcotic kind. The effluvia from the fresh herb are said to affect the eyes and head, and that the water in which it has been long steeped is a sudden poison. Hemp-seeds, when fresh, afford a considerable quantity of oil. Decoctions and emulsions of them have

been recommended against coughs, ardor urinæ, &c. Their use, in general, depends on their emollient and demulcent qualities. The leaves of an oriental hemp, called *bang* or *bangue*, and by the Egyptians *assis*, are said to be used in eastern countries, as a narcotic and aphrodisiac. See *Bangue*.

CA'NNULA. (*a, æ.* f.; diminutive of *canna*, a reed.) The name of a surgical instrument, which is tubular. It is often adapted to a sharp instrument, with which it is thrust into a cavity or tumour containing a fluid: the perforation being made, the sharp instrument is withdrawn and the can nula left, in order that the fluid may pass through it.

CA'NON. Κανων. A rule or canon, by which medicines are compounded.

CANO'NIAI. Κανονιαι. Hippocrates, in his book De Aëre, &c. calls those persons thus, who have straight, and not prominent bellies. He would intimate that they are disposed, as it were, by a straight rule.

CANO'PICON. (From κανωπον, the flower of the elder.) 1. A sort of spurge, named from its resemblance.

2. A collyrium, of which the chief ingredient was elder flowers.

CANOPI'TE. The name of a collyrium mentioned by Celsus.

CANO'PUM. Κανωπον. The flower or bark of the elder tree, in Paulus Ægineta.

CANTA'BRICA. See *Convolvulus*.

CANTA'BRUM. (From *kanta*, Hebrew.) In Cœlius Aurelianus it signifies bran.

CA'NTACON. Garden saffron.

CA'NTARA. The plant which bears the St. Ignatius's bean. See *Ignaria amara*.

CANTERBURY. The name of a celebrated town in Kent, in which there is a mineral water, *Cantuariensis aqua*, strongly impregnated with iron, sulphur, and carbonic acid gas; it is recommended in disorders of the stomach, in gouty complaints, jaundice, diseases of the skin, and chlorosis.

CA'NTHARI FIGULINI. Earthen cucurbits.

CA'NTHARIS. (*is, idis*, f.; pl. *cantharides*: from κανθαρος, a beetle, to which tribe it belongs.) The blistering fly, and Spanish fly. *Musca Hispanica. Lytta vesicatoria.* This fly has a green shining gold body, and is common in Spain, Italy, France, and Germany. The largest come from Italy, but the Spanish cantharides are generally preferred. The importance of these flies, by their stimulant, corrosive, and epispastic qualities, in the practic of physic and surgery, is very considerable; indeed, so much so, as to induce many to consider them as the most powerful medicine in the materia medica. When applied on the skin, in the form of a plaster, it soon raises a blister full of serous matter, and thus relieves inflammatory diseases. The tincture of these flies is also of great utility in several cutaneous diseases, rheumatic affections, sciatic pains, &c. but ought to be used with much caution. See *Blister*, and *Tinctura cantharidis*. This insect is two thirds of an inch in length, one fourth in breadth, oblong, and of a gold shining colour, with soft elytera or wing sheaths, marked with three longitudinal raised stripes, and covering brown membraneous wings. An insect of a square form, with black feet, but possessed of no vesicating property, is sometimes mixed with the cantharides. They have a heavy disagreeable odour, and acrid taste.

If the inspissated watery decoction of these insects be treated with pure alkohol, a solution of a resinous matter is obtained, which being separated by gentle evaporation to dryness, and submitted for some time to the action of sulphuric æther, forms a yellow solution. By spontaneous evaporation, crystalline plates are deposited, which may be freed from some adhering colouring matter by alkohol. Their appearance is like spermaceti. They are soluble in boiling alkohol, but precipitate as it cools. They do not dissolve in water. According to Robiquet, who first discovered them, these plates form the true blistering principle. They might be called *Vesicatoria*. Besides the above peculiar body, cantharides contain, according to Robiquet, a green bland oil, insoluble in water, soluble in alkohol; a black matter, soluble in water, insoluble in alkohol, without blistering properties; a yellow viscid matter, mild, soluble in water and alkohol; the crystalline plates; a fatty bland matter; phosphates of lime and magnesia; a little acetic acid, and much lithic or uric acid. The blistering fly, taken into the stomach in doses of a few grains, acts as a poison, occasioning horrible satyriasis, delirium, convulsions, and death. Some frightful cases are related by Orfila, vol. i. part 2d. Oils, milk, syrups, frictions on the spine, with volatile liniment and laudanum, and draughts containing musk, opium, and camphorated emulsion, are the best antidotes.

CA'NTHUM. Sugar-candy.

CA'NTHUS. (*us, i.* m.; Κανθος, the tire or iron binding of a cart-wheel. Dr. Turton, in his glossary, supposes from its etymology, that it originally signified the circular extremity of the eyelid.) The angle or corner of the eye, where the upper and under eyelids meet. That next the nose is termed the internal or greater canthus; and the other, the external or lesser canthus.

CANTION. Sugar.

CA'NTIUM. *Cantum*. A word used by the Greeks to signify angular.

CA'NULA. (*a, æ.* f.; diminutive of *canna*, a reed.) See *Cannula*.

CANUSA. Crystal.

CAOUTCHOU'C. The substance so called is obtained from the vegetable kingdom, and exists also in the mineral.

I. The first, known by the names Indian rubber, Elastic gum, Cayenne resin, Cautchuc, and Caoutchouc, is prepared principally from the juice of the *Siphonia elastica*:—*foliis ternatis ellipticis integerrimis subtus canis longe petiolatis* (Suppl. Plant.), and also from the *Jatropha elastica* and *Urceola elastica*. The manner of obtaining this juice is by

making incisions through the bark of the lower part of the trunk of the tree, from which a fluid issues in great abundance, appearing of a milky whiteness as it flows into the vessel placed to receive it, and into which it is conducted by means of a tube or leaf fixed in the incision, and supported with clay. On exposure to the air, this milky juice gradually inspissates into a soft, reddish, elastic substance. It is formed by the Indians in South America into various figures, but is commonly brought to Europe in that of pear-shaped bottles, which are said to be formed by spreading the juice of the Siphonia over a proper mould of clay; as soon as one layer is dry, another is added, until the bottle be of the thickness desired. It is then exposed to a thick dense smoke, or to a fire, until it becomes so dry as not to stick to the fingers, when, by means of certain instruments of iron, or wood, it is ornamented on the outside with various figures. This being done, it remains only to pick out the mould, which is easily effected by softening it with water.

"The elasticity of this substance is its most remarkable property: when warmed, as by immersion in hot water, slips of it may be drawn out to seven or eight times their original length, and will return to their former dimensions nearly. Cold renders it stiff and rigid, but warmth restores its original elasticity. Exposed to the fire it softens, swells up, and burns with a bright flame. In Cayenne it is used to give light as a candle. Its solvents are æther, volatile oils, and petroleum. The æther, however, requires to be washed with water repeatedly, and in this state it dissolves it completely. Pelletier recommends to boil the caoutchouc in water for an hour; then to cut it into slender threads; to boil it again about an hour; and then to put it into rectified sulphuric æther in a vessel close stopped. In this way he says it will be totally dissolved in a few days, without heat, except the impurities, which will fall to the bottom if æther enough be employed. Berniard says, the nitrous æther dissolves it better than the sulphuric. If this solution be spread on any substance, the æther evaporates very quickly, and leaves a coating of caoutchouc unaltered in its properties. Naphtha, or petroleum, rectified into a colourless liquid, dissolves it, and likewise leaves it unchanged by evaporation. Oil of turpentine softens it, and forms a pasty mass, that may be spread as a varnish, but is very long in drying. A solution of caoutchouc in five times its weight of oil of turpentine, and this solution dissolved in eight times its weight of drying linseed oil by boiling, is said to form the varnish of air-balloons. Alkalies act upon it so as in time to destroy its elasticity. Sulphuric acid is decomposed by it; sulphureous acid being evolved, and the caoutchouc converted into charcoal. Nitric acid acts upon it with heat; nitrous gas being given out, and oxalic acid crystallising from the residuum. On distillation it gives out ammonia, and carburetted hydrogene.

Caoutchouc may be formed into various articles without undergoing the process of solution. If it be cut into a uniform slip of a proper thickness, and wound spirally round a glass or metal rod, so that the edges shall be in close contact, and in this state be boiled for some time, the edges will adhere so as to form a tube. Pieces of it may be readily joined by touching the edges with the solution in æther; but this is not absolutely necessary, for, if they be merely softened by heat, and then pressed together, they will unite very firmly.

If linseed oil be rendered very drying by digesting it upon an oxide of lead, and afterwards applied with a small brush on any surface, and dried by the sun or in the smoke, it will afford a pellicle of considerable firmness, transparent, burning like caoutchouc, and wonderfully elastic. A pound of this oil, spread upon a stone, and exposed to the air for six or seven months, acquired almost all the properties of caoutchouc: it was used to make catheters and bougies, to varnish balloons, and for other purposes.

II. Of the mineral caoutchouc there are several varieties: a blackish brown inclining to olive; a black, when cut into, of a yellowish white; a liver-brown colour, having the aspect of the vegetable caoutchouc, but passing by gradual transition into a brittle bitumen, of vitreous lustre, and a yellowish colour; and a dull reddish-brown, of a spongy or cork-like texture, containing blackish-grey nuclei of impure caoutchouc. Many more varieties are enumerated.

The mineral caoutchouc resists the action of solvents still more than the vegetable. The rectified oil of petroleum affects it most, particularly when, by partial burning, it is resolved into a pitchy viscous substance.

CAPAIBA. (*a, æ.* f.; from *Copaiba*, the Indian name of the plant.) See *Copaifera officinalis.*

CAPAIVA. See *Copaifera officinalis.*

CAPELI'NE. (*Capalina, æ.* f.; from *capeline*, French, a woman's hat, or bandage.) A double-headed roller put round the head.

CAPE'LLA. A cupel or test.

CAPER. (So called, from the name of the plant capparis.) See *Capparis spinosa* and *Capra.*

Caper-bush. See *Capparis spinosa.*

CA'PETUS. (Καπετος, *per aphæresin*, pro σκαπετος; from σκαπτω, to dig.) Hippocrates means by this word a foramen, which is impervious, and needs the use of a chirurgical instrument to make an opening; as the anus of some new-born infants.

CA'PHORA. (Arabian.) Camphire.

CA'PHURA BAROS INDORUM. Camphire.

CAPHURÆ OLEUM. An oil distilled from the root of the cinnamon-tree.

CAPILLACEUS. Capillary.

CAPILLARES PLANTÆ. Capillary, or hair-shaped plants.

CAPILLARIS. See *Capillary.*

CAPILLARIS VERMICULUS. See *Crino* and *Dracunculus.*

CAPI'LLARY. (*Capillaris;* from *capillus,* a little hair: so called from the resemblance to hair or fine thread.)

1. In *Natural Philosophy.* See *Attraction.*

2. In *Anatomy,* the very small ramifications of the arteries, which terminate upon the external surface of the body, or on the surface of internal cavities, are called capillary, because they appear as small as hairs.

3. In *Botany,* applied to parts of plants, which are, or resemble hairs: thus, a capillary root is one which consists of many very fine fibres; as that of *Festuca ovina,* and most grasses.

CAPILLA'TIO. (From *capillus,* a hair.) A capillary fracture of the cranium.

CAPI'LLUS. (*us, i.* m; quasi *capitis pilus,* the hair of the head.) The hair. Small, cylindrical, transparent, insensible, and elastic filaments, which arise from the skin, and are fastened in it by means of small roots. The human hair is composed of a spongy, cellular texture, containing a coloured liquid, and a proper covering. Hair is divided into two kinds: *long,* which arises on the scalp, cheek, chin, breasts of men, the anterior parts of the arms and legs, the arm-pits, groins, and pelvis; and *short,* which is softer than the long, and is present over the whole body, except only the palm of the hand and the sole of the foot. The hair originates in the adipose membrane, from an oblong membraneous bulb, which has vessels peculiar to it.

The hair is distinguished by different names in certain parts: —

1. *Capillus,* on the top of the head.
2. *Crinis,* on the back of the head.
3. *Circrinnus,* on the temples.
4. *Cilium,* on the eyelids.
5. *Supercilium,* on the eyebrows.
6. *Vibrissa,* in the nostrils.
7. *Barba,* on the chin.
8. *Pappus,* on the middle of the chin.
9. *Mystax,* on the upper lip.
10. *Pilus,* on the body.

From numerous experiments of Vauquelin it appears, that black hair is formed of nine different substances, namely: —

1. An animal matter, which constitutes the greater part. 2. A white concrete oil, in small quantity. 3. Another oil of a greyish-green colour, more abundant than the former. 4. Iron, the state of which in the hair is uncertain. 5. A few particles of oxide of manganese. 6. Phosphate of lime. 7. Carbonate of lime, in very small quantity. 8. Silex, in a conspicuous quantity. 9. Lastly, a considerable quantity of sulphur.

The same experiments show, that red hair differs from black only in containing a red oil instead of a blackish-green oil; and that white hair differs from both these only in the oil being nearly colourless, and in containing phosphate of magnesia, which is not found in them.

CAPILLITIUM. The hairy scalp.

CAPILLUS VENERIS. See *Adianthum.*

CAPILLUS VENERIS CANADENSIS. See *Adianthum pedatum.*

CAPIPLE'NIUM. (From *caput,* the head, and *plenus,* full.) A barbarous word: but Baglivi uses it to signify a continual heaviness in the head.

CAPISTRA'TIO. (From *capistrum,* a bridle: so called because the præpuce is restrained, as it were, with a bridle.) See *Phimosis.*

CAPI'STRUM. (*um, i.* n.; from *caput,* the head.) 1. A bandage for the head is so called.

2. The locked jaw. — *Vogel.*

CA'PITAL. *Capitalis.* 1. Belonging to the caput, or head.

2. The head or upper part of an alembic.

CAPITATUS. (From *caput,* the head.) Headed; growing in heads.

CAPITE'LLUM. (*um, i.* n.; a diminutive from *capitulum.*) The head, or seed vessels; frequently applied to mosses, &c.

CAPITILU'VIUM. (*um, i.* n.; from *caput,* the head, and *lavo,* to wash.) A lotion for the head.

CA'PITIS OBLIQUUS INFERIOR ET MAJOR. See *Obliquus inferior capitis.*

CAPITIS PAR TERTIUM FALLOPII. See *Trachelo-mastoideus.*

CAPITIS POSTICUS. See *Rectus capitis posticus major.*

CAPITIS RECTUS. See *Rectus capitis posticus minor.*

CAPITULATUS. Headed: with a knob or little head on the top.

CAPI'TULUM. (*um, i.* n.; diminutive of *caput,* the head.) 1. A small head or knob.

2. A protuberance of a bone, received into the concavity of another bone.

3. An alembic.

4. In *Botany,* the term for a species of inflorescence, called a head or tuft, formed of many flowers, in a globular form, upon a common peduncle. From the insertion of the flowers, it is called,

1. *Pedunculate;* as in *Astragalus syriacus,* and *Eryngium maritimum.*
2. *Sessile;* as in *Trifolium tomentosum.*
3. *Terminal;* as in *Monarda fistulosa.*
4. *Axillary;* as in *Gomphrena sessilis.*

From the figure it is said to be,

1. *Globose;* as in *Gomphrena globosa.*
2. *Subrotund;* as in *Trifolium pratense.*
3. *Conic;* as in *Trifolium montanum.*
4. *Dimidiate,* flat on one side, round on the other; as in *Trifolium lupinaster.*

From its covering,

1. *Naked;* as in *Illecebrum polygonoides.*
2. *Foliose;* as in *Plantago indico.*

A *capitulum* that is *very small,* and is mostly in the *axilla,* is called *Glomerulus.*

CAPI'VI. See *Copaifera officinalis.*

CAPNELÆ'UM. (*um, i.* n.; from καπνος, smoke, and ελαιον, oil: so named from its smoky exhalations when exposed to heat.) In Galen's works it means a resin.

CA'PNIAS. (From καπνος, a smoke.)

1. A jasper of a smoky colour.

2. A vine which bears white, and part black grapes.

CAPNI'STON. (From καπνος, smoke.) A preparation of spice and oil, made by kindling the spices, and fumigating the oil.

CAPNI'TIS. (From καπνος, smoke; so called from its smoky colour.) Tutty.

CAPNOI'DES. (From καπνος, fumitory, and ειδος, likeness.) Resembling fumitory.

CA'PNOS. (*us, i.* f.; καπνος, smoke: so called, says Blanchard, because its juice, if applied to the eyes, produces the same effect and sensations as smoke.) *Capnus.* The herb fumitory. See *Fumaria.*

CAPNUS. See *Capnos.*

CA'PPA HERBA. (*à capite,* from the head: so called from its supposed resemblance.) The herb monk's-hood. See *Aconitum.*

CA'PPARIS. (*is, is.* m.; from *cabar,* Arab. or παρα το καπτανειν αραν, from its curing madness and melancholy.) The caper plant. 1. The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Monogynia.*

2. The pharmacopœial name of the caper plant. See *Capparis spinosa.*

CAPPARIS SPINOSA. The systematic name of the caper plant. *Capparis—pendunculis solitariis unifloris, stipulis spinosis, foliis annuis, capsulis ovalibus* of Linnæus. The buds, or unexpanded flowers of this plant, are in common use as a pickle, which is said to possess antiscorbutic virtues. The bark of the root was formerly in high esteem as a deobstruent.

CAPRA. (*a, æ.* f.; from *carpo,* to crop: because they are apt to crop the fruit and leaves of every plant they can come at.) The name of a genus of animals. Class, *Mammalia;* Order, *Pecora.* The goat. This animal, when castrated, is called caper.

CAPRA HIRCUS. The domesticated goat; the milk of which is used aboard of ship in place of cow's milk. See *Milk, goat's.*

CAPREOLA'RIS. (From *capreolus,* a tendril.) *Capreolatus.* Resembling in its contortions, or other appearance, the tendrils of a vine; applied to the spermatic vessels.

CAPREOLA'TUS. See *Capreolaris.*

CAPRE'OLUS. (*us, i.* m.; diminutive of *caprea,* a tendril. Dr. Turton suggests its derivation from *caper,* a goat, the horn of which its contortions somewhat resemble.)

1. The helix or circle of the ear, from its tendril-like contortion.

2. A tendril. See *Cirrus.*

CAPRIC. (*Capricus.* From *caper,* the goat.) Of or belonging to the goat.

CAPRIC ACID. (*Acidum capricum;* so named because it has a smell like that of the goat.) An acid obtained from soap made with the butter of cow-milk.

CAPRICO'RNUS. In alchemistic writings a name for lead. The name also of a species of goat.

CAPRIFICATION. (*Caprificatio;* from *caprificus,* a wild fig.) The very singular husbandry or management of fig-trees.

CAPRIFI'CUS. (*us, i.* f.; from *caper,* a goat, and *ficus,* a fig: because they are a chief food of goats.) The wild fig-tree. See *Ficus.*

CAPRIFOLIUM. (From *caprea,* a tendril, and *folium,* a leaf.) See *Lonicera.*

CAPRI'ZANS. Galen and others used this word to express an inequality in the pulse, when it leaps, and, as it were, dances in uncertain strokes and periods.

CAPRUS. The castrated goat. See *Capra hircus.*

CAPSE'LLA. (Diminutive of *capsa,* a chest, from its resemblance.) A name in Marcellus Empiricus for viper's bugloss; the *Echium Italicum* of Linnæus.

CA'PSICUM. (*um, i.* n.; from καπτω, to bite: on account of its effect on the mouth.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the capsicum. See *Capsicum annuum.*

CAPSICUM ANNUUM. The plant from which we obtain Cayenne pepper, called also Guinea pepper. Cayenne pepper. *Piper indicum, Lada chilli, Capo molago, Solanum urens, Siliquastrum Plinii, Piper Brazilianum, Piper Guineense, Piper Calecuticum, Piper Hispanicum,* and *Piper Lusitanicum.* This species of pepper is obtained from the *Capsicum—caule herbaceo, pedunculis solitariis* of Linnæus. What is generally used under the name of Cayenne pepper, however, is an indiscriminate mixture of the powder of the dried pods of many species of capsicum, but especially of the capsicum minimum, or bird pepper, which is the hottest of all. These peppers have been chiefly used as condiments. They prevent flatulence from vegetable food, and give warmth to the stomach, possessing all the virtues of the oriental spices without producing those complaints of the head which the latter are apt to occasion. An abuse of them, however, gives rise to visceral obstructions, especially of the liver. In the practice of medicine, there can be little doubt that they furnish us with one of the purest and strongest stimulants which can be introduced into the stomach, and may be very useful in some paralytic and gouty cases. Dr. Adair, who first introduced them into practice, found them useful in the chexia Africana, which he considers as a most frequent and fatal predisposition to disease among the slaves. Dr. Wright says, that in dropsical and other complaints where chalybeates are indicated, a minute portion of powdered capsicum forms an excellent addition, and recommends its use in lethargic affections. This pepper has also been successfully employed in a species of

cynanche maligna, which proved very fatal in the West Indies, resisting the use of Peruvian bark, wine, and other remedies commonly employed. In tropical fevers, coma and delirium are common attendants; and, in such cases, cataplasms of capsicum have a speedy and happy effect. They redden the parts, but seldom blister unless when kept on too long. In ophthalmia from relaxation, the diluted juice of capsicum is found to be a valuable remedy. Dr. Adair gave six or eight grains for a dose, made into pills; or else he prepared a tincture by digesting half an ounce of the pepper in a pound of alkohol, the dose of which was one or two drachms, diluted with a sufficient quantity of water. A *tinctura capsici* is now introduced into the London pharmacopœia.

CA'PSULA. (*a, æ.* f.; diminutive of *capsa*, a chest or case.) A capsule.

I. In *Anatomy*, a membraneous production enclosing a part like a bag; as the capsular ligaments, the capsule of the crystalline lens, &c.

II. In *Botany*, a dry, woody, coriaceous, or membraneous pericarpium, or seed-vessel, generally splitting into several valves.

The parts of a capsule, are,

1. The *valves*, or external shell, into which the capsule splits.

2. The *sutures*, or the external surface in which the valves are joined.

3. The *dissepiments*, or partitions by which the capsule is divided into several cells.

4. The *loculaments*, or cells, the spaces between the partitions and valves.

5. The *columella*, or central column, or filament, which unites the partitions, and to which the seeds are usually attached.

From the number of the *valves*, a capsule is said to be,

1. *Bivalve;* as in *Magnolia*, and *Capraria.*
2. *Three-valve;* as in *Canna indica.*
3. *Four-valve;* as in *Datura stramonium*, and *Œnothera biennis.*
4. *Five-valve;* as in *Illecebrum*, and *Coris.*
5. *Many valve;* as in *Hura crepitans.*
6. *Operculate*, or *circumcised*, the operculum splitting horizontally; as in *Hyosciamus niger*, and *Lecythis ollaria.*

From the number of *cells*,

1. *Unilocular*, when there is no partition; as in *Parnassia palustris*, and *Agrostema.*
2. *Bilocular*, two-celled; as *Hyosciamus niger*, and *Datura stramonium.*
3. *Trilocular*, three-celled; as in *Æsculus hypocastanum*, and *Iris germanica.*
4. *Quinquelocular*, five-celled; as in *Hibiscus syriacus*, and *Azalea procumbens.*
5. *Novemlocular*, nine-celled; as in *Punica granatum.*
6. *Submultilocular*, when there are many cells, and the partitions do not reach the middle of the capsule; as in *Papaver somniferum.*

From the *appearance* of the external surface, a capsule is called,

1. *Glabrous;* as in *Papaver somniferum.*
2. *Aculeate;* as in *Datura stramonium.*
3. *Muricate;* as in *Canna indica.*

From the number of *tubercles* on the external surface,

1. *Dicoccal*, or *didymous;* as in *Spigelia.*
2. *Tricoccal;* as in *Euphorbia lathyrus*, and *Cneorum tricoccum.*
3. *Tetracoccal;* as in *Paururus cernuus*, and *Evonymus europeus.*

From the number of *contiguous* capsules,

1. *Simple*, if solitary.
2. *Duplex*, two aggregated; as in *Pæonia officinalis.*
3. *Triplex;* as in *Veratrum album.*
4. *Quintuplex;* as in *Aquilegia vulgaris*, and *Nigella.*
5. *Multiplex;* as in *Sempervivum tectorum.*

From the *substance*, a capsule is called,

1. *Membranaceous;* as in *Datura stramonium.*
2. *Corticate*, the external fungous membrane receding from the capsule; as in *Ricinus communis.*
3. *Woody*, very hard, yet splitting; as in *Hura crepitans.*
4. *Baccate*, when the seed is surrounded by a pulp; as *Evonymus europeus*, and *Samyda.*
5. *Spurious*, if the calyx, capsule-like, surrounding the seed, splits; as in *Fagus sylvatica.*

The number of *seeds* contained in the capsule, gives rise to the following distinctions:

1. *Monosperm*, one-seeded; as in *Gomphrenia*, *Herniaria*, and *Salsola.*
2. *Disperm*, two-seeded; as in *Hebenstratia*, and *Buffonia.*
3. *Trispern*, three-seeded; as in *Glaux*, and *Hudsonia.*
4. *Polysperm*, many seeded; as in *Papaver somniferum.*

Capsula atrabilaris. See *Renal Glands.*

Capsula renalis. See *Renal Glands.*

CA'PSULAR. (*Capsularis;* from *capsa*, a bag.) Surrounding a part, like a bag: applied to a ligament which surrounds every moveable articulation, and contains the synovia like a bag.

CA'PSULE. See *Capsula.*

Capsule of glisson. A strong tunic, formed of cellular texture, which accompanies the vena portæ, and its most minute ramifications, throughout the whole liver.

CA'PULUM. (*um, i.* n.; from καμπτω, to bend.) 1. A contortion of the eyelids, or other parts.

2. The penis.

Ca'pur. (Arabian.) Camphire.

CA'PUT. (*ut, itis.* neut.; from *capio*, to take: because from it, according to Varro, the senses take their origin.) The head.

In *Anatomy*, it is variously applied. 1. The cranium, head, or skull. It is situated above or upon the trunk, and united to the cervical vertebræ. It is distinguished into skull and face. On the skull are observed,

The *vertex*, or crown.

The *sinciput*, or fore parts,
The *occiput*, or hinder part,
The *temples*. The parts distinguished on the face are well known; as the forehead, nose, eyes, &c. The arteries of the head are branches of the carotids; and the veins empty themselves into the jugulars. See *Skull* and *Face*.

2. The upper extremity of a long bone; as the head of the humerus or femur.

3. The origin of a muscle; as the long head of the biceps.

4. A protuberance like the head of any thing; as *caput gallinaginis*.

5. The beginning of a part; as *caput cæci*.

In *Chemistry*, it is applied to the remains of any thing after its destruction by fire, or other means: hence *caput mortuum*.

Caput gallinaginis. *Verumontanum*. A cutaneous eminence in the urethra of men, before the neck of the bladder, somewhat like the head of a woodcock in miniature, around which the seminal ducts, and the ducts of the prostate gland, open.

Caput mortuum. A fanciful term, much used by the old chemists, but now entirely rejected. It denoted the fixed residue of operations. As the earlier chemists did not examine these, they did not find any inconvenience in one general term to denote them: but the most slender acquaintance with modern chemistry must show, that it is utterly impracticable to denote, by one general term, all the various matters that remain fixed in certain degrees of heat. The term is obsolete.

Caput obsti'pum. The wry neck. Mostly a spasmodic complaint.

Caput purgans. (A barbarous word, from *caput*, the head, and *purgo*, to purge.) A medicine which, by causing a defluxion from the nose, purges, as it were, the head, as some errhines do.

Capyri'dion. (From καπυρος, burnt.) *Capyrion*. A medicated cake, much baked.

Capy'rion. See *Capyridion*.

Ca'rabe. (Persian.) Amber.

Carabe funerum. A bitumen.

CA'RABUS. (*us*, *i*. m.; Καραϐος.) A genus of insects of the beetle kind. Two species, the *chrysocephalus* and *ferrugineus*, have been recommended for the toothach. They must be pressed between the fingers, and then rubbed on the gum and tooth affected.

Caraco'smos. A name of the sour mare's milk, so much admired by the Tartars.

Caragua'ta. The aloe of Brazil.

CARA'NNA. (*a*, *æ*. f.; Spanish.) A concrete resin, called also *Caragna*, *Carannæ gummi*, *Bresilis*, that exudes from a large tree, of which we have no particular account. It is brought from New Spain and America, in little masses, rolled up in leaves of flags; externally and internally it is of a brownish colour, variegated with irregular white streaks. When fresh, it is soft and tenacious; but becomes dry and friable by keeping. Pure caranna has an agreeable aromatic smell, especially when heated, and a bitterish slightly pungent taste. It was formerly employed as an ingredient in vulnerary balsams, strengthening, discutient, and suppurating plasters; but its scarcity has caused it to be forgotten.

CARRAWAY. See *Carum*.

CA'RBASUS. (*us*, *i*. m. and f.; pl. *a*, *orum*. Fine linen. Καρϐασος.) Scribonius Largos uses this word for lint.

CA'RBO. (*o*, *onis*. m.; *Charbah*, Hebrew, burnt or dried.) Coal.

1. In *Medicine* and *Chemistry*, it is commonly understood to mean charcoal. See *Carbon*.

2. In *Surgery*, a carbuncle. See *Anthrax*.

Carbo fossilis. Pit coal.

Carbo ligni. See *Carbon*.

Carbo vegetabilis. Charcoal.

CARBON. (*on*, *onis*. n.; from *carbo*, coal.)

1. The diamond. See *Adamas*.

2. *Charcoal*. "When vegetable matter, particularly the more solid, as wood, is exposed to heat in close vessels, the volatile parts fly off, and leave behind a black porous substance, which is charcoal. If this be suffered to undergo combustion in contact with oxygene, or with atmospheric air, much the greater part of it will combine with the oxygene, and escape in the form of gas; leaving about a two-hundredth part, which consists chiefly of different saline and metallic substances. This pure inflammable part of the charcoal is what is commonly called *carbon*; and if the gas be received into proper vessels, the carbon will be found to have been converted by the oxygene into carbonic acid. See *Carbonic acid*.

For general purposes, wood is converted into charcoal by building it up in a pyramidal form, covering the pile with clay or earth, and leaving a few air-holes, which are closed as soon as the mass is well lighted; and by this means the combustion is carried on in an imperfect manner.

In charring wood, it has been conjectured, that a portion of it is sometimes converted into a pyrophorus, and that the explosions that happen in powder-mills are sometimes owing to this.

Charcoal is made on the great scale, by igniting wood in iron cylinders. When the resulting charcoal is to be used in the manufacture of gunpowder, it is essential that the last portion of vinegar and tar be suffered to escape, and that the reabsorption of the crude vapours be prevented, by cutting off the communication between the interior of the cylinders and the apparatus for condensing the pyrolignous acid, whenever the fire is withdrawn from the furnace. If this precaution be not observed, the gunpowder made with the charcoal would be of inferior quality.

Charcoal is black, sonorous, and brittle, and in general retains the figure of the vegetable it was obtained from. If, however, the vegetable consist for the most part of water or

other fluids, these in their extrication will destroy the connection of the more fixed parts. In this case the quantity of charcoal is much less than in the former. The charcoal of oily or bituminous substances is of a light pulverulent form, and rises in *soot*. This charcoal of oils is called *lamp-black*. A very fine kind is obtained from burning alkohol.

Well-burned charcoal is a conductor of electricity, though wood simply deprived of its moisture, by baking, is a non-conductor; but it is a very bad conductor of caloric, a property of considerable use on many occasions, as in lining crucibles.

It is insoluble in water, and hence the utility of charring the surface of wood exposed to that liquid, in order to preserve it, a circumstance not unknown to the ancients. This preparation of timber has been proposed as an effectual preventive of what is commonly called the dry-rot. It has an attraction, however, for a certain portion of water, which it retains very forcibly. Heated red-hot, or nearly so, it decomposes water; forming with its oxygene carbonic acid, or carbonic oxide, according to the quantity present; and with the hydrogene a gaseous carburet, called carburetted hydrogene, or heavy inflammable air.

Charcoal is infusible by any heat. If exposed to a very high temperature in close vessels, it loses little or nothing of its weight, but shrinks, becomes more compact, and acquires a deeper black colour.

Recently prepared charcoal has a remarkable property of absorbing different gases, and condensing them in its pores, without any alteration of their properties or its own.

Charcoal has a powerful affinity for oxygene; whence its use in disoxygenating metallic oxides, and restoring their base to its original metallic state, or reviving the metal. Thus, too, it decomposes several of the acids, as the phosphoric and sulphuric, from which it abstracts their oxygene, and leaves the phosphorus and sulphur free.

Carbon is capable of combining with sulphur and with hydrogene. With iron it forms steel; and it unites with copper into a carburet, as observed by Dr. Priestley.

A singular and important property of charcoal is that of destroying the smell, colour, and taste of various substances: for the first accurate experiments on which we are chiefly indebted to Mr. Lowitz, of Petersburgh, though it had been long before recommended to correct the fœtor of foul ulcers, and as an antiseptic. On this account it is certainly the best dentifrice. Water that has become putrid by long keeping in wooden casks, is rendered sweet by filtering through charcoal powder, or by agitation with it; particularly if a few drops of sulphuric acid be added. Common vinegar boiled with charcoal powder becomes perfectly limpid. Saline solutions, that are tinged yellow or brown, are rendered colourless in the same way, so as to afford perfectly white crystals. The impure carbonate of ammonia obtained from bones, is deprived both of its colour and fœtid smell by sublimation with an equal weight of charcoal powder. Malt spirit is freed from its disagreeable flavour by distillation from charcoal; but if too much be used, part of the spirit is decomposed. Simple maceration, for eight or ten days, in the proportion of about 1-150th of the weight of the spirit, improves the flavour much. It is necessary that the charcoal be well burned, brought to a red heat before it is used, and used as soon as may be, or at least be carefully excluded from the air. The proper proportion, too, should be ascertained by experiment on a small scale. The charcoal may be used repeatedly, by exposing it for some time to a red heat before it is again employed.

Charcoal is used on particular occasions as fuel, on account of its giving a strong and steady heat without smoke. It is employed to convert iron into steel by cementation. It enters into the composition of gunpowder. In its finer states, as in ivory black, lamp black, &c. it forms the basis of black paints, Indian ink, and printers' ink.

The purest carbon for chemical purposes is obtained by strongly igniting lamp black in a covered crucible. This yields, like the diamond, unmixed carbonic acid by combustion in oxygene.

Carbon unites with all the common simple combustibles, and with azote, forming a series of most important compounds. With sulphur it forms a curious limpid liquid, called carburet of sulphur, or sulphuret of carbon. With phosphorus it forms a species of compound, whose properties are imperfectly ascertained. It unites with hydrogene in two definite proportions, constituting subcarburetted and carburetted hydrogene gases. With azote it forms prussic gas, the cyanogene of Gay Lussac. Steel and plumbago are two different compounds of carbon with iron. In black chalk we find this combustible intimately associated with silica and alumina. The primitive combining proportion, or prime equivalent of carbon, is 0·75 on the oxygene scale.

Carbon, or charcoal, in combination with oxygene, forms two important compounds, viz. the oxide of carbon, and carbonic acid. See *Carbonic acid* and *Carbonic oxide*.

3. *Carbon mineral.* This is of a grey blackish colour. It is charcoal with various proportions of earth and iron, without bitumen. It has a silky lustre, and the fibrous texture of wood. It is found in small quantities, stratified with brown coal, slate coal, and pitch coal.

Carbonaceous acid. See *Carbonic acid.*

Carbonas ammoniæ. See *Ammonia.*

Carbonas calcis. See *Creta preparata.*

Carbonas ferri. See *Ferrum.*

Carbonas magnesiæ. See *Magnesia.*

Carbonas plumbi. See *Lead.*

Carbonas potassæ. See *Potash.*

Carbonas sodæ. See *Soda.*

CARBO'NATE. (*Carbonas, atis, f.*; from carbonic acid being one of its constituents.) A carbonate. A salt, formed by

the union of carbonic acid with a salifiable basis.

When the base is imperfectly neutralised by the carbonic acid, the salt is termed a *sub-carbonate;* and when there is an excess of acid, the salt is called a *bicarbonate*, and a *hypercarbonate*. The following carbonates have been particularly attended to: — The carbonate of barytes, of strontian, of lime, of potash, soda, and ammonia; of magnesia, of glucine, and zircone.

They are all characterised by effervescing with almost all the acids, even the acetic, when they evolve their gaseous acid, which, passed into lime-water by a tube, deprives it of its taste, and converts it into chalk and pure water. Those used in medicine are,

1. The carbonate of lime. See *Creta præparata* and *Testæ præparatæ*.
2. The carbonate of potash.
3. ——————— soda.
4. ——————— barytes.
5. The subcarbonate of ammonia.
6. ——————— magnesia.
7. ——————— iron.
8. ——————— lead.

The salts with a greater quantity of carbonic acid are,

9. The bicarbonate of potash.
10. ——————— soda.

Carbonate of barytes. See *Heavy spar*.

Carbonated-hydrogene gas. See *Carburetted hydrogene gas*.

Carbonate of lime. See *Creta præparata*, and *Testæ præparatæ*.

Carbonate of potash. See *Potassæ carbonas*.

Carbonate of soda. See *Sodæ carbonas*.

CARBONIC. (*Carbonicus*, from *carbon*, its base.) Of, or belonging to carbon.

Carbonic acid. (*Acidum carbonicum;* so called because *carbon* is the acidifiable base of it.) This acid, also named Fixed air, Carbonaceous acid, Calcareous acid, and Aërial acid, is a compound of carbon and oxygene, and may be formed by burning charcoal; but as it exists in great abundance ready formed, it is not necessary to have recourse to this expedient. All that is necessary is to pour sulphuric acid, diluted with five or six times its weight of water, on common chalk, which is a compound of carbonic acid and lime. An effervescence ensues, and carbonic acid is evolved in the state of gas, and may be received in the usual manner.

Carbonic acid abounds in great quantities in nature, and appears to be produced in a variety of circumstances. It composes $\frac{44}{100}$ of the weight of limestone, marble, calcareous spar, and other natural specimens of calcareous earth, from which it may be extricated either by the simple application of heat, or by the superior affinity of some other acid; most acids having a stronger action on bodies than this. This last process does not require heat, because fixed air is strongly disposed to assume the elastic state.

Water, under the common pressure of the atmosphere, and at a low temperature, absorbs somewhat more than its bulk of fixed air, and then constitutes a weak acid. If the pressure be greater, the absorption is augmented. It is to be observed, likewise, that more gas than water will absorb should be present. Heated water absorbs less; and if water impregnated with this acid be exposed on a brisk fire, the rapid escape of the aërial bubbles affords an appearance as if the water were at the point of boiling, when the heat is not greater than the hand can bear. Congelation separates it readily and completely from water; but no degree of cold or pressure has yet exhibited this acid in a dense or concentrated state of fluidity.

Carbonic acid gas is much denser than common air, and for this reason occupies the lower parts of such mines or caverns as contain materials which afford it by decomposition. The miners call it choke-damp. The Grotto del Cano, in the kingdom of Naples, has been famous for ages on account of the effects of a stratum of fixed air which covers its bottom. It is a cave or hole in the side of a mountain, near the lake Agnano, measuring not more than eighteen feet from its entrance to the inner extremity; where if a dog or other animal that holds down its head be thrust, it is immediately killed by inhaling this noxious fluid.

Carbonic acid gas is emitted in large quantities by bodies in the state of the vinous fermentation; and, on account of its great weight, it occupies the apparently empty space or upper part of the vessels in which the fermenting process is going on. A variety of striking experiments may be made in this stratum of elastic fluid. Lighted paper, or a candle dipped into it, is immediately extinguished; and the smoke remaining in the carbonic acid gas, renders its surface visible, which may be thrown into waves, by agitation, like water. If a dish of water be immersed in this gas, and briskly agitated, it soon becomes impregnated, and obtains the pungent taste of Pyrmont water. In consequence of the weight of the carbonic acid gas, it may be lifted out in a pitcher, or bottle, which, if well corked, may be used to convey it to great distances, or it may be drawn out of a vessel by a cock like a liquid. The effects produced by pouring this invisible fluid from one vessel to another, have a very singular appearance: if a candle or small animal be placed in a deep vessel, the former becomes extinct, and the latter expires, in a few seconds after the carbonic acid gas is poured upon them, though the eye is incapable of distinguishing any thing that is poured. If, however, it be poured into a vessel full of air, in the sunshine, its density being so much greater than that of the air, renders it slightly visible by the undulations and streaks it forms in this fluid, as it descends through it.

Carbonic acid reddens infusion of litmus; but the redness vanishes by exposure to the air, as the acid flies off.

It has a peculiar sharp taste, which may be perceived over vats in which wine or beer is

fermenting, as also in sparkling Champaign, and the brisker kinds of cider. It not only destroys life, but the heart and muscle of animals killed by it lose all their irritability, so as to be insensible to the stimulus of galvanism.

Carbonic acid is dilated by heat, but not otherwise altered by it. It is not acted upon by oxygene, or any of the simple combustibles. Charcoal absorbs it, but gives it out again unchanged, at ordinary temperatures; but when this gaseous acid is made to traverse charcoal ignited in a tube, it is converted into carbonic oxide.

Carbonic acid appears, from various experiments of Ingenhousz, to be of considerable utility in promoting vegetation. It is probably decomposed by the organs of plants, its base furnishing part, at least, of the carbon that is so abundant in the vegetable kingdom, and its oxygene contributing to replenish the atmosphere with that necessary support of life, which is continually diminished by the respiration of animals and other causes.

Water absorbs about its volume of this acid gas, and thereby acquires a specific gravity of 1·0015. On freezing it, the gas is as completely expelled as by boiling. By artificial pressure with forcing pumps, water may be made to absorb two or three times its bulk of carbonic acid. This is liquid carbonic acid, or water impregnated with carbonic acid. It sparkles in the glass, has a pleasant acidulous taste, and forms an excellent beverage. It diminishes thirst, lessens the morbid heat of the body, and acts as a powerful diuretic. It is also an excellent remedy against irritability of the stomach, during pregnancy; and it is one of the best anti-emetics which we possess. It is also esteemed in the cure of typhus fevers, and of irritability and weakness of the stomach, producing vomiting. Against the former diseases it is given by administering yeast, bottled porter, and the like; and for the latter, it is disengaged from the carbonated alkali by lemon-juice in a draught given while effervescing. When there is also added a little potash or soda, it become the *aërated* or *carbonated alkaline water*, a pleasant beverage, and a not inactive remedy in several complaints, particularly dyspepsia, hiccough, and disorders of the kidneys.

In combination with the salifiable bases, this acid forms *carbonates*. See *Carbonas*.

Carbonic oxide. This is also called *Gaseous oxide of carbon*. It was first described by Dr. Priestley, who mistook it for a hydrocarbonate. With the true nature of it we have been only lately acquainted. It was first proved to be a peculiar gas by Mr. Cruikshank, of Woolwich, who made it known to us as such, in April 1801, through the medium of Nicholson's Journal for that month. Several additional properties of this gas were soon afterwards noticed by Desormes, Clement, and others. Gaseous oxide of carbon forms an intermediate substance between the pure hydro-carbonates and carbonic acid gas; but not being possessed of acid properties, Mr. Cruikshank called it, conformably to the rules of the chemical nomenclature, *gaseous oxide of carbon*, for it consists of oxygene and carbon rendered gaseous by caloric.

The carbonic oxide is a compound of one prime equivalent of carbon, and one of oxygene. This gas cannot be formed by the chemist by the direct combination of its constituents; for at the temperature requisite for effecting a union, the carbon attracts its full dose of oxygene, and thus generates carbonic acid. It may be procured by exposing charcoal to a long continued heat. The last products consist chiefly of carbonic oxide.

To obtain it pure, however, our only plan is to abstract one proportion of oxygene from carbonic acid, either in its gaseous state, or as condensed in the carbonates.

If we subject to a strong heat, in a gun-barrel or retort, a mixture of any dry earthy carbonate, such as chalk, or carbonate of strontites, with metallic filings or charcoal, the combined acid is resolved into the gaseous oxide of carbon. The most convenient mixture is equal parts of dried chalk and iron, or zinc filings.

This gas burns with a dark blue flame. It inflames in the atmosphere, when brought into contact with an iron wire heated to dull redness, whereas carburetted hydrogene is not inflammable by a similar wire, unless it is heated to whiteness, so as to burn with sparks. Carbonic oxide, when respired, is fatal to animal life. Sir H. Davy took three inspirations of it, mixed with about one fourth of common air: the effect was a temporary loss of sensation, which was succeeded by giddiness, sickness, acute pains in different parts of the body, and extreme debility. Some days elapsed before he entirely recovered. Since then, Mr. Witter, of Dublin, was struck down in an apoplectic condition, by breathing this gas; but he was speedily restored by the inhalation of oxygene. See an interesting account of this experiment, by Mr. Witter, in the Phil. Mag. vol. 43.

When a mixture of it and chlorine is exposed to sunshine, a curious compound, discovered by Dr. John Davy, is formed, to which he gave the name of phosgene gas. It has been called chlorocarbonic acid, though chlorocarbonous acid seems a more appropriate name.

CARBUNCLE. 1. The name of a gem highly prized by the ancients, probably the *alamandine*, a variety of noble garnet.

2. The name of a disease. See *Anthrax*.

CARBUNCULATE. *Carbunculatus*.

1. In *Pathology*, the face, and especially the nose, of those who have lived freely, is often the seat of small confluent tumours or irregularities, which seem always to be inflamed, and mottled with a purple colour. They are well known by the vulgar appellation of grog-blossoms. This disease is sometimes described by nosologists as *acne*, by

others as *ionthus*. It results from a sympathy between the skin and liver; and hence it is proverbially regarded as a proof of having indulged in the use of spirits and vinous liquors. It is incurable, but very much controlled by attention to diet, and the use of aperients.

2. In *Natural History*, applied to small protuberances or elevations on any part of animals, vegetables, or minerals.

CARBU'NCULUS. (*us, i.* m.; diminutive of *carbo*, a burning coal.) A carbuncle. See *Anthrax*.

CARBURET. (*Carburetum, i.* n.) A combination of charcoal with any other substance: thus carburetted hydrogene is hydrogene holding carbon in solution; carburetted iron is steel, &c.

Carburet of sulphur. *Carburetum sulphuris.* Sulphuret of carbon. Alkohol of sulphur. This liquid was originally obtained by Lampadius in distilling a mixture of pulverised pyrites and charcoal in an earthen retort. It has not hitherto been applied to any medical use.

Carburetted hydrogene gas. Of this compound gas, which is also called *Carbonated hydrogene gas, Heavy inflammable air, Hydro-carbonate, Olefiant gas, and Hydroguret of carbon*, there are two species, differing in the proportions of the constituents:—

1. *Carburetted hydrogene*, the percarburetted of the French chemists, is, according to Mr. Brande, the only definite compound of these two elements. To prepare it, we mix, in a glass retort, 1 part of alkohol, and 4 of sulphuric acid, and expose the retort to a moderate heat.

When this gas is mixed with its own bulk of chlorine, the gaseous mixture is condensed over water into a peculiar oily-looking compound. Hence this carburetted hydrogene was called by its discoverers, the associated Dutch chemists, *olefiant gas*.

2. *Subcarburetted hydrogene.* This gas is supposed to be procured, in a state of definite composition, from the mud of stagnant pools or ditches. We have only to fill a wide-mouthed goblet with water, and inverting it in the ditch-water, stir the bottom with a stick. Gas rises into the goblet.

The fire-damp of mines is a similar gas to that of ditches. There is in both cases an admixture of carbonic acid, which lime or potash-water will remove. A proportion of air is also present, the quantity of which can be ascertained by analysis. By igniting acetate of potash in a gun-barrel, an analogous species of gas is obtained.

Subcarburetted hydrogene is destitute of colour, taste, and smell. It burns with a yellow flame, like that of a candle.

The combustion of subcarburetted hydrogene with common air, takes place only when they are mixed in certain proportions. If from 6 to 12 parts of air be mixed with one of carburetted hydrogene, we have explosive mixtures. Proportions beyond these limits will not explode.

CA'RCARUS. (From καρκαιρω, to resound.) *Carcaros.* A resounding: applied formerly to a fever in which the patient has a continual horror and trembling, with an unceasing sounding in his ears.

CA'RCAX. (From καρα, a head.) A species of poppy, with a very large head.

CA'RCER. (*er, eris,* m.; *à coërcendo*, because it restrains, or keeps within.) A remedy, according to Paracelsus, for restraining the motions of body, the extravagant and libidinous conversation in some disorders; as in *Chorea Sancti Viti*, &c.

CARCHE'SIUM. (*um, ii.* n.; καρχησιος. The openings at the top of a ship's mast, through which the rope passes.) A name of some bandages noticed by Galen, and described by Oribasius.

CARCINODES. (From καρκινομα, a cancer, and ειδος, resemblance.) Cancer-like.

CARCINO'MA. (*a, atis.* n.; from καρκινος, a cancer.) See *Cancer*.

CARCINUS. (*us, i.* m.; καρκινος, a cancer.) See *Cancer*.

Cardama'ntica. (From καρδαμον, the nasturtium.) See *Lepidium iberis*.

Cardamele'um. A medicine of no note, mentioned by Galen.

CARDAMI'NE. (*e, es.* f.; from καρδια, the heart: because it acts as a cordial and strengthener, or from its having the taste of cardamum, that is, nasturtium, or cress.) Cuckoo-flower. 1. The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliquosa*.

2. The pharmacopœial name of the cuckoo-flower. See *Cardamine pratensis*.

Cardamine pratensis. The systematic name of the common ladies' smock, or cuckoo-flower, called *cardamine* in the pharmacopœias, and *Cardamantica, Nasturtium aquaticum, Culi flos,* and *Iberis sophia*.

Cardamine—foliis pinnatis, foliolis, radicalibus subrotundis, caulinis lanceolatis of Linnæus. The flower has a place in the materia medica, upon the authority of Sir George Baker, who has published five cases, two of chorea Sancti Viti, one of spasmodic asthma, one of hemiplegia, and a case of spasmodic affections of the lower limbs, wherein the *flores cardamines* were supposed to have been successfully used. A variety of virtues have been given to this plant, but it does not deserve the attention of practitioners.

CARDAMO'MUM. (*um, i.* n.; from καρδαμον, and αμωμον: because it partakes of the nature, and is like both the cardamum and amomum.) The cardamom. See *Amomum, Elettaria*, and *Illicium*.

Cardamomum majus. See *Amomum*.

Cardamomum medium. The seeds correspond, in every respect, with the lesser, except in being twice as long, but no thicker than the *Cardamomum minus*.

Cardamomum minus. See *Elettaria*.

Cardamomum piperatum. *See Amomum*.

Cardamomum siberiense. See *Illicium*.

CA'RDAMUM. (*um, i.* n.; from καρδια, the heart: because it comforts and strengthens the heart.) The cardamum. See *Amomum*, *Elettaria*, *Illicium*, and *Nasturtium*.

CA'RDIA. (*a, æ.* f.; from κεαρ, the heart.) 1. This term was applied by the Greeks to the heart.

2. The superior opening of the stomach; so called from its proximity to the heart.

CARDI'AC. (*Cardiacus;* from καρδια, the heart.) 1. Of, or belonging to, the cardia, or heart.

2. A cordial. See *Cordial*.

Cardiac confection. See *Confectio aromatica*.

Cardiac herb. Named *cardiaca:* from the supposed relief it gives in faintings, and disorders of the stomach. The pharmacopœial name of the plant called Mother-wort. See *Leonurus cardiaca*.

Cardiac passion. Passio cardiaca. Ancient writers frequently mention a disorder under this name, which consists of that oppression and distress which often accompanies fainting.

CARDIACUS MORBUS. A name by which the ancients called the typhus fever.

CARDIA'LGIA. (*a, æ.* f.; from καρδια, the cardia, and αλγος, pain.) *Cordolium.* Pain at the stomach. It is an uneasy sensation in the stomach, with anxiety, a heat more or less violent, and sometimes attended with oppression, faintness, and often with an inclination to vomit, or a plentiful discharge of clear lymph, like saliva.

Cardialgia is sometimes found as a symptom of dyspepsia, as it is also in a multitude of other complaints; as flatulency, scirrhus, or inflammation of the stomach, worms, retrocedent gout, suppressed menstruation, and various diseases of the heart, liver, pancreas, kidneys, and intestines; in hypochondrias, and in sudden and violent emotions of the mind: but it is likewise found, in many instances, as an idiopathic affection.

In some cases it is gnawing or burning pain, felt chiefly at the cardia, or upper orifice of the stomach: the specific name of cardialgia is derived from this symptom. The cardia is, indeed, generally supposed to be the immediate seat of this affection: but this is an erroneous view. It is from the greater sensibility of the upper orifice of the stomach than any other part of it, that we are most sensible of uneasiness in that region: but irritability of the whole, or of any other part of the organ, and perhaps of the adjoining organs, as the pancreas, spleen, and liver, will often produce the same local pain; and, in some instances, of very long standing, it has been ascertained after death to have been occasioned by a scirrhous, or some other obstruction of the pylorus.

In other cases, the pain or uneasiness are somewhat less intense, but far more general; reaching, indeed, over the whole range of the stomach and epigastrium, accompanied with nausea and anxiety, and, by sympathetically affecting the general system, attended with coldness of the extremities, failure of strength, shortness of breath, and great tendency to faint, which continues till the system re-acquires warmth and perspiration.

This is distinguished, in popular language, by the name of *sinking heartburn*.

In another form, the disease is known by a morbid increase in the quantity of the fluids secerned: and hence the peculiar symptom of an eructation, frequently in considerable abundance, of a thin watery liquor; chiefly in the morning after food has been abstained from for many hours, and the stomach has nothing in its cavity but its own fluids. Dr. Cullen has admirably described one form of the disease: "It appears most commonly," says he, "in persons under middle age, but seldom in any persons before the age of puberty. When it has once taken place, it is ready to recur occasionally for a long time after; but it seldom appears in persons considerably advanced in life. It affects both sexes, but more frequently the female. The fits of this disease usually come on in the morning and forenoon, when the stomach is empty. The first symptom is a pain at the pit of the stomach, with a sense of constriction, as if the stomach were drawn towards the back: the pain is increased by raising the body into an erect posture, and therefore the body is bended forward. This pain is often severe; and, after continuing for some time, brings on an eructation of a thin watery fluid in considerable quantity. This fluid has sometimes an acid taste, but is very often absolutely insipid. The eructation is for some time frequently repeated, and does not immediately give relief to the pain which preceded it; but does so at length, and puts an end to the fit." To this description it may be added, that when the watery discharge is altogether insipid, there is merely an increased secretion of the fluids poured into the stomach, apparently in a thinner or more dilute condition; and that when this discharge is of an acrid taste, the gastric or other juices, which exist simply, and without food or other intermixture, in the stomach at the time, possess an acidity in themselves, — a fact which closely connects *pyrosis* with cardialgia. In the colloquial tongue of England, it is called *black-water;* in that of Scotland, *water-brash*, and *water-qualm*.

Most of these varieties have sometimes returned periodically, especially in the spring; and as their general causes and mode of treatment do not essentially differ, it is more convenient to consider them jointly than under detached heads.

The remote causes of cardialgia, under whatever variety it shows itself, which is chiefly regulated by the habit or idiosyncrasy of the individual, are indigestible food or other ingesta; an habitual and copious use of very cold or very hot beverages, but especially the latter; indulgence in spirituous potations; worms, and insects, or their larves; drastic purges; obstructed perspiration; repelled cu-

taneous eruptions; and bile depraved, or excessive in its secretion. Of the indigestible foods, the most common are animal fat, oil, butter, or cheese eaten in excess. The kernels of fruits have often laid a foundation for the complaint. It occurs also, not unfrequently, as a sequel or symptom of some other affection.

All these causes have a direct tendency to produce imbecility of the stomach, especially a loss of tone, or weaker action in its muscular fibres, and, consequently, a morbid condition of the fluids secreted by, or poured into the stomach; which hence become changed in their quantity or their quality, and are given forth too freely or too scantily, with an acid or other acrimonious character or tendency; or with several of these in conjunction, according to the idiosyncrasy or peculiarity of the constitution. And hence, through the whole of this species, we meet with a peculiar proximate cause, as well as a remote one.

The existence of an acidity in the stomach seems to be proved beyond doubt.

The acid, according to the experiments of M. Perperes, is chiefly the acetous, which, in some cases, seems to be favoured by the nature of the gastric fluid itself, which appears to be secreted in too dilute or weakly a condition for the purposes of digestion; on which account, the food, instead of being converted into chyme, runs readily into a state of fermentation, so that some persons cannot take either honey or sugar without producing this effect: while, in others, the gastric juice is possibly itself acid at the time of secretion; since we occasionally find that the disease is not increased by vegetable foods, or even acescent fruits; and that water alone, or small wine-and-water, suit the stomach better than undiluted wines or spirits.

In applying to this disease the resources of the art of healing, it is obvious that our intention should be twofold;

1. To palliate the present distress.
2. To prevent a recurrence of the paroxysms.

The first may be obtained by small doses of opium, and sometimes by other antispasmodics, as the æthers and volatile alkali; and where acidity is unquestionable, by calcareous and saponaceous earths. Lime-water, or acidulous alkaline waters, or the different alkalies of the alkalescent earths, magnesia, and lime, have been almost the only ones that have hitherto been employed; or at least the others have not been submitted to a sufficient trial, and under a sufficient variety of modifications, to enable us to speak of them with accuracy. It is a common belief that chalk, with an acid in the stomach, produces an astringent, and magnesia a laxative neutral. There is no evidence that an acid is found below the duodenum; and hence it is chiefly in the upper part of the alimentary canal that these calculous concretions are impacted and agglutinated.

Oleaginous preparations have also been had recourse to, and in some habits apparently with success; and when we have full proof of acidity as the existing cause, there are few medicines we can more fully depend upon than soap: probably because in its decomposition it lets loose the oleaginous principle, which may in some degree obtund the pain, and at the same time unites its alkali with the acid of the stomach; thus neutralising its acrimony, and forming a valuable aperient. "It is often," says Dr. Cullen, "a more convenient remedy than common absorbents or simple alkalines." If the pain be very severe, we shall much improve the beneficial operation of the soap, by combining it with opium — a very valuable medicine in all the varieties of the disease, but it is peculiarly so in water-brash.

It is necessary, in every case, to direct our view to the second intention, that of preventing a recurrence of the paroxysm.

Now, this can only be done effectually by restoring the stomach to its proper tone. The warmer bitters, the metallic oxides, and especially the oxides of zinc and bismuth, bid fairest for success. Of the bitters, one of the most elegant as well as most effectual, is the extract of chamomile. Yet the *Matricaria chamomilla*, or dog's chamomile, seems to rival its powers.

Among the aromatics, many of the terebinthinate balsams will be found highly useful. The balsam of Gilead, and that of Mecca, were once highly extolled, and perhaps deservedly; but are too dear for common use. The Turks take eight or ten drops as a dose; but the quantity may be considerably increased. In some of the pharmacopœias, cubebs, as much cheaper, have been ordered instead of the balsams.

It is almost superfluous to add, that the diet should consist of articles least disposed to ferment; as animal food generally, shellfishes, biscuits; and for drink, small brandy-and-water, toast-and-water, lime-water, or most of the mineral waters.

Cardialgia sputatoria. See *Pyrosis*.

Cardime'lech. (From καρδια, the heart, and *meleck*, Hebrew, a governor.) A fictitious term in Dolæus's Encyclopedia, by which he would express a particular active principle in the heart, appointed to what we call the vital functions.

Cardimo'na. Pain at the stomach.

Cardinal de Lugo. See *De Lugo*.

Cardinal flowers. See *Lobelia*.

Cardiname'ntum. (From *cardo*, a hinge.) An articulation like a hinge.

CARDIO'GMUS. (*us*, *i*. m.; from καρδιωσσω, to have a pain in the stomach.)

1. A distressing pain at the præcordia or stomach.
2. An aneurism in or near the heart, which occasions pain in the præcordia.

CARDIO'NCHUS. (*us*, *i*. m.; from καρδια, the heart, and ογκος, a tumour.) A tumour of the heart; and has been applied to an aneurism in the heart, or in the aorta near the heart.

Cardiotro'tus. (From καρδια, the heart, and τιτρωσκω, to wound.) A wound of the heart.

CARDI'TIS. (*is, idis. f.*; from καρδια, the heart.) Inflammation of the heart. It is known by pyrexia, pain in the region of the heart, great anxiety, difficulty of breathing, cough, irregular pulse, palpitation, and fainting, and the other symptoms of inflammation.

The treatment of carditis is, in a great measure, similar to that of pneumonitis. It is necessary to take blood freely, as well generally as locally, and apply a blister near the part. Purging may be carried to a greater extent than in pneumonia; and the use of digitalis is more important, to lessen the irritability of the heart. It is equally desirable to promote diaphoresis, but expectoration is not so much to be looked for, unless indeed, as very often happens, the inflammation should have extended, in some degree, to the lungs.

CARDIUM. (*um, i.* n.; from *cardo*, a hinge: so called from the hinge-like union of the two shells.) The name of a genus of bivalve shells. Class, *Vermes*; Order, *Testacea*. The cockle.

Cardium edule. The common cockle. It is found, in the greatest plenty, buried in the sands on all the arid shores of Europe. The flavour of this fish is very peculiar, and by some much esteemed. It is never eaten raw, but boiled or stewed, when it is considered as wholesome.

CA'RDO. A hinge. 1. The articulation called *Ginglymus*.

2. The second vertebra of the neck.

Cardo'nium. Wine medicated with herbs.

Cardopa'tium. Most probably the low carline thistle. See *Carlina acaulis*.

CA'RDUUS. (*us, i.* m.; *à carere, quasi aptus carendæ lanæ*, being fit to tease wool; or from κειρω, to abrade: so named from its roughness, which abrades and tears whatever it meets with.) A genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*.

Carduus acanthus. The bear's breech. See *Acanthus mollis*.

Carduus altilis. See *Cinara*.

Carduus arvensis. See *Serratula*.

Carduus benedictus. See *Centaurea*.

Carduus hæmorrhoidalis. The common way-thistle. See *Serratula arvensis*.

Carduus lacteus. The milk-thistle. See *Carduus marianus*.

Carduus mariæ. The officinal name of the *Carduus marianus*.

Carduus marianus. The systematic name of the officinal *Carduus mariæ*. Common milk-thistle, or Lady's-thistle. *Carduus — foliis amplexicaulibus, hastato-pinnatifidis, spinosis; calycibus aphyllis; spinis caliculatis, duplicato-spinosis*, of Linnæus. The seeds of this plant, and the herb, have been employed medicinally. The former contain a bitter oil, and are recommended as relaxants. The juice of the latter is said to be salutary in dropsies, in the dose of four ounces; and, according to Miller, to be efficacious against pungent pains. The leaves, when young, surpass, when boiled, the finest cabbage, and in that state are diuretic.

Carduus nutans. The Arabian thistle. Fallen into disuse.

Carduus pinea. See *Atractylis*.

Carduus sativus. See *Carthamus*.

Carduus solstitialis. See *Calcitrapa officinalis*.

Carduus spinosissimus. See *Carduus nutans*.

Carduus tomentosus. See *Onopordium acanthium*.

CAREBA'RIA. (*a, æ.* f.; from καρη, the head, and βαρος, weight.) A painful and uneasy heaviness of the head.

CARE'NUM. (From καρη, the head.) The head.—*Galen*.

Carenum vinum. Strong wine.

CAREUM. (*eum, ei.* n.; from *Caria*, the country whence they were brought.) The carraway. See *Carum carui*.

CA'REX. (*ex, icis.* fœm.; from *careo*, not *quia viribus careat*, but because, from its roughness, it is fit *ad carendum*, to card, tease, or pull.) A genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Triandria*.

Carex arenaria. The name of the plant, the roots of which are called *sarsaparilla germanica*. It grows plentifully on the sea-coast. The root has been found serviceable in some mucal affections of the trachea, in rheumatic pains, and gouty affections. These roots, and those of the *carex hirta*, are mixed with the true sarsaparilla, which they much resemble.

CA'RICA. (*a, æ.* f.; from *Caria*, the place where they were cultivated.) The fig. See *Ficus carica*.

Carica papaya. Papaw-tree. This is a native of both Indies, and the Guinea coast of Africa. When the roundish fruit are nearly ripe, the inhabitants of India boil and eat them with their meat, as we do turnips. They have somewhat the flavour of a pompion. Previous to boiling, they soak them for some time in salt and water, to extract the corrosive juice, unless the meat they are to be boiled with should be very salt and old, and then this juice being in them will make them as tender as a chicken. But they mostly pickle the long fruit, and thus they make no bad succedaneum for mango. The buds of the female flowers are gathered, and made into a sweetmeat; and the inhabitants are such good husbands of the produce of this tree, that they boil the shells of the ripe fruit into a repast, and the insides are eaten with sugar, in the manner of melons. Every part of the papaw-tree, except the ripe fruit, affords a milky juice, which is used, in the Isle of France, as an effectual remedy for the tape-worm. In Europe, however, whither it has been sent in the concrete state, it has not answered,

perhaps from some change it had undergone, or not having been given in a sufficient dose.

A very remarkable circumstance regarding the papaw-tree, is the extraction from its juice of a matter exactly resembling the flesh or fibre of animals, and hence called vegetable fibrin.

CARICUM. (From *Caricus*, its inventor.) *Carycum*. An ointment for cleansing ulcers, composed of hellebore, lead, and cantharides.

CA'RIES. (*es, ei.* f.; from *carah*, chald.) Foul: corroding. A term formerly applied to such a condition of ulcers and soft parts; but now universally used to express a denuded state of a bone, tending, probably, to a dead state, but the vitality has not left it. See *Necrosis*.

CARI'MA. The cassada-bread.

CARI'NA. (*a, æ.* f.; the keel of a ship.) 1. In *Anatomy*, a name formerly applied to the back-bone.

2. In *Botany*, the keel, or that part of the petals which compose a papilionaceous flower, consisting of two, united or separate, which embrace the internal or genital organs. See *Corolla*.

CARINATUS. Keel-shaped; boat-shaped: applied to leaves and petals when the back is longitudinally prominent, like the keel of a boat; as in the leaf of the *Allium carinatum*, and the petals of the *Allium ampelloprasum*, and *Carum carui*.

CARINTHINE. A subspecies of mineral augite found in Carinthia.

Cariosse. See *Ady*.

CARIOUS. *Cariosus*. When a part of a bone is exposed, and nearly deprived of its vitality, it is said to be carious: hence carious tooth. See *Caries*.

CA'RIUM TERRA. Lime.

CARLI'NA. (or *Carolina, æ*, f.; from *Carolus*, Charles the Great, or Charlemagne: because it was believed that an angel showed the Carline thistle to him, and that, by the use of it, his army was preserved from the plague.) 1. A genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*.

2. The officinal name of two kinds of plants.

CARLINA ACAULIS. The Carline thistle. Star thistle. Called also *Chamæleon album*, *Carlina*, *Cardopatium*, *Crocodilium*, *Heracantha*, and *Ixia*. *Carlina—caule unifloro, flore breviore*, of Linnæus. The root of this plant is bitter, and said to possess diaphoretic and anthelmintic virtues. It is also extolled by foreign physicians in the cure of acute, malignant, and chronic disorders, particularly gravel and jaundice.

CARLINA GUMMIFERA. See *Atractylis gummifera*.

Carline thistle. See *Carlina acaulis*.

CA'RLO SANCTO, RADIX. St. Charles's root; so called by the Spaniards, on account of its great virtues. It is found in Mechoachan, a province in America. Its bark hath an aromatic flavour, with a bitter acrid taste. The root itself consists of slender fibres. The bark is sudorific, and strengthens the gums and stomach.

CA'RMEN. (*en, inis.* neut. A verse; because charms usually consisted of a verse.) A charm; an amulet.

CARMES. (A Carmelite friar.) Carmelite water; so named from its inventors: composed of baum, lemon-peel, &c.

CARMINA'NS. See *Carminative*.

CARMI'NATIVE. (*Carminativus*; from *carmen*, a verse, or charm: because practitioners, in ancient times, ascribed their operation to a charm or enchantment.) That which allays pain and dispels flatulency of the primæ viæ. The principal carminatives are the semina cardamomi, anisi, et carui; olea essentialia carui, anisi, et juniperi; confectio aromatica; pulvis aromaticus; tinctura cardamomi; tinctura cinnamomi composita; zingiber; stimulants; tonics; bitters; and astringents.

CARMINE. *Carminum*. The name given by the French chemists to the colouring matter of cochineal. See *Coccus cacti*.

CARNABA'DIUM. Carraway-seed.

CA'RNEÆ COLUMNÆ. Fleshy pillars or columns. See *Heart*.

CARNELIAN. A subspecies of calcedony.

CARNEUS. Carneous: fleshy. 1. Applied to some muscles of the heart. See *Carnosus*.

2. Applied generally, in *Natural History*, to designate colour: the *color carneus*, flesh colour.

CARNI'CULA. (*a, æ.* f.; diminutive of *caro, carnis*, flesh.) A small fleshy substance.

CARNIFO'RMIS. (From *caro*, flesh, and *forma*, likeness.) Having the appearance of flesh.

CARNIVOROUS. (*Carnivorosus*, from *caro*, flesh, and *voro*, to devour.) Flesh devouring: applied to animals that live on flesh.

CARNO'SUS. Fleshy: applied very generally, in *Natural History*, to leaves, pods, &c. of a thick pulpy substance; as in the leaves of all those plants called succulent, especially *sedum*, *crassula*, &c.

CARNOSUS PANNICULUS. See *Panniculus*.

CA'RO. (*Caro, carnis*, fœm.) 1. Flesh. The red part or belly of a muscle.

2. The pulp of fruit.

CAROLI'NA. See *Carlina*.

CAROMEL. The smell exhaled from sugar at the calcining heat.

CARO'PI. The *Amomum verum*.

CARO'RA. A chemical vessel that resembles an urinal.

CAROS. See *Carus*.

CARO'SIS. See *Carus*.

CARO'TA. (*a, æ.* f.) See *Daucus*.

CAROTID. (*Carotidus*, from καρόω, to cause to sleep; because, if tied with a ligature, the animal becomes comatose, and has the appearance of being asleep.) The name

of an artery of the neck, *Arteria carotidea.* The carotids are two considerable arteries, that proceed, one on each side of the cervical vertebræ, to the head, to supply it with blood. The right carotid does not arise immediately from the arch of the aorta, but is given off from the arteria innominata. The left arises from the arch of the aorta. Each carotid is divided into external and internal, or that portion without and that within the cranium. The external gives off eight branches to the neck and face, viz. *anteriorly*, the superior thyroideal, the sublingual, the inferior maxillary, the external maxillary; *posteriorly*, the internal maxillary, the occipital, the external auditory, and the temporal. The internal carotid or cerebral artery gives off four branches within the cavity of the cranium: the anterior cerebral, the posterior, the central artery of the optic nerve, and the internal orbital.

CARO'UM. The carraway-seed.

CARP. See *Cyprinus carpio.*

CA'RPASUS. (So named παρα το καρον ποιησαι: because it makes the person who eats it appear as if he was asleep.) An herb the juice of which was formerly called opocarpason, which, according to Galen, resembled myrrh, but was highly poisonous.

CARPA'THICUM BALSAMUM. See *Pinus.*

CARPENTA'RIA. (*a, æ.* f.; from *carpentarius*, a carpenter: and so named from its virtues in healing cuts and wounds made by a tool.) A vulnerary herb; not properly known what it is, but believed to be the common milfoil, or yarrow, the *Achillæa millifolium* of Linnæus.

CARPESIUM. (*um, i.* n.; from καρπος, fruit.) An aromatic vegetable, often mentioned by the ancients, and probably the *Carpesium cernuum* of Linnæus.

CARPHA'LEUS. (From καρφω, to exsiccate.) Hippocrates uses this word to mean *dry*, opposed to *moist.*

CARPHOLO'GIA. (*a, æ.* f.; from καρφος, the nap of clothes, and λεγω, to pluck.) *Carpologia.* A delirious picking of the bed-clothes, a symptom of great danger in diseases. See *Floccilatio.*

CA'RPHUS. (*us, i.* m.; from καρφη, a straw.) 1. In Hippocrates it signifies a mote, or any small substance.

2. A pustule of the smallest kind.

3. In *Botany*, the herb fenugreek.

CA'RPIA. (*a, æ.* f.; from *carpo*, to pluck, as lint is made from linen-cloth.) Lint.

CARPI'SMUS. The wrist.

CARPOBA'LSAMUM. (*um, i.* n.; from καρπος, fruit, and βαλσαμον, balsam.) See *Amyris gileadensis.*

CARPOLO'GIA. See *Carphologia.*

CARPOTICUS. (From καρπωσις, *fruitio*, from καρπος, *fructus.*) Appertaining to impregnation.

CA'RPUS. (*us, i.* m.; καρπος, the wrist.) 1. The wrist, or carpus. It is situated between the fore-arm and hand.

2. (*us, i.* f.; καρπος, *fructus.*) Fruit of any sort.

CARROT. (Supposed to be derived from *cara*, the wild parsnip.) See *Daucus carota.*

Carrot, candy. See *Athamanta cretensis.*

Carrot poultice. See *Cataplasma dauci.*

CA'RTHAMUS. (*us, i.* m.; from καθαιρω, to purge.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis.*

2. The pharmacopœial name of the saffron flower. See *Carthamus tinctorius.*

CARTHAMUS TINCTORIUS. The systematic name of the saffron flower, or bastard saffron; called also *Cnicus*, *Crocus saracenicus*, *Carthamum officinarum*, and *Carduus sativus. Carthamus—foliis ovatis, integris, serrato-aculeatis* of Linnæus. The seeds, freed from their shells, have been celebrated as a gentle cathartic, in the dose of one or two drachms. They are also supposed to be diuretic and expectorant; particularly useful in humoral asthma, and similar complaints. The *carthamus lanatus* is considered, in France, as a febrifuge and sudorific. The dried flowers are frequently mixed with saffron to adulterate it. The plant is cultivated in many places on account of its flowers, which are used as a dye. Rouge is prepared from this plant; and it is in very general use for dying silk of a poppy, cherry, rose, and bright orange red.

CARTHEUSER, JOHN FREDERICK, a professor of medicine at Francfort on the Oder, acquired considerable reputation about the middle of the last century, by several luminous works on botany and pharmacy; especially his "Rudimenta Materiæ Medicæ Rationalis," and "De Genericis quibusdam Plantarum Principiis."

CARTHUSIA'NUS. (From the Monks of that order, who first invented it.) A name of the precipitated sulphur of antimony.

CARTILA'GE. (*Cartilago, inis.* f.; quasi *carnilago*; from *caro, carnis*, flesh.) A white elastic, glistening substance, growing to bones, and commonly called *gristle.* Cartilages are divided, by anatomists, into *obducent*, which cover the moveable articulations of bones; *inter-articular*, which are situated between the articulations, and *uniting* cartilages, which unite one bone with another. Their use is to facilitate the motions of bones, or to connect them together.

The chemical analysis of cartilage affords one third the weight of the bones, when the calcareous salts are removed by digestion in dilute muriatic acid. It resembles coagulated albumen. Nitric acid converts it into gelatine. With alkalies it forms an animal soap. Cartilage is the primitive paste, into which the calcareous salts are deposited in the young animal. In the disease rickets, the earthy matter is withdrawn by morbid absorption, and the bones return into the state nearly of flexible cartilage. Hence arise the distortions characteristic of this disease.

CARTILAGINEUS. Cartilaginous.

1. In *Anatomy*, applied to parts which natu-

rally, or from disease, have a cartilaginous consistence.

2. In *Botany*, to leaves which have a hard or horny leaf-edge, as in several species of saxifrage. See *Leaf*.

CARTILAGINOUS. See *Cartilagineus*.

Cartilago annularis. The ring-like cartilage. See *Cartilago cricoidea*.

Cartilago arytænoidea. See *Larynx*.

Cartilago cricoidea. The cricoid cartilage. It belongs to the larynx, and is situated between the thyroid and arytenoid cartilages and the trachea; it constitutes, as it were, the basis of the many annular cartilages of the trachea.

Cartilago ensiformis. *Cartilago xiphoidea*. Ensiform cartilage. A cartilage shaped somewhat like a sword or dagger, attached to the lowermost part of the sternum, just at the pit of the stomach.

Cartilago scutiformis. See *Thyroid*.

Cartilago thyroidea. See *Thyroid*.

Cartilago xiphoidea. See *Cartilago ensiformis*.

CA'RUI. See *Carum*.

CA'RUM. (*um, i.* n.; Καρος: so named from *Caria*, a province of Asia.) The Caraway. 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

2. The pharmacopœial name of the caraway plant. See *Carum carui*.

Carum carui. The caraway plant. *Carvi, Carus, Caruon, Cuminum pratense.* The seeds are well known to have a pleasant spicy smell, and a warm aromatic taste; and, on this account, are used for various economical purposes. They are esteemed to be carminative, cordial, and stomachic, and recommended in dyspepsia, flatulencies, and other symptoms attending hysterical and hypochondriacal disorders. An essential oil and distilled water are directed to be prepared from them by the London College.

CA'RUNCULA. (*a, æ.* f.; diminutive of *caro*, flesh.) A caruncle, or little fleshy excrescence. It is variously applied:

1. To healthy and natural parts; as the carunculæ myrtiformes, and carunculæ lachrymalis.

2. To soft, fleshy, pendulous excrescences, which have received certain names; as ficus, when pendulous and fig or raisin shaped; encanthus, when on the canthus or angle of the eye.

Caruncula lachrymalis. The lachrymal caruncle. A little fleshy conoidal glandiform body, red externally, situated in the internal canthus of each eye, before the union of the eyelids. It appears to be formed of numerous sebaceous glands, from which many small hairs grow. The hardened smegma observable in this part of the eye in the morning, is separated by this caruncle.

Carunculæ mamillares. The extremities of the tubes in the nipple.

Carunculæ myrtiformes. When the hymen has been lacerated by attrition, there remain in its place, two, three, or four caruncles, which have received the name of myrtiform.

Carunculæ papillares. The protuberances within the pelvis of the kidney, formed by the papillous substance of the kidney.

Ca'ruon. See *Carum*.

CA'RUS. (*us, i.* m.; Καρος; from καρα, the head, as being the part affected.) *Caros; Carosis.*

1. Insensibility and sleepiness, as in apoplexy, attended with quiet respiration.

2. A lethargy, or a profound sleep, without fever.

3. The caraway seed.

Ca'rva. The cassia lignea.

Cary'don. See *Caryedon*.

Carye'don. (From καρυα, a nut.) *Carydon*. A sort of fracture, where the bone is broken into small pieces, like the shell of a cracked nut.

Caryoces. See *Ady*.

Caryocosti'num. An electuary; so named from two of its ingredients, the clove and costus.

CARYOPHYLLA'TA. (*a, æ.* f.; from καρυοφυλλον, the caryophyllus: so named because it smells like the caryophyllus, or clove July flower.) See *Geum urbanum*.

Caryophylloi'des cortex. See *Laurus culilawan*.

CARYOPHY'LLUM. (*um, i.* n.; Καρυοφυλλον, from καρυον, a nut, and φυλλον, a leaf: so named because it was supposed to be the leaf of the Indian nut.) The clove. See *Eugenia caryophyllata*.

CARYOPHY'LLUS. (*us, i.* m. See *Caryophyllum*.) The clove-tree. The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Monogynia*. See *Eugenia caryophyllata*.

Caryophyllus aromaticus. See *Eugenia caryophyllata*.

Caryophyllus aromaticus americanus. See *Myrtus pimenta*.

Caryophyllus hortensis. See *Dianthus caryophyllus*.

Caryophyllus ruber. The clove pink. See *Dianthus caryophyllus*.

Caryophyllus vulgaris. See *Geum urbanum*.

Caryo'tis. (From καρυον, a nut.) *Caryota*. Galen gives this name to a superior sort of date, of the shape of a nut.

CASCARI'LLA. (*a, æ.* f.; diminutive of *cascara*, the Spanish for bark or shell.) A name given originally to small specimens of cinchona; but now applied to another bark. See *Croton Cascarilla*.

Cas'chu. See *Acacia catechu*.

CASEIC. (*Caseicus*. From *caseus*, cheese.) Appertaining to cheese.

Caseic acid. (*Acidum caseicum*: so called because it is obtained from cheese.) The name given by Proust to an acid formed in cheese, to which he ascribes their flavour.

CASEUS. (*us, i.* m.; from the Arabic term *casah*, milk.) See *Cheese*.

Cashew-nut. See *Anacardium occidentale.*

Cashow. See *Acacia catechu.*

Ca'sia. See *Cassia.*

Casmina'ris. See *Cassumuniar.*

Ca'ssa. The Arabian for the breast.

CASSA'DA. See *Jatropha manihot.*

Ca'ssamum. The fruit of the balsam of Gilead tree, or *Amyrus opobalsamum.*

Ca'ssava. See *Jatropha manihot.*

CASSEBOHM, Frederic, born perhaps, but certainly lived at Halle, in Saxony; published, in 1730, a treatise on the *Difference between the Fœtus and Adult,* in which he notices the descent of the testicle from the abdomen; and four years after, a very minute and exact description of the ear. He likewise explained, in subsequent publications, the manner of dissecting the muscles and the viscera.

CASSERIUS, Julius, was born in 1545. He published an *Account of the Organs of Voice and Hearing,* which he afterwards extended to the other senses, explaining also the uses of these parts. Some years after his death in 1616, the rest of his plates, amounting to 78, with the explanations, were published with the works of Spigelius.

CA'SSIA. (*a, æ.* f.; from the Arabic *katsia,* which is from *katsa,* to tear off: so called from the act of stripping the bark from the tree.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

Cassia absus. The systematic name of a small Egyptian lotus, the seeds of which are powdered, and mixed with an equal quantity of sugar, and a small portion put by the Egyptians under the eyelids at the commencement of their ophthalmia.

Cassia aluta. The systematic name of a plant, the leaves of which are bitter, nauseous in their taste, and supposed to be cathartic. They are said to cure herpes.

Cassia bark. See *Laurus cassia.*

Cassia caryophyllata. The clove-bark tree. See *Myrtus caryophyllata.*

Cassia fistula. The purging cassia. Called also, *Cassia nigra, Cassia fistularis, Cassia Alexandrina, Chaiarxambar, Canna, Cassia solutiva,* and *Tlai Xiem.* This tree, *Cassia—foliis quinquejugis ovatis acuminatis glabris, petiolis eglandulatis* of Linnæus, is a native of both Indies. The pods of the East India cassia are of a less diameter, smoother, and afford a blacker, sweeter, and more gratefull pulp, than those which are brought from the West Indies. Those pods which are the heaviest, and in which the seeds do not rattle on being shaken, are commonly the best, and contain the most pulp, which is the part medicinally employed, and to be obtained in the manner described in the pharmacopœias. The best pulp is of a bright shining black colour, and of a sweet taste, with a slight degree of acidity. It has been long used as a laxative medicine, and being gentle in its operation, and seldom disturbing the bowels, is well adapted to children, and to delicate or pregnant women. Adults, however, find it of little effect, unless taken in a very large dose, as an ounce or more; and, therefore, to them this pulp is rarely given, but usually conjoined with some of the brisker purgatives. The officinal preparation of this drug, is the confectio cassiæ; it is also an ingredient in the confectio sennæ.

Cassia fistularis. See *Cassia fistula.*

Cassia latinorum. See *Osyris.*

Cassia lignea. See *Laurus cassia.*

Cassia monspeliensium. See *Osyris.*

Cassia nigra. See *Cassia fistula.*

Cassia poetica. See *Osyris.*

Cassia, purging. See *Cassia fistula.*

Cassia senna. The senna, or Egyptian cassia. *Senna alexandrina, Senna italica. Cassia—foliis sejugis subovatis, petiolis eglandulatis* of Linnæus. The leaves of senna, which are imported here from Alexandria for medicinal use, have a rather disagreeable smell, and a sub-acrid, bitterish, nauseous taste. They are in common use as a purgative. The formulæ given of the senna by the colleges, are an infusion, a compound powder, a tincture, and an electuary. See *Infusum sennæ,* &c.

Cassia solutiva. See *Cassia fistula.*

Cassiæ aramentum. The pulp of cassia.

Cassiæ flores. The Cassia flowers. See *Laurus cinnamomum.*

Cassiæ pulpa. See *Cassia fistula.*

Cassina. See *Ilex cassine.*

Cassius's precipitate. The purple powder which forms on a plate of tin immersed in a solution of gold. It is used to paint in enamel.

Ca'ssob. An obsolete term for kali.

Cassoleta. Warm fumigations described by Marcellus.

Cassonada. Sugar.

CASSUMMU'NIAR. (Of uncertain derivation; perhaps Indian.) *Casamunar, Casmina, Risagon, Bengale Indorum.* The root, occasionally exhibited under one of these names, is brought from the East Indies. It comes over in irregular slices of various forms, some cut transversely, others longitudinally. The cortical part is marked with circles of a dusky brown colour; the internal part is paler, and unequally yellow. It possesses moderately warm, bitter, and aromatic qualities, and a smell like ginger. It is recommended in hysterical, epileptic, and paralytic affections.

CASTA'NEA. (*a, æ.* f.; καςανον, from *Castana,* a city in Thessaly, whence they were brought.) See *Fagus castanea.*

Castanea equina. The horse-chestnut. See *Æsculus hippocastanum.*

CASTANEUS. 1. Of or belonging to a walnut.

2. A chestnut or orange-brown colour.

CASTELLANUS, Peter, or Du Chatel, born in Flanders, 1585. He published the lives of eminent physicians in Latin, written in a concise but very entertaining

manner, with useful references to the original authorities.

CASTELLUS, BARTHOLOMEW, an Italian physician, who practised at Messina, about the end of the 16th century. He was author of two works, both for a long time extremely popular, a Synopsis of Medicine, and *Lexicon Medicum Græco-Latinum*, in which great learning and judgment are conspicuous.

CASTJOE. See *Acacia catechu.*

CASTLE-LEOD. The name of a place in Ross-shire, in Scotland, where there is a sulphureous spring, celebrated for the cure of cutaneous diseases and foul ulcers.

CASTOR. (*or, oris.* m.; from καϛωρ, the beaver, *quasi* γαϛωρ; from γαϛηρ, the belly: because of the largeness of its belly; or *à castrando*, because he was said to castrate himself in order to escape the hunters.)

1. The name of a genus of animals.

2. The English name of the *Castoreum* of the pharmacopœias, a peculiar concrete substance obtained from the *Castor fiber* of Linnæus. See *Castor fiber.*

CASTOR FIBER. The systematic name of the beaver. An amphibious quadruped inhabiting some parts of Prussia, Russia, Germany, &c.; but the greatest number of these animals is met with in Canada. The name of *castoreum*, or castor, is given to two bags, situated in the inguinal regions of the beaver, which contain a very odorous substance, soft, and almost fluid when recently cut from the animal, but which dries, and assumes a resinous consistence in process of time. The best comes from Russia. It is of greyish yellow, or light brown colour. It consists of a mucilage, a bitter extract, a resin, an essential oil, in which the peculiar smell appears to reside, and a flaky crystalline matter, much resembling the adipocire of biliary calculi. Castor has an acrid, bitter, and nauseous taste; its smell is strong and aromatic, yet at the same time fœtid. It is used medicinally, as a powerful antispasmodic, in hysterica and hypochondriacal affections, and in convulsions, in doses of from 10 to 30 grains. It has also been successfully administered in epilepsy and tetanus. It is occasionally adulterated with dried blood, gum ammoniacum, or galbanum, mixed with a little of the powder of castor, and some quantity of the fat of the beaver.

Castor oil. See *Ricinus.*

Castor, Russian. See *Castor fiber.*

CASTOREUM. (*um, i.* n.; from *castor.*) See *Castor fiber.*

CASTORI'UM. See *Castoreum.*

CASTRATION. (*Castratio, onis,* f.; from *castro*, to emasculate, *quia castrando vis libidinis extinguitur.*) 1. In *Surgery*, an operation, by which a testicle is removed from the body.

2. In *Botany*, the removal of the anthera of a flower.

CASTRATUS. One who is castrated.

CASTRE'NSIS. (From *castra*, a camp.) Belonging to a camp: applied to those diseases with which soldiers, encamped in marshy places, are afflicted.

CASTUS. (*Castus*, chaste: so called because the chaste matrons, at the feasts of Ceres, strewed flowers upon their beds and lay upon them.) See *Vitex agnus castus.*

CATA'BASIS. (From καταϐαινω, to descend.) An operation downwards.

CATABI'BASIS. (From καταϐιϐαζω, to cause to descend.) An expulsion of the humours downwards.

CATABLACEU'SIS. (From καταϐλακευω, to be useless.) Hippocrates uses this word to signify carelessness and negligence in the attendance on and administration to the sick.

CATABLE'MA. (From καταϐαλλω, to throw round.) The outermost fillet, which secures the rest of the bandages.

CATABRONCHE'SIS. (From κατα, and βρογχος, the throat; or, καταϐρογχιζω, to swallow.) The act of swallowing.

CATACAU'MA. (From κατακαιω, to burn.) A burn or scald.

CATACAU'SIS. (From κατακαιω, to burn.) A combustion or burning.

CATACECLI'MENUS. (From κατακλινομαι, to lie down.) Keeping the bed, from the violence of a disease.

CATACECRA'MENUS. (From κατακεραννυμι, to reduce to small particles.) Broken into small pieces: formerly applied to fractures.

CATACERA'STICUS. (From κατακεραννυμι, to mix together.) Having the property of obtunding the acrimony of humours, by mixing with them and reducing them.

CATACHLIDE'SIS. (From καταχλιδαω, to indulge in delicacies.) A gluttonous indulgence in sloth and delicacies, to the generation of diseases.

CATACHLOOS. (*us, i.* m.; from κατα, and χλοαω, to make green.) A very green colour, according to Galen.

CATACHRI'SMA. An ointment.

CATACHRI'STON. (From καταχριω, to anoint.) An ointment.

CATA'CLASIS. (From κατακλαω, to break, or distort.) Distortion: applied formerly to the eyelids.

CA'TACLEIS. (From κατα, beneath, and κλεις, the clavicle.) The subclavicle, or first rib, which is placed immediately under the clavicle.

CATACLI'NES. (From κατακλινω, to lie down.) One who, by disease, is fixed to his bed.

CATA'CLISIS. (From κατακλινω, to lie down.) A lying down. Also incurvation.

CATACLY'SMA. (From κατακλυζω, to wash.) A clyster.

CATACLY'SMUS. (From κατακλυζω, to wash.) 1. An embrocation.

2. A dashing of water upon any part.

CATACONESIS. (From κατακοναω, to irrigate.) Irrigation, or the plentiful affusion of water on some part of the body.

CATACORES. (From κατακρεννυμι, to su-

persaturate.) Full: abundant: applied formerly to alvine evacuations, when very bilious.

CATACRE'MNOS. (From *κaτa*, and *κρημνος*, a precipice.) Hippocrates means, by this word, a swollen and inflamed throat, from the exuberance of the parts.

CATACRU'SIS. (From *κaτaκρουω*, to drive back.) A revulsion of humours.

Catadoule'sis. (From *κaτaδουλοω*, to enslave.) The subduing of passions, as in a phrensy, or fever.

CATÆGIZE'SIS. (From *κaτaιγιζω*, to repel.) A revulsion or rushing back of humours, or wind in the intestines.

CATÆONE'SIS. (From *κaτaιονεω*, to irrigate.) Irrigation by a plentiful affusion of liquor on some part of the body.

Cataglyphe. (From *γλυφω*, to cut in wood or metal.) An excavation, hole, or pit. —*Hippocrates.*

CATAG'MA. (From *κaτa*, and *αγω*, to break.) A fracture. Galen says a solution of the bone is called *catagma*, and *elcos* is a solution of the continuity of the flesh: that when it happens to a cartilage, it has no name, though Hippocrates calls it *catagma*.

Catagma'ticus. (From *κaτaγμa*, a fracture.) Catagmatic: promoting the formation of callus.

Catag'oge. (From *κaτaγομαι*, to abide.) The seat or region of a disease or part.

Catagyio'sis. (From *κaτaγυιοω*, to debilitate.) An imbecility and enervation of the strength and limbs.

CATALEPSIS. (*is, is.* f.; from *κaτaλαμβανω*, to seize, to hold.) Catalepsy. Trance. This disease has also been denominated *Catoche, Catochus, Congelatio, Detentio, Encatalepsis* by Hippocrates, *Aphonia* by Antigenes, *Anaudia* by Cælius Aurelianus, *Apprehensio, Oppressio*, and *Comprehensio.* It consists in a total suspension of sensibility and voluntary motion; mostly of mental power; the pulsation of the heart and the breathing continuing; the muscles flexible; the body yielding to and retaining any given position, in which respect it differs chiefly from ecstasy.

It is very difficult to ascertain the causes of this nervous affection: they are mostly some mental excitements, and the state of the habit or idiosyncrasy determines the effect. The countenance is mostly florid, the eyes open, and apparently fixed intently upon an object, but in most cases without perception, though in some cases it is otherwise.

The paroxysm commonly attacks without any previous warning, and closes with sighing. Its duration is from a few hours or minutes to two or three days; and, according to well-established authorities, sometimes for a much longer period. This disease is far from common. Dr. Cullen affirms he never saw an instance of it, except when it was altogether counterfeited, and asserts the same of other practitioners. A critical examination mostly gives proof of a very feeble flutter of the heart, and of some movement of the involuntary organs; for if a clear mirror be applied to the mouth and nostrils, it will generally be found to have a thin vapour on its surface: but even these signs have not always been given, and the disease has been mistaken for real death; and, in countries where the rite of sepulture takes place speedily, it is much to be feared that the unfortunate sufferer has, in a few instances, been buried alive.

The cure of this disease is to be effected by stimulants: no good has resulted from blood-letting, nor means which reduce the nervous influence. The nose and air passages should be besmeared with ammonia and volatiles: the stomach-pump should be passed down the œsophagus, and ammoniated and spirituous stimulants transfused into it. Electricity and voltaism are likely to be serviceable. The body should be kept warm, with a free influx of pure air, and general friction resorted to.

When the paroxysm has passed by, tonics and nervous medicines should be persisted in for a considerable period.

Catalo'ticus. (From *κaτaλοaω*, to grind down.) That which softens and makes smooth the rough edges and crust of cicatrices.

CATA'LYSIS. (*Καταλυσις*: from *καταλυω*, to dissolve or destroy.) It signifies a palsy, or such a resolution as happens before the death of the patient; also that dissolution which constitutes death.

CATAMARA'SMUS. (From *κaτaμαραινω*, to grow thin.) 1. An emaciation of the body.

2. The resolution of tumours.

CATAMASSE'SIS. (From *κaτaμασσομαι*, to manducate.) The grinding of the teeth, and biting of the tongue; common in epilepsy.

CATAME'NIA. (*nia, niorum.* neut. plur.; from *κaτa*, according to, and *μην*, the month.) The monthly discharge from the uterus of females. See *Menstruation.*

Catana'nce. Succory.

Catani'phthis. (From *κaτaνιπτω*, to wash.) Washed, or scoured. Used by Hippocrates of a diarrhœa washed and cleansed by boiled milk.

Catantle'ma. (From *κaτaντλaω*, to pour upon.) A lotion by infusion of water, or medicated fluids.

Catantle'sis. A medicated fluid.

CATAPA'SMA. (*a, atis.* n.: from *καταπασσω*, to sprinkle.) *Catapastum, Conspersio, Epipaston, Pasma, Sympasma, Aspersio, Aspergo.* The ancient Greek physicians meant by this, any dry medicine reduced to powder to be sprinkled on the body. Their various forms and uses may be seen in Paul of Egina, lib. vii. cap. xiii. Those which were valued for their grateful smell were called diapasms. Empasms were used to restrain sweat; and sympasms were of an acrid quality, and used to produce heat.

CATAPAU'SIS. (From *κaτaπαυω*, to rest, or cease.) That rest or cessation from pain which proceeds from the resolution of uneasy tumours.

CATAPE'LTES. (From κατα, against, and πελτη, a shield.) 1. A sling, a granado, or battery.

2. The medicine which heals the wounds and bruises made by such instruments.

CATA'PHORA. (*a, æ.* f.; from καταφερω, to make sleepy.) A preternatural propensity to sleep; a mild lethargy. See *Lethargus.*

Cataphra'cta. (From καταφρασσω, to fortify.) A bandage on the thorax.

CATAPLA'SMA. (*a, atis.* n.; from καταπλασσω, to spread like a plaster.) A poultice.

Cataplasma aceti. Vinegar poultice. This is made by adding vinegar to crumb of bread, or any simple farinaceous flour. It is a good application to bruises and sprains, applied cold.

Cataplasma acetosæ. Sorrel poultice. The leaves are to be beaten in a mortar into a pulp. A good application to scorbutic ulcers.

Cataplasma aeratum. See *Cataplasma fermenti.*

Cataplasma aluminis. This application was formerly used to inflammation of the eyes, which was kept up from weakness of the vessels; it is now seldom used, a solution of alum being mostly substituted.

Cataplasma bynes. Malt poultice. Finely ground malt is to be mixed with thin yeast to the consistence of a poultice, and applied warm. Some surgeons prefer this to the yeast poultice against gangrene.

Cataplasma carbonis. Charcoal poultice. A nasty and unsatisfactory poultice, made by mixing very finely powdered charcoal with linseed, oatmeal, or bread crumb, and warm water. Some put the charcoal only on the surface. It is used to correct the state of ill-conditioned ulcers and destroy their fetor.

Cataplasma cerevisiæ. Strong beer poultice. This is sometimes made with the grounds or dregs of strong London porter, when it can be had, or with that of other strong beer, by stirring in as much oatmeal as is necessary to make it of a good proper consistence, and heating it cautiously in a pipkin or pan. It is considered a good stimulant and antiseptic for sloughing or gangrenous parts. See *Fermentum cerevisiæ.*

Caataplasma conii. Hemlock poultice. ℞. Conii foliorum exsiccatorum ʒj. Aquæ fontanæ, Oij. To be boiled till only a pint remains, when as much linseed meal as necessary is to be added. This is an excellent application to many cancerous and scrophulous ulcers, and other malignant ones; frequently producing great diminution of the pain of such diseases, and improving their appearance. Justamond preferred the fresh herb bruised.

Cataplasma cumini. Take of cumin seeds, one pound; bay berries, the leaves of water germander dried, Virginia snake root, of each three ounces; cloves, one ounce; with honey equal to thrice the weight of the powder formed: of these make a cataplasm. It was formerly called Theriaca Londinensis. This is a warm and stimulating poultice, and was formerly much used as an irritating antiseptic application to gangrenous ulcers, and the like. It is now seldom ordered.

Cataplasma dauci. Carrot poultice. ℞. Radicis dauci recentis, ℔j. Bruise it in a mortar into a pulp. Some, perhaps with reason, recommend the carrots to be first boiled. The carrot poultice is employed as an application to ulcerated cancers, scrophulous sores of an irritable kind, and various inveterate malignant ulcers.

Cataplasma digitalis. Fox-glove poultice. Linseed-meal, oatmeal, or crumb of bread are to be made into the consistence of a poultice, by mixing them with a strong decoction of the leaves of fox-glove. This poultice is said to be more sedative than hemlock, and to allay the pain of irritable sores.

Cataplasma fermenti. Yest cataplasm. Take of flour, a pound; yest, half a pint. Mix and expose to a gentle heat, until the mixture begins to rise. This is a celebrated application in cases of sloughing and mortification.

Cataplasmi fuci. Sea-weed poultice. This is prepared by bruising a quantity of the marine plant, commonly called sea-tang, which is afterwards to be applied by way of a poultice. Its chief use is in cases of scrophula, white swellings, and glandular tumours more especially. When this vegetable cannot be obtained in its recent state, a common poultice of sea-water and oatmeal has been substituted by the late Mr. Hunter, and other surgeons of eminence.

Cataplasma lini. Linseed poultice. ℞. Farinæ lini, ℔ss. Aquæ ferventis, Ojss. The powder, or linseed meal, is to be gradually sprinkled into the water, while they are quickly blended together with a spoon. This is the best and most convenient of all emollient poultices for common cases, and has, in a great measure, superseded the bread and milk one, so much in use formerly.

Cataplasma panis. Bread poultice. This is either made with milk or water. When with milk, it is applied warm, and is made by putting some slices of crumb of stale bread into milk, and letting them gently simmer over a fire, in a pipkin, until they are properly softened. The mass is then to be beat and stirred about with a spoon. A small quantity of lard, or sweet oil, should be spread over it before it is applied. The linseed meal poultice is much better than this as an emollient.

Cataplasma plumbi acetatis. ℞. Liquoris plumbi acetatis, ʒj. Aquæ distill. Oj. Micæ panis, q. s. Misce. Practitioners, who place much confidence in the virtues of lead, often use this poultice in cases of inflammation.

Cataplasma quercus marini. See *Cataplasma fuci.*

Cataplasma sinapeos. See *Cataplasma sinapis.*

Cataplasma sinapis. Mustard cataplasm. Take of mustard seed, linseed, of each pow-

dered half a pound; boiling vinegar, as much as is sufficient. Mix until it acquires the consistence of a cataplasm.

CATAPLE'XIS. (*is, is.* f.; from κατα, and πλησσω, to strike.) A sudden stupefaction, or deprivation of sensation, in any member, or organ, as the eye, &c.

CATAPO'SIS. (From καταπινω, to swallow down.) According to Aretæus, it signifies the instruments of deglutition.

CATAPO'TIUM. (Καταποτιον. *um, ii.* n.; from καταπινω, to swallow down.) A pill. See *Pilula.*

CATAPSY'XIS. (From κατα, and ψυχω, to refrigerate.) A coldness, or chillness, without shivering, either universal, or of some particular part.

CATAPTO'SIS. (From καταπιπτω, to fall down.) A falling down.

1. Such as happens in apoplexy.
2. The falling down of a limb from palsy.

CATAPU'TIA. (*a, æ.* f.; from καταπυθω, to have an ill savour; or from the Italian, *cacapuzza*, which has the same meaning: so named from its fœtid smell.) Spurge.

CATAPUTIA MAJOR. See *Ricinus.*

CATAPUTIA MINOR. See *Euphorbia Lathyris.*

CA'TARACT. (*Cataracta. a, æ.* f.; from καταρασσω, to confound or disturb: because the sense of vision is confounded, if not destroyed.) A disease of the eye. It is a species of obstructed sight, or blindness, arising from an opacity of the crystalline lens, or its capsule, preventing the rays of light passing to the optic nerve. It commonly begins with a dimness of sight; and this generally continues a considerable time before any opacity can be observed in the lens. As the disease advances, the opacity becomes sensible, and the patient imagines there are particles of dust, or motes, upon the eye, or in the air, which are called *muscæ volitantes.* This opacity gradually increases, till the person either becomes entirely blind, or can merely distinguish light from darkness. The disease commonly comes on rapidly, though sometimes its progress is slow and gradual. From a transparent state, it changes to a perfectly white, or light grey colour. In some very rare instances, a black cataract is found. The consistence also varies, being at one time hard, at another entirely dissolved. When the opake lens is either more indurated than in the natural state, or retains a tolerable degree of firmness, the case is termed a *firm* or hard cataract. When the substance of the lens seems to be converted into a whitish or other kind of fluid, lodged in the capsule, the case is denominated a *milky* or fluid cataract. When the substance is of a middling consistence, neither hard nor fluid, but about as consistent as a thick jelly, or curds, the case is named a *soft* or caseous cataract. When the anterior or posterior layer of the crystalline capsule becomes opake, after the lens itself has been removed from this little membraneous sac, by a previous operation, the affection is named a *secondary membraneous cataract.* There are many other distinctions made by authors. Cataract is seldom attended with pain; sometimes, however, every exposure to light creates uneasiness, owing probably to the inflammation at the bottom of the eye. The real cause of cataract is not yet well understood. Numbers of authors consider it as proceeding from a preternatural contraction of the vessels of the lens, arising from some external violence, though more commonly from some internal and occult cause. The cataract is distinguished from gutta serena, by the pupils in the latter being never affected with light, and from no opacity being observed in the lens. It is distinguished from *hypopyon, staphyloma,* or any other disease in the fore part of the eye, by the evident marks which these affections produce, as well as by the pain attending their beginning. But it is difficult to determine when the opacity is in the lens, or in its capsule. If the retina (which is an expansion of the optic nerve in the inside of the eye) be not diseased, vision may, in most cases, be restored, by either depressing the diseased lens, which is termed couching, or by extracting it.

CATARIA. (From *catus*, a cat: so called because cats are fond of it.) See *Nepita cataria.*

CATARRHEU'MA. (*a, atis.* n.; from καταρρεω, to flow from.) A defluxion of humours from the air-passages.

CATARRHE'XIS. (*is, is.* f.; from καταρρηγνυω, to burst out.) A violent and copious eruption or effusion.

1. Joined with κοιλιας, it is a copious evacuation from the belly, and sometimes alone it is of the same signification.
2. Vogel applies it to a discharge of pure blood from the intestines, such as takes place in dysentery.

CATARRHŒCUS. (From καταρρεω, to flow from.) A disease proceeding from a discharge of phlegm. Obsolete.

CATA'RRHOPA. (From καταρρεω, to flow down.) Tending downward: formerly applied to a tubercle or tumour, which pointed downward. Not now used.

CATA'RRHOPOS. (From καταῤῥεπω, to tend backward.) A remission of the disease, or its decline; opposed to the paroxysm. Obsolete.

CATA'RRH. (*Catarrhus, i.* m.; from κατα, which denotes augmented action, and ῥεω, to flow.) *Bronchus. Coryza.* The terms catarrhus, bronchus, and coryza are now considered as synonymous, though formerly otherwise; and hence the following distinctions:—

"Si fluit ad pectus dicatur rheuma *catarrhus;*
Ad fauces *bronchus,* ad nares esto *coryza.*"

Of this complaint there are two species: the one is the common cold in the head or chest; the other, the epidemic which is called Influenza. The symptoms of common catarrh are a sense of fulness in the head, and of

weight over the eyes, which are inflamed and lachrymose. The nostrils are obstructed, and pour forth a thick acrimonious ichor, which excoriates the skin as it descends, accompanied with frequent sneezing. The voice is hoarse, the fauces sore, and the lungs loaded, often producing a troublesome cough.

Its usual cause is suppressed perspiration from cold. There seems, however, to be, in many cases at least, something more than this; for neither cold nor suppressed perspiration will account for every instance of common catarrh. There are few practitioners, perhaps, but have sometimes known persons thus affected who have been bed-ridden from chronic lameness or some other cause, and have had their chamber warmed night and day by a fire. Some ladies always catch a cold in the head on quitting the town for the country; and others on quitting the country for the town. Something must therefore depend on the actual state of the constitution at the moment; and something upon the variable quality of the atmosphere: and a change in both frequently perhaps concurs in producing the affection of a common catarrh.

Where the attack is slight, medical aid is not often sought for, or needed. A few days of domestic repose, in a warm but not a close atmosphere, diluent drinks, with an abstinence from animal food, and vinous or other fermented liquors, a sudorific posset at night, with an additional blanket thrown over the bed to encourage perspiration, usually succeed in carrying off the complaint. But if there be a sense of oppression on the chest, or of fulness in the head, with the ordinary signs of fever, venesection should be had recourse to, and a smart purgative immediately afterwards, while the preceding process is still continued. If the cough should be troublesome at night, it will be best allayed by a dose of Dover's powder, which will take off the irritation, and determine to the surface.

Catarrh is also found occasionally, as a symptom, in measles, small-pox, worms, dentition, and rheumatism.

In the other species, or influenza, the disease is epidemic: the attack is sudden; there is great heaviness over the eyes; and the fever is strikingly depressive. It differs chiefly from the other, in the abruptness of its incursion, the severity of its symptoms, and very generally in the rapidity of its transition. It probably also differs in the nature of its remote cause.

It commences, according to Dr. J. C. Smith, who has accurately given us its progress as it appeared in 1781 and 1782, with the usual catarrhal symptoms, in conjunction with others that are far more distressing to the patient, and often not less alarming to the physician; such as great languor, lowness and oppression at the præcordia; anxiety, with frequent sighing, sickness, and violent headach. The pulse is peculiarly quick and irregular, and at night there is often delirium. The heat of the body is seldom considerable, particularly when compared with the violence of the other symptoms; the skin is moist, with a tendency to profuse sweating; the tongue moist, but white or yellowish. Sometimes there are severe muscular pains, general or local; at other times, erysipelatous patches or efflorescences on different parts of the body. From the onset, for the first twenty-four or forty-eight hours, the symptoms are extremely violent, far beyond the danger or duration of the distemper. For the most part it attacks the healthy and robust: children and old people either escape entirely, or are affected in a slighter manner. Pregnant women, however, are disposed to miscarry, and the flooding is in some cases fatal. Patients also subject to pulmonic complaints, suffer much from the cough, difficulty of breathing, and other peripneumonic symptoms, which occasionally lead on to dissolution.

Such is the general progress of influenza in most of the periods in which it has shown itself. But in every period its symptoms have considerably varied in severity in different individuals. In many instances, they have scarcely exceeded the signs of a common cold; in others, the pleuritic pain has been very acute, or the headach intolerable, shooting up to the vertex with a sense of splitting; the pulse has been a hundred and forty, and often considerably more, in a minute, with incoherency or delirium from the first night. Yet cases of real danger are very few; and the violence of the disease is over frequently in forty-eight hours; sometimes in twenty-four. Those who have suffered, appear to be insusceptible of a second attack during the continuance of the epidemy, though they have no indemnity against the next that may appear. In many cases, however, the general debility induced on the system does not terminate with the catarrh itself, but remains for weeks, perhaps for months afterwards, and is sometimes removed with great difficulty.

The disease has been known and described from the time of Hippocrates to the present day; and is dwelt upon at great length by Sydenham, who regarded it, in the autumn of 1675, as a general cough produced by cold and moist weather, grafted upon the autumnal epidemy, and varying its symptoms.

Influenza, however, has not only occurred in the autumn, but in every season of the year, whether hot, cold, damp, or temperate; and when there has been apparently no other constitutional distemper with which it could unite itself. That it is an epidemy, cannot be doubted for a moment: yet this is to advance but a very little way towards a knowledge of its origin or remote cause; for we have still to enquire into the nature of epidemics, their sources, diversities, and means of diffusion; often, as in the case of spasmodic cholera, in the very teeth of periodical winds and other meteorological phænomena that we might fairly conclude, if we did not know the con-

trary, would irresistibly oppose their progress, or disintegrate their principles, and consequently abolish their power. Sydenham freely confesses his ignorance upon the subject, though he is rather disposed to ascribe them to "some occult and inexplicable changes wrought in the bowels of the earth itself, by which the atmosphere becomes contaminated with certain effluvia, which predispose the bodies of men to some form or other of disease;" while Hippocrates resolves them, with a devotional feeling, into a present divinity, a providential interposition; for such, as Galen informs us, is the actual meaning of his ΤΟ ΘΕΙΟΝ.

An epidemy, however, or state of the atmosphere capable of producing any general disorder, whether originating specially or in the ordinary course of nature, may depend upon an intemperament, or inharmonious combination of the elementary principles of which it consists, or upon some foreign principle accidentally combined with it, and which has, of late years more especially, been called a miasm or contamination. It is possible that both these may be causes of different diseases.

In the disease before us, many writers have endeavoured to trace it to the first of the above causes, and particularly to the atmosphere's being in a state of negative electricity; and M. Weber, fully confiding in this cause, has recommended, somewhat whimsically, the use of socks made of the most powerful non-conductors, as oiled silk, or paper covered with sealing-wax, as a certain prophylactic. Others, without undertaking to determine in what the atmospheric intemperament consists, have regarded it as a mere exciting cause of catarrhs, or, in other words, as merely rendering the body more susceptive of the ordinary causes of this disease, and hence converting a sporadic into a general distemper.

More commonly, however, catarrh, as well as other epidemics, have, in modern times, been contemplated as dependent upon the second of the aërial causes just adverted to, namely, the existence of a specific miasm, or morbid principle of a peculiar kind into the atmosphere, distinct from any change in the combination of its proper elements. There is much, indeed, to support this opinion; for in many cases, as in intermittent and remittent fevers, we can manifestly trace such an origin; and, as contagions and miasms are often identic or nearly so, the former may be brought forward as abundantly confirming the same view.

That the influenza possesses not only an epidemic character, but is dependent on atmospheric influence, is established by such a cloud of well-known proofs, that it is hardly worth while to give examples. In an hospital, containing a hundred and seventy persons, more than a hundred were, on one occasion, attacked within twenty-four hours; and few of the remainder escaped afterwards.

The proofs of communication by personal contagion are not less decisive. "The first," says Dr. Hamilton, describing the influenza of 1782, "who were seized with it at Norwich, were two men lately arrived from London, where it then continued to rage. A serjeant of grenadiers in the 10th regiment of foot, went to London on furlough: the disease then raged in the capital. He returned, in a few days, to St. Albans, affected, and communicated it to the people in whose house he had his billet. This was the first of its appearance there; and from thence it spread rapidly all over the town."

Cullen, in his Synopsis, has followed the more striking returns of influenza from the fourteenth century down to the present times. "In all these instances," says he, "the phænomena have been much the same; and the disease has always been particularly remarkable in this, that it has been the most widely and generally spreading epidemic known. It has seldom appeared in any one country of Europe, without appearing successively in every other part of it." And, in some instances, the infection has passed the Atlantic, with little or no remission of its severity, and attacked Americans, who had not had the slightest intercourse with Europeans.

And hence we are capable of tracing it at sea as well as on land. In the epidemy of 1782, Lord Anson sailed in the month of May with a fleet for the Dutch coast; and Admiral Kempenfelt for that of France. The crews of both fleets were well on sailing; but in the same month both were attacked very generally, and the latter was obliged to return home. The previous state of the air, with respect to any of the sensible qualities of heat, cold, electricity, or damp, seem to have exercised but little power. Influenzas have recurred at every different season, in every state of the barometer, thermometer, and hygrometer.

Thus the influenza of 1762, one of the severest on record, producing effects which continued, in many instances, for two or three years afterwards, was preceded by weather uncommonly warm; while in that of 1767, being the next in rotation, which was also very severe, though productive of less durable mischief to the constitution, the weather was remarkable for being unusually cold. We know nothing of the country from which the disease has at any time taken its rise; but it has frequently seemed to proceed from north to south, though it has occasionally travelled from west to east. That of 1781 and 1782 is said to have originated in China, and to have travelled through Asia into Europe; whence it crossed the Atlantic, and arrived the ensuing year in America. But this assertion wants confirmation. If we allow its materies to depend upon specific miasm floating in the atmosphere, we can only account for its preserving its agency so long, and operating in such distant theatres, by supposing that its particles are with great difficulty dissolved or decomposed in the air,

even when in its purest state, or highest degree of agitation by tempests.

In the remedial treatment, bleeding is rarely required, and, from the debility so soon induced, should be avoided, except in urgent pleuritic pains, which are not common. It was tried copiously by many practitioners in 1782, but they soon reverted to the cautionary track of Sydenham. Quiet, diluent drinks, and the promotion of easy breathing perspiration will usually be found sufficient, if the bowels be kept free from confinement. If the chest be much loaded, an emetic will afford the best relief. And if the cough be troublesome, and the breathing laborious, both which, however, are generally alleviated by an emetic, small doses of ipecacuan, with or without oxymel of squills, will promote an easy expectoration, and take off the sense of oppression. Cullen joined these with opium, and was particularly attached to the use of Dover's powder in all catarrhal affections, asserting that there is no disease in which opium has been found more useful. But it generally agrees better in common catarrhs than in influenza. The subsequent debility may be removed by a free use of the bark, gentle exercise, pure air, cold bathing, and a liberal regimen: which last, indeed, should be continued through the disease itself. The cough, occasionally produced, remains sometimes as a sequel, long after the other symptoms have disappeared: and, in this case, opium with camphire, or the resinous balsams, often affords essential relief, and especially at night; yet it has not been found that even the symptom of a cough has proved any impediment to the use of the bark, or even to that of cold bathing, or been augmented by the practice, as influenza has rarely terminated in phthisis; and, according to Dr. Carmichael Smith, is less disposed to produce this complaint than a common catarrh.

Catarrhus bellinsulanus. The mumps. See *Parotitis.*

Catarrhus suffocativus. See *Croup.*

Catarrhus vesicæ. A discharge of mucus from the bladder, which adheres to the urinal, and is ropy, and often like to what is discharged from the nose in a catarrh. It is a chronic inflammation of the mucous membrane which lines the bladder.

Catarti'smus. (From *καταρτιζω*, to make perfect.) The translation of a bone from a preternatural to its natural situation.—*Galen.*

CATASA'RCA. (From *κατα*, and *σαρξ*, flesh.) See *Anasarca.*

CATASBE'STIS. (From *κατα*, and *σβεννυμι*, to extinguish.) The resolution of tumours without suppuration. Obsolete.

CATASCHA'SMUS. (From *κατασχαζω*, to scarify.) Scarification. Obsolete.

CATASEI'SIS. (From *κατα*, and *σειω*, to shake.) A concussion.

CATASPA'SMA. (From *κατασπαω*, to draw backwards.) A revulsion or retraction of humours, or parts.

CATASTA'GMOS. (From *κατα*, and *σταζω*, to distil.) The name which the Greeks, in the time of Celsus, had for distillation.

CATASTA'LTICUS. (From *καταστελλω*, to restrain, or contract.) Styptic, astringent, repressing.

CATA'STASIS. *Καταστασις.* The constitution, state, or condition of any thing.

Cata'tasis. (From *κατατεινω*, to extend.) In Hippocrates it means the extension of a fractured limb, or a dislocated one, in order to replace it. Also the actual replacing it in a proper situation.

CATA'XIS. (From *καταγω*, to break.) A fracture. Also a division of parts by an instrument.

Cate. See *Acacia catechu.*

CATECHO'MENUS. (From *κατεχω*, to resist.) Resisting and making ineffectual the remedies which have been applied or given.

CA'TECHU. (*Catechu*, indeclinable. It is said that, in the Japanese language, *kate* signifies a tree, and *chu*, juice.) See *Acacia catechu.*

Catechu, extractum. See *Acacia catechu.*

CATEIA'DION. (From *κατα*, and *εια*, a blade of grass.) An instrument mentioned by Aretæus, having at the end a blade of grass, or made like a blade of grass, which was thrust into the nostrils to provoke an hæmorrhage when the head ached.

CATE'LLUS. (Diminutive of *catulus*, a whelp.) 1. A young whelp.

2. A chemical instrument called a cupel, which was formerly in the shape of a dog's head.

CATHÆ'RESIS. (From *καθαιρω*, to take away.) 1. The subtraction or taking away any part or thing from the body.

2. An evacuation.—*Hippocrates.*

3. A consumption of the body, without manifest evacuation.

Cathære'ticus. (From *καθαιρω*, to take away.) Consuming or removing superfluous flesh.

CATHA'RMA. (*a, atis.* n.; from *καθαιρω*, to remove.) An excrement, or humour, purged off from the body.

Catha'rmus. (From *καθαιρω*, to remove.) 1. A purgation of the excrements or humours.

2. A cure by incantation, or the royal touch.

CATHA'RSIS. (*is, eos,* f.; from *καθαιρω*, to take away.) Purgation of the excrements, or humours, either medically or naturally.

CATHA'RTIC. (*Catharticus;* from *καθαιρω*, to purge.) That which, taken internally, or applied externally, increases the number of alvine evacuations. Purgative medicines have received many appellations: *purgantia; catocathartica; catoretica; catoteretica; dejectoria; alviduca.* The different articles referred to this class are divided into five orders of cathartics:—

1. *Stimulating,* as jalap, aloes, bitter apple, and croton oil, which are well calculated to discharge accumulations of serum, and are mostly selected for indolent and phlegmatic habits, and those who are hard to purge.

2. *Refrigerating*, as sulphate of soda, supertartrate of potash, &c. These are better adapted for plethoric habits, and those with an inflammatory diathesis.

3. *Astringent*, as rhubarb and damask roses, which are mostly given to those whose bowels are weak and irritable, and subject to diarrhœa.

4. *Emollient*, as manna, malva, castor oil, and olive oil, which may be given, in preference to other cathartics, to infants and the very aged.

5. *Narcotic*, as tobacco, hyoscyamus, and digitalis. This order is never given but to the very strong and indolent, and to maniacal patients, as their operation is very powerful.

Murray, in his Materia Medica, considers the different cathartics under the two divisions of laxatives and purgatives; the former being mild in their operation, and merely evacuating the contents of the intestines; the latter being more powerful, and even extending their stimulant operation to the neighbouring parts. The following he enumerates among the principal laxatives: — Manna, Cassia fistula, Tamarindus indica, Ricinus communis, Sulphur, Magnesia. Under the head of purgatives, he names Cassia senna, Rheum palmatum, Convolvulus jalapa, Helleborus niger, Bryonia alba, Cucumis colocynthis, Momordica elaterium, Rhamnus catharticus, Aloe perfoliata, Convolvulus scammonia, Gambogia, Submurias hydrargyri, Sulphas magnesiæ, Sulphas sodæ, Sulphas potassæ, Supertartras potassæ, Tartras potassæ, Tartras potassæ et sodæ, Tighlii oleum, Phosphas sodæ, Murias sodæ, Terebinthina veneta, Nicotiana tabacum.

Cathartic, Glauber's salt. See *Sodæ sulphas.*

Cathartic salt. See *Magnesiæ sulphas*, and *Sodæ sulphas.*

CATHARTINE. A substance of a reddish colour, a peculiar smell, and a bitter nauseous taste, soluble in water and alkohol but insoluble in æther; obtained by Lassaigne and Fenuelle from the leaves of senna.

CATHE'DRA. (From καθεζομαι, to sit.) The anus, or rather, the whole of the buttocks, as being the part on which we sit.

CATHERE'TICUS. (From καθαιρω, to remove.) Corrosive. That which, by corrosion, removes superfluous flesh.

CA'THETER. (*Catheterus*, and *catheter, teris.* m.; Καθετηρ, from καθιημι, to thrust into.) A long and hollow tube, that is introduced by surgeons into the urinary bladder, to remove the urine, when the person is unable to pass it. Catheters are either made of silver or a mixture of metals, or of the elastic gum. That for the male urethra is much longer than that for the female, and so curved, if metallic, as to adapt itself to the urethra.

CATHETERI'SMUS. (*us, i.* m.; from καθετηρ, a catheter.) The operation of introducing the catheter.

CATHI'DRYSIS. (From Καθιδρυω, to place together.) The reduction of a fracture, or operation of setting a broken bone.

CA'THMIA. A litharge.

CA'THODOS. (From κατα, and οδος.) A descent of humours.

CATHO'LCEUS. (From κατα, and ολκεω, to draw over.) An oblong fillet, made to draw over and cover the whole bandage of the head.

CATHO'LICON. (*us, i.* m.; from κατα, and ολικος, universal.) A universal medicine: formerly applied to a medicine that was supposed to purge all the humours.

CATHY'PNIA. (From κατα, and υπνος, sleep.) A profound but unhealthy sleep.

CA'TIAS. (From καθιημι, to place in.) An incision knife, formerly used for opening an abscess in the uterus, and for extracting a dead fœtus.

CATI'LLUS. See *Catellus.*

CA'TINUM ALUMEN. A name given to potash.

CA'TINUS. A crucible.

CATKIN. See *Amentum.*

CATLING. A long, narrow, double-edged, sharp-pointed knife.

CA'TMINT. (So called, because cats are very fond of it.) See *Nepeta.*

CATOCATHA'RTIC. (*Catocatharticus*; from κατω, downwards, and καθαιρω, to purge.) Medicines that operate by stool.

CA'TOCHE. (From κατεχω, to detain.) See *Catalepsis.*

CATOCHEI'LUM. (*Catocheilum, i.* n.; from κατω, beneath, and χειλος, the lip.) The lower lip.

CA'TOCHUS. (*us, i.* m; from κατεχω, to detain.) A spasmodic disease, in which the body is rigidly held in an upright posture.

CATOMI'SMUS. (From κατω, below, and ωμος, the shoulder.) By this word, P. Ægineta expresses a method of reducing a luxated shoulder, by raising the patient over the shoulder of a strong man, that, by the weight of the body, the dislocation may be reduced.

CATOPHYLLUM INOPHYLLUM. *Calaba.* The Indian mastich tree. A native of America, where the whole plant is considered as a resolvent and anodyne.

CATO'PSIS. (From κατοπτομαι, to see clearly.) An acute and quick perception. Formerly applied to the acuteness of the faculties which accompanies the latter stages of consumption.

CATO'PTER. (From κατα, and οπτομαι, to see; by metaphor, a probe.) An instrument like what we call the speculum ani.

CATORCHI'TES. (From κατα, and ορχις, the orchis.) A wine in which the orchis root has been infused.

CATORE'TICUS. (From κατω, downwards, and ρεω, to flow.) *Catotereticus, Catotericus.* A medicine which purges by stool.

CATOTERE'TICUS. See *Catoreticus.*

CATOTICUS. (From κατω, below; whence κατωτερος, and κατωτατος, *inferior*, and *infernus.*) Affecting the inferior parts.

CAT'S-EYE. A mineral, much valued as a precious stone, brought from Ceylon.

CATULO'TICUS. (From κατουλοω, to cicatrize.) Having the power to cicatrize.

CATULUS. See *Amentum.*

CATUTRI'PALI. The *Piper longum.*

CAU'CALIS. (*is, is* vel *idis.* f.; from καυκιον, a cup, or from δαυκαλις, the daucus, or carrot.) 1. The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.*

2. Bastard parsley; so named from the shape of its flower.

3. The wild carrot.

CAUCALIS ANTHRISCUS. *Daucus annuus minor.* A common plant in the hedges, of little or no medicinal value.

CAUCALOI'DES. (From *caucalis,* and ειδος, a likeness; from its likeness to the flower of the caucalis.) 1. Like unto the caucalus: applied to some plants.

2. The patella has been so called.

CAU'DA. (*a, æ.* f.; from *cado,* to fall. Because it hangs down behind.) A tail.

1. The tail of animals.

2. An appendage to seeds which resembles a tail; as in the genus *clematis.*

3. The end of the spinal marrow, which resembles the tail of a horse. See *Cauda equina.*

4. A name formerly given to the os coccygis, that being, in tailed animals, the beginning of the tail.

5. A fleshy substance, projecting from the lips of the vagina, and resembling a tail, according to Aëtius.

6. Many herbs are so named, with the affixed name of some animal, the tail of which the herb is supposed to be like; as *cauda equina,* horse-tail; *cauda muris,* mouse-tail, &c.

CAUDA EQUINA. 1. The spinal marrow, at its termination about the second lumbar vertebra, gives off a large number of nerves, which, when unravelled, resemble the horse's tail; hence the name. See *Medulla spinalis.*

2. See *Hippuris vulgaris.*

CAUDA SEMINIS. The tail, or elongated, generally feathery appendage to a seed, formed of the permanent style. It is simple, in *Geranium zonale;* hairy, in *Clematis* and *Pulsatilla;* and geniculate, in *Tormentilla.*

CAUDA'TIO. (From *cauda,* a tail.) An elongation of the clitoris.

CAUDATUS. (From *cauda,* a tail.) Caudate; tailed: applied very generally, and especially to seeds which have a tail-like appendage; as those of the *Clematis vitalba,* and *Anemone sulphurea.*

CAUDEX. (*ex, icis.* m.) The stem or trunk, or the body of the root of a plant. See *Radix.*

CAUL. 1. Th[illegible] English name for the omentum. See *O[illegible]tum.*

2. The amnio[illegible] which is sometimes torn by the child's [illegible] passing from the uterus, and comes [illegible] it wholly separated from the p[illegible]

CAULE'D[illegible]. (From καυλος, a stalk.) A transverse fracture, when the bone is broken, like the stump of a tree.

CAULES'CENS. Having a stem.

CAU'LIFLOWER. A species of brassica, the flower of which is cut before the fructification expands. The observations which have been made concerning cabbages are applicable here. Cauliflower is, however, a far more delicious vegetable. See *Brassica capitata.*

CAULINE. (*Caulinus,* from *caulis,* the stem.) Of or belonging to the stem. Leaves and peduncles are so called, which grow on, or come immediately from, the stem.

CAU'LIS. (*is, is.* m. Καυλος; from *kalab,* a Chaldean word.) The stalk or stem of herbaceous plants. The characters of the stalk are, that it is rarely ligneous, and lives but one or two years in the natural state of the plant. A plant is said to be

Caulescent, when furnished with a stem.

Acauline, when without a stem; as in *Carlina acaulis.*

From its *duration,* the caulis or stem is distinguished into,

1. *Herbaceous,* which perishes every year; as *Melissa officinalis.*

2. *Suffruticose,* which perishes halfway down every year; as *Cheiranthus incanus.*

3. *Fruticose,* shrubby, having many stems, which do not perish in the winter; as *Melissa fruticosa.*

4. *Arboreal;* as the trunk of trees.

From the *substance,* into,

1. *Fistulose,* hollow internally; as in *Anethum graveolens,* and *Allium fistulosum.*

2. *Loculamentose,* hollow and divided into cells; as in *Angelica, Archangelica,* and *Phellandrum aquaticum.*

3. *Inane,* or *medullary,* empty or pithy; as in *Sambucus nigra.*

4. *Solid;* as in *Mentha* and *Melissa.*

5. *Ligneous,* woody; as *Prunus spinosa.*

6. *Carnose,* or fleshy; as, in *Sedum arboreum,* and *Stapelia hirsuta.*

7. *Pulpous,* pulpy; as in *Mesembryanthemum crystallinum.*

8. *Fibrose,* separable into long fibres; as *Cocos nucifera.*

9. *Succous,* full of juice; as in the *Euphorbias,* and *Chelidonium majus.*

From the difference of the *surface,* the *caulis* is said to be,

1. *Glaber,* or *lævis,* smooth, without any hairiness, or roughness, or inequality; as *Lepedium latifolium.*

2. *Scaber,* or *asper,* when it has hard inequalities; as in *Galium aperine,* and *Lithospermum arvense.*

3. *Suberose,* corky; as *Passiflora suberosa,* and *Quercus suber.*

4. *Rimose,* cracky; as in *Ulmus campestris.*

5. *Tuberculate,* with rough nobs; as in *Cissus tuberculata.*

6. *Tunicate,* the cuticle peeling off spontaneously in large portions; as in *Betula alba,* and some of the *Spiræas.*

7. *Striate,* having superficial longitudinal lines; as in *Chærophyllum sylvestre, Aster sibiricus,* and *Daphne mezereon.*

8. *Sulcate*, furrowed, fluted, when longitudinally indented with long and deep hollows; as in *Celosia coccynea, Selinum carvifolia, Pimpinella sanguisarba, Doronicum pardalianches.*

9. *Perfoliate*; as in *Bupleurum perfoliatum.*

The *figure* affords the following distinctions: —

1. *Caulis teres*, or *cylindrical*, round, without angles; as *Sinapis arvensis.*

2. *Semiteres*, half-rounded, flat on one side; as *Hyacinthus orientalis, Allium descendens.*

3. *Compressed*, which implies that two sides of the stem are flat, and approach each other; as in *Poa compressa, Lathyrus latifolius, Pancratium declinatum.*

4. *Anceps*, two-edged; as *Iris graminea, Hypericum androsemum.*

5. *Angulate*, presenting several acute angles in its circumference.

a. *Triangulate*, three-cornered; as in *Cactus triangularis.*

b. *Quadrangulate*, four-cornered; as *Cactus teragonus.*

c. *Quinqueangulate*; as in *Cactus pentagonus.*

d. *Hexangulate*, six-cornered; as *Cactus hexagonus.*

e. *Multangulate*, many-cornered; as *Cactus cereus.*

6. *Obtusangulate*, obtuse-angled; as in *Scrophularia nodosa.*

7. *Acutangulate*, acute-angled; as in *Scrophularia aquatica.*

8. *Triquetral*, three-sided, when there are three flat sides, forming acute angles; as *Hedysarum triquetrum, Viola mirabilis, Carex acuta.*

9. *Tetraquetral*, four-sided; as in *Hypericum quadrangulare, Monarda fistulosa, Mentha officinalis.*

10. *Membranaceous*, leaf-like; as in *Cactus phyllanthus.*

11. *Alate*, when the edges or angles expand into leaf-like borders; as in *Onopordium acanthium*, and *Lathyrus latifolius.*

12. *Articulate*, jointed; as *Cactus flagelliformis*, and *Lathyrus sylvestris.*

13. *Nodose*, knotty, divided at intervals by swellings; as in *Scandix nodosa, Geranium nodosum.*

14. *Enodus*, without knot.

From the *direction*, the caulis is,

15. *Rectus*, erect, when it ascends almost perpendicularly; as the firs, *Chenopodium scoparium*, &c.

16. *Strictus*, straight, perfectly perpendicular; as *Alcea rosea.*

17. *Obliquus*, oblique; as the *Solidago mexicana.*

18. *Adscendens*, ascending, when its lower portion forms a curve, the convexity of which is towards the earth, or rests upon it, and the summit rises; as exemplified in many grasses, *Trifolium pratense, Hedysarum onobrychis.*

19. *Descendens*, or *Declinatus*, the reverse of the former, forming an arch, towards the ground; as in *Pancratium declinatum, Ficus carica.*

20. *Nutans*, or *cernuus*, nodding, when bent towards the summit; as *Polygonatum multiflora.*

21. *Procumbens*, or *Prostatus*, lying on the earth; as *Veronica officinalis.*

22. *Decumbens*, rising a little, and returning to the earth; as *Thymus serphyllum.*

23. *Repens*, creeping and sending radicles into the ground; as *Trifolium repens*, and *Gnaphalium repens.*

24. *Flexuosus*, zigzag; as in *Celastrus buxifolius*, and *Solidago flexicaulis.*

25. *Radicans*, sending fibres which take root in the earth; as *Ficus indica.*

26. *Sarmentosus*, trailing, or sending off a runner, which fixes on neighbouring bodies; as the *Hedera helix.*

27. *Stoloniferus*, sending off radicating stolos; as *Agrostis stolonifera*, and *Fragaria vesca.*

28. *Scandens*, climbing, furnished with tendrils; as *Solanum dulcamara, Cobœa scandens.*

29. *Volubilis*, twining, winding itself spirally round any other plant or body.

a. *Dextrorsum*, when from right to left; as *Phaseolus multiflorus*, and *Convolvulus.*

b. *Sinistrorsum*, in the opposite direction, or following the apparent motion of the sun; as the *Lonicera pericleminum*, and *Humulus lupulus.*

30. *Laxus*, bent by the lightest wind; as *Secale sereale*, and *Juncus bufonius.*

31. *Rigidus*, breaking when lightly bent; as *Boerhaavia scandens.*

When *clothed* with any kind of appendage, the stem is designated by a term expressive of this; thus,

1. *Caulis foliosus*, when leafy; as in *Melissa officinalis.*

2. *Aphyllus*, when without leaves; as *Asphodelus fistulosus.*

3. *Squamosus*, scaly; as the *Orobanche major.*

4. *Stipulatus*, when furnished with stipulæ; as *Cystus helianthemum*, and *Geranium terebinthinaceum.*

5. *Imbricatus*, tiled or covered with little leaves or scales; as *Crassula imbricata, Aloe viscosa.*

6. *Vaginatus*, sheathed, embraced by the base of a leaf as by a sheath; as *Canna indica, Arundo donax.*

7. *Bulbiferus*, bulb-bearing, when studded with bulbs in the axilla of the leaves; as *Lilium bulbiferum.*

8. *Nudus*, naked, without leaf, scale, or other covering; as *Cuscuta europea.*

From its mode of *branching*, into,

1. *Simplex*, having few branches; as *Campanula perfoliata, Verbascum thapsus.*

2. *Simplicissimus*, without branches; as *Orobanche americana* and *major, Campanula barbata.*

3. *Prolifer*, giving off branches only from the tops of the former; as the *Dracena draco.*

4. *Dichotomus*, forked, always divided into pairs; as in *Horanthus europæus*, and *Valeriana locusta.*

5. *Ramosus*, branched; as *Rosmarinus officinalis.*

6. *Ramosissimus*, having many branches; as *Chenopodium scoparia, Ulmus, Grossularia,* &c.

7. *Paniculatus*, paniculate; as in *Crambe tataria.*

From the *pubescence* and *armature*, or defences, into,

1. *Spinosus*, when furnished with sharp spines; as *Prunus spinosa*, and *Mespilus oxyacantha.*

2. *Aculeatus*, prickly, when covered with sharp-pointed bodies; as *Rosa centifolia* and *eleganterea.*

3. *Cetaceus*, bristly, when the armature consists of brushes of minute bristles; as *Cactus flagelliformis.*

4. *Ramentaceus*, ramentaceous; as in *Erica ramentacea.*

5. *Pilosus*, hairy, the pubescence consisting of long hairs; as *Hieraceum pilocella, Salvia pratensis.*

6. *Muricatus*, or *hispidus*, when the hairs are stiff or bristly; as *Borago officinalis*, and *Echium vulgare.*

7. *Tomentosus*, downy, soft to the touch, like down; as *Verbascum thapsus*, and *Geranium rotundifolium.*

8. *Villosus*, shaggy; as *Stachys germanica*, and *Veronica villosa.*

9. *Lanatus*, woolly, when the hairs are long and matted; as in *Stachys lanata*, and *Ballote lanata.*

10. *Sericus*, silky, when the hairs are shining and silky.

Instead of pubescence, the covering is in some instances either a dry powdery, or a moist, excretion; and hence, the stem is denominated either,

1. *Incanus*, or *pruinosus*, when covered with a fine white dust; as the *Atriplex portulacoides.*

2. *Farinosus*, mealy; as the *Primula farinosa.*

3. *Glaucus*, of a sea-green colour; as *Ricinus officinalis.*

4. *Viscidus*, viscid, covered with a resinous exudation; as *Siline viscosa.*

5. *Glutinosus*, glutinous, when the exudation is adhesive and soluble in water; as in *Primula glutinosa.*

The primary division of a stem is into *lateral stems* or *branches.* These are variously denominated,

From their *situation*, into,

1. *Opposite*, when one branch stands on the opposite side of the stem to another, and their bases are nearly on the same plane; as in *Mentha arvensis.*

2. *Alternate*, one opposite to another, alternately; as *Althæa officinalis.*

3. *Verticillate*, when more than two proceed from a centre, like the spokes of a wheel; as *Pinus abies.*

4. *Scattered*, when given off from the stem in any indeterminate manner.

From their *direction*, the branches, or rami, are termed,

1. *Rami patentes*, spreading, when the angle formed by the branch and the upper part of the stem is obtuse; as in *Galium mollugo*, and *Cestus italicus.*

2. *Patentissimi*, proceeding at a right angle from the stem, or horizontally; as *Ammania ramosior*, and *Asparagus officinalis.*

3. *Brachiati*, brachiate, spread in four directions, crossing each other alternately in pairs; as *Syringa vulgaris*, and *Panisteria brachiata.*

4. *Deflexi*, bending downward from the stem, in an arched or curved direction; as *Pinus larix.*

5. *Reflexi*, hanging almost perpendicularly from the stem; as *Salix babylonica.*

6. *Retroflexi*, turned backward; as in *Solanum dulcamara.*

7. *Introflexi*, bent inward, when the tops bend towards the stem; as in *Populus dilatata.*

8. *Fastigiati*, when the tops of the branches, from whatever part of the stem they spring, rise nearly to the same height; as in *Chrysanthemum corymbosum*, and *Dianthus barbatus.*

9. *Virgati*, weak and long; as *Salix viminalis.*

10. *Appressi*, approximated, when nearly parallel and close to the stem; as *Genista tinctoria.*

11. *Fulcrati*, supported or propped, when they project nearly horizontally, and give out root-like shoots from the under side, which, extending until they reach the ground, take root, and serve as props to the branches; as in the banyan tree, or *Ficus religiosus.*

Caulis florida. Cauliflower.

Caulo'des. (From καυλος, a stem.) The white or green cabbage.

Caulo'tom. (From καυλος, a stem; because it grows upon a stalk.) A name given to the beet.

CAU'MA. (*a, atis.* n. Καυμα, heat; from καιω, to burn.) The heat of the body in a fever.

2. The heat of the atmosphere, in a fever.

3. An inflammatory fever.

Cau'nga. A name of the areca.

CAUSE. (*Causa, æ.* f.) See *Ætiology.*

CAU'SIS. (From καιω, to burn.) A burn; or, rather, the act of combustion, or burning.

CAUSO'DES. (From καιω, to burn.) A burning fever. — *Celsus.*

CAUSO'MA. (*a, atis.* n.; from καιω, to burn.) An ardent or burning heat and inflammation. — *Hippocrates.*

CAUSTIC. See *Causticum.*

Caustic alkali. A pure alkali. See *Alkali.*

Caustic barley. See *Cevadilla.*

Caustic, lunar. See *Argenti nitras.*

Caustic volatile alkali. See *Ammonia.*

CAU'STICUM. (*um, i.* n.; from καιω, to burn: because it always produces a burning sensation.) A caustic. A substance which has so strong a tendency to combine with organised substances, as to destroy their texture.

Causticum americanum. See *Veratrum sabadilla.*

Causticum antimoniale. Muriate of antimony.

Causticum arsenicale. See *Arsenical caustic.*

Causticum commune fortius. See *Potassa cum calce.*

Causticum lunare. See *Argenti nitras.*

CAU'SUS. (*us, i.* m.; from καιω, to burn.) A highly ardent fever. — *Hippocrates.*

CAUTERIZATION. (*Cauterizatio;* from *cauterium*, the cautery.) The act of applying the cautery.

CAUTERY. (*Cauterium, ii.* n.; from καιω, to burn.) Cauteries were divided, by the ancients, into *actual* and *potential;* but the term is now given only to the red-hot iron, or *actual cautery,* formerly the only means of preventing hæmorrhages from divided arteries, till the invention of the ligature. *Potential* cautery was the name by which kali purum, or potash, was distinguished in former dispensatories. See *Causticum.*

Ca'va vena. (This vein is said to have been so denominated from its being large and hollow. See *Vena Cava.*

CAVE'RNA. (*a, æ.* f.; from *cavus*, hollow.) A cavern: applied by some writers to the pudendum muliebre.

CAVIARE. *Caviarium.* A food made of the hard roes of the *acipenser sturio*, or sturgeon, formed into a soft mass, or into cakes, and much esteemed by the Russians.

Cavi'cula. (Diminutive of *cavilla.*) See *Cavilla.*

Cavi'lla. (From *cavus*, hollow.) The ankle, or hollow of the foot.

CA'VITY. (*Cavitas, atis.* f.; from *cavus*, hollow.) 1. Any cavity, or hollowness

2. The auricle of the heart was formerly called *cavitas innominata*, the hollow without a name.

CAVUS. Hollow: applied in the several departments of natural history. 1. The name of a vein, *vena cava.*

2. Applied to the roots and stems of plants; as that of the *Fumaria cava*, the stem of *Triticum*, &c.

Cawk. A term by which the miners distinguish the opake specimens of sulphate of barytes.

Cayenne pepper. See *Capsicum.*

Cazabi. See *Jatropha.*

CEANO'THUS. (*us, i.* m.; from κεανωθος, quia κεει ανωθεν, because it pricks at the extreme part.) 1. A genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The *Sirratula arvensis.*

Ceanothus americanus. *Celastrus; Celastus.* Some noted Indians depend more on this plant, than on the lobelia, for the cure of syphilis, and use it in the same manner as lobelia.

Cea'sma. (From κεω, to split, or divide.) *Ceasmus.* A fissure, or fragment.

Ce'ber. (Arabian.) The Lignum aloes. Also the capparis.

Cebipi'ra. (Indian.) A tree which grows in Brazil, decoctions of the bark of which are used in baths and fomentations, to relieve pains in the limbs, and cutaneous diseases.

Cecis. (From κηκιω, to spring: so called because it springs from the tree.) The oak-gall.

CE'DAR. See *Pinus cedrus.*

Ce'dma. (From κεδαω, to disperse.) A defluxion, or rheumatic affection, of the parts about the hips.

Cedrinum lignum. See *Pinus cedrus.*

CEDRINUS. Appertaining to the cedar.

Cedri'tes. (From κεδρος, the cedar-tree.) Wine in which the resin which distils from the cedar-tree has been steeped.

CE'DRIUM. 1. Cedar, or cedar-tree.

2. Common tar, in old writings.

Cedrome'la. The citron.

Cedrone'lla. Turkey baum.

CEDRO'STIS. (*is, is.* f.; from κεδρος, the cedar-tree.) The white bryony, which smells like the cedar. See *Bryonia alba.*

CE'DRUS. (*us, i.* f.; from *Kedron*, a valley where this tree grows abundantly.) See *Pinus cedrus.*

Cedrus americana. The arbor vitæ.

Cedrus baccifera. The savine.

Cei'ria. (From κειρω, to abrade.) The tape-worm; so called from its excoriating and abrading the intestines.

CE'LANDINE. See *Chelidonium.*

Cela'strus. (From κελα, a dart, which it represents.) See *Ceanothus americanus.*

Cela'stus. See *Ceanothus americanus.*

CE'LE. (From κηλη.) A tumour caused by the protrusion of any soft part. Hence the compound terms *enteocele, epiplocele,* &c.

CE'LERY. See *Apium graveolens.*

CELESTINE. (So called from its occasional delicate blue colour.) A native sulphate of strontites. See *Heavy spar.*

Ce'lis. (From καιω, to burn.) A spot or blemish upon the skin, particularly that which is occasioned by a burn.

CELL. *Cella.* See *Cellula,* and *Loculamentum.*

CE'LLULA. (*a, æ.* f.; diminutive of *cella*, a cell.) A little cell, or cavity.

Cellulæ mastoideæ. See *Temporal bones.*

CE'LLULAR. *Cellularis.* Having little cells.

Cellular membrane. See *Membrana.*

Cellular texture. See *Membrana.*

Cellular tissue. See *Membrana.*

Cellular web. See *Membrana.*

CELOTO'MIA. (*a, æ.* f.; from κηλη, hernia, and τεμνω, to cut.) The operation for a strangulated hernia, by cutting.

CE'LSA. A term of Paracelsus, to signify what is called the live blood in a particular part.

CE'LSUS, AURELIUS CORNELIUS. It is commonly supposed that this learned and esteemed ancient author was a Roman, of the Cornelian family, born towards the end of the reign of Augustus, and still living in the time of Caligula. But these points are not established upon certain testimony, and it is even disputed whether he practised medicine; though his perfect acquaintance with the doctrines of his predecessors, his accurate descriptions of diseases, and his judicious rules of treatment, appear to leave little room for doubt on that head. At any rate, his eight books, *De Medicinâ*, have gained him deserved celebrity in modern times, containing a large fund of valuable information, and detailed in remarkably elegant and concise language. In surgery, particularly, he has been greatly admired, for the methods of practice laid down, and for describing several operations as they are still performed. There have been numerous editions of his work, and translations of it into the several modern languages.

CEMENT. Chemists call by this name whatever they employ to unite or cement things together; as lutes, glues, solders of every kind.

CEMENTATION. A chemical process, which consists in surrounding a body in the solid state with the powder of some other bodies, and exposing the whole for a time, in a closed vessel, to a degree of heat not sufficient to fuse the contents. Thus iron is converted into steel by cementation with charcoal; green bottle glass is converted into porcelain by cementation with sand, &c.

CEME'NTERIUM. A crucible.

CE'NCHRAMIS. (From κεγχρος, millet.) A grain or seed of the fig.

CE'NCHRIUS. A species of herpes that resembles κεγχρος, or millet.

CENEANGEI'A. (From κενος, empty, and αγγος, a vessel.) See *Keneangeia.*

CENI'GDAM. *Ceniplam. Cenigotam. Cenipolam.* An instrument anciently used for opening the head in epilepsies.

CENIOTE'MIUM. A purging remedy, formerly of use in the venereal disease, supposed to be mercurial.

CENO'SIS. (From κενος, empty.) Evacuation: a general evacuation.

CENOTICUS. (From κενωσις, *evacuatio, exinanitio,* emptiness.) Emptiness.

CENTAU'REA. (*ea, æ.* f.; so called from *Chiron,* the centaur, who is said to have employed one of its species to cure himself of a wound accidentally received, by letting one of the arrows of Hercules fall upon his foot.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia frustanea.*

CENTAUREA BEHEN. The true white behen of the ancients. The officinal *behen album. Jacea orientalis patula. Raphonticoides lutea.* The root possesses astringent virtues.

CENTAUREA BENEDICTA. The systematic name of the blessed or holy thistle: called also, *Carduus benedictus* and *Cnicus sylvestris.*

Centaurea benedicta — calycibus duplicato-spinosis lanatis involucratis, foliis semi-decurrentibus denticulato-spinosis of Linnæus. This exotic plant, a native of Spain, and some of the Archipelago islands, obtained the name of Benedictus, from its being supposed to possess extraordinary medicinal virtues. In loss of appetite, where the stomach was injured by irregularities, its good effects have been frequently experienced. It is a powerful bitter tonic and astringent. Bergius considers it as antacid, corroborant, stomachic, sudorific, diuretic, and eccoprotic. Camomile flowers are now generally substituted for the *carduus benedictus,* and are thought to be of at least equal value.

CENTAUREA CALCITRAPA. The systematic name of the common star-thistle, or Star-knapweed. Called also, *Calcitrapa, Carduus stellatus,* and *Jacea ramosissima, stellata,* and *rupina.* The plant thus called in the pharmacopœias, is the *Centaurea — calycibus subduplicato-spinosis, sessilibus; foliis pinnatifidis, linearibus dentatis; caule piloso,* of Linnæus, every part of which is bitter. The juice, or extract, or infusion, is said to cure intermittents; and the bark of the root, and the seeds, have been recommended in nephritic disorders, and in suppression of urine. It scarcely differs, in its effects, from other bitters, and is now little used.

CENTAUREA CENTAURIUM. The greater centaury; also named, *Rhoponticum vulgare, Centaurium magnum,* and *Centaurium majus.* The root of this plant was formerly used as an aperient and corroborant, in alvine fluxes. It is now totally discarded from the Materia Medica of this country.

CENTAUREA CYANUS. The systematic name of the blue-bottle, or corn-flower plant. *Cyanus* of the pharmacopœias. The flowers of this plant, *Centaurea — calycibus serratis; foliis linearibus, integerrimis, infimis dentatis,* of Linnæus, were formerly in frequent use; but their antiphlogistic, antispasmodic, cordial, aperient, diuretic, and other properties, are now, with great propriety, forgotten.

CENTAUREA SOLSTITIALIS. St. Barnaby's thistle: also named, *Calcitrapa officinalis, Carduus stellatus luteus, Carduus solstitialis, Jacea stellata, Jacea lutea capite spinoso minori,* and *Leucanthe veterum.* It is commended as an anticteric, anticachectic, and lithontriptic, but is, in reality, only a weak tonic.

CENTAURII CACUMINA. See *Chironia centaurium.*

CENTAURIOI'DES. (From κενταυριον, and ειδος, resemblance.) See *Gratiola officinalis.*

CENTAU'RIUM. (*um, ii.* n.; from *κενταυρος*, a centaur: so called, because it was feigned that Chiron cured Hercules's foot, which he had wounded with a poisonous arrow, with it.) Centaury. See *Chironia centaurium.*

Centaurium magnum. See *Centaurea centaurium.*

Centaurium majus. See *Centaurea centaurium.*

Centaurium minus. See *Chironia centaurium.*

Centaurium parvum. See *Chironia centaurium.*

CENTAU'RY. See *Chironia.*

CENTIMO'RBIA. (*a, æ.* f.; from *centum*, a hundred, and *morbus*, a disease: so named, from its supposed efficacy in the cure of a multitude of disorders.) The *Lysimachia nummularia*, or moneywort.

Centinervia. (From *centum*, and *nervus*, a string; so called from the many ribs upon its leaf.) See *Plantago.*

CENTINO'DIA. See *Centumnodia.*

CENTI'PES. (*es, edis.*; from *centum*, a hundred, and *pes*, a foot: so named from the multitude of its feet.) See *Oniscus asellus.*

Centra'tio. (From *centrum*, a centre.) The concentration and affinity of certain substances to each other. Paracelsus expresses by it the degenerating of a saline principle, and contracting a corrosive and exulcerating quality. Hence *centrum salis* is said to be the principle and cause of ulcers.

Ce'ntrium. (From *κεντεω*, to prick.) A plaster recommended by Galen against stitches and pains in the side.

CE'NTRUM. (From *κεντεω*, to point or prick.) 1. The middle point of a circle.

2. In *Chemistry*, the residence or foundation of matter.

3. In *Medicine*, the point in which the virtue resides.

4. In *Anatomy*, the middle point of some parts, as *centrum nerveum*, the middle or tendinous part of the diaphragm.

Centrum nerveum. See *Diaphragm.*

Centrum ovale. When the two hemispheres of the brain are removed on a line with a level of the *corpus callosum*, the internal medullary part presents a somewhat oval centre, which is called *centrum ovale.* Vieussenius supposed all the medullary fibres met at this place.

Centrum tendinosum. See *Diaphragm.*

CENTUMNO'DIA. (*a, æ.* f.; from *centum*, a hundred, and *nodus*, a knot: so called from its many knots or joints.) *Centinodia.* See *Polygonum aviculare.*

CENTU'NCULUS. The name, in some writings, of the *Alsine media*, or common chickweed.

CE'PA. (*a, æ.* f.; from *κηπος*, a wool-card, from the likeness of its roots.) See *Allium cepa.*

Cepæ'a. A species of onion.

CEPHALÆ'A. (From *κεφαλη*, the head.)

1. The flesh of the head which covers the skull.

2. A headach of some authors.

CEPHA'LALGIA. (*a, æ.* f.; from *κεφαλη*, the head, and *αλγος*, pain.) See *Headach.*

Cephala'rtic. (From *κεφαλη*, the head, and *αρτιζω*, to make pure.) Having the property of purging the head.

Cephalarticus. (From *κεφαλη*, the head, and *αρτιζω*, to make clear.) A medicine which purges the head.

CE'PHALE. Κεφαλη. The head.

CEPHALIC. (*Cephalicus.* From *κεφαλη*, the head.) Pertaining to the head.

1. In *Pharmacy*, a variety of external and internal medicines are so called, as being adapted for the cure of disorders of the head. Of this class are the snuffs, which produce a discharge from the mucous membrane of the nose, &c.

2. In *Anatomy*, applied to several parts on the head, and to a vein of the arm which, it was supposed, went to the head.

Cephalic vein. (*Vena cephalica*; so called because the head was supposed to be relieved by opening it.) The anterior or outermost vein of the arm, that receives the cephalic of the thumb.

Cephalic powder. See *Pulvis cephalicus.*

CEPHALI'TIS. (*tis, tidis.* f.; from *κεφαλη*, the head.) Inflammation of the brain and its membranes. This disease, described by Cullen and many others under the name of *Phrenitis*, is also called *Phrenesis*; *Phrenetiasis*; *Phrenismus*; *Encephalitis*; *Sphacelismus*; and *Cephalalgia inflammatoria*; and by the Arabians, *karabitus.* It is characterised by strong fever, violent headach, redness of the face and eyes, impatience of light and noise, watchfulness, and furious delirium. Cephalitis often makes its attacks with a sense of fulness in the head, flushing of the countenance, and redness of the eyes, the pulse being full, but in other respects natural. As these symptoms increase, the patient becomes restless, his sleep is disturbed, or wholly forsakes him. It sometimes comes on, as in the epidemic of which Saalman gives an account, with pain, or a peculiar sense of uneasiness of the head, back, loins, and joints; in some cases, with tremor of the limbs, and intolerable pains of the hands, feet, and legs. It now and then attacks with stupor and rigidity of the whole body, sometimes with anxiety and a sense of tension referred to the breast, often accompanied with palpitation of the heart. Sometimes nausea, and a painful sense of weight in the stomach, are among the earliest symptoms. In other cases, the patient is attacked with vomiting, or complains of the heartburn, and griping pains in the bowels. When the intimate connection which subsists between the brain and every part of the system is considered, the variety of the symptoms attending the commencement of phrenitis is not so surprising,

nor that the stomach in particular should suffer, which so remarkably sympathises with the brain. These symptoms assist in forming the diagnosis between phrenitis and synocha. The pain of the head soon becomes more considerable, and sometimes very acute. "If the meninges," says Dr. Fordyce, "are affected, the pain is acute; if the substance only, obtuse, and sometimes but just sensible." And Dr. Cullen remarks, "I am here, as in other analogous cases, of opinion, that the symptoms above mentioned of an acute inflammation, always mark inflammations of membraneous parts, and that an inflammation of parenchyma, or substance of viscera, exhibits, at least commonly, a more chronic inflammation."

The seat of the pain is various: sometimes it seems to occupy the whole head; sometimes, although more circumscribed, it is deep-seated and ill-defined. In other cases, it is felt principally in the forehead or occiput. The redness of the face and eyes generally increases with the pain, and there is often a sense of heat and throbbing in the head, the countenance acquiring a peculiar fierceness. These symptoms, for the most part, do not last long before the patient begins to talk incoherently, and to show other marks of delirium. Sometimes, however, Saalman observes, delirium did not come on till the fifth, sixth, or seventh day. The delirium gradually increases, till it often arrives at a state of phrensy. The face becomes turgid, the eyes stare, and seem as if bursting from their sockets, tears, and sometimes even blood, flowing from them; the patient, in many cases, resembling a furious maniac, from whom it is often impossible to distinguish him, except by the shorter duration of his complaint. The delirium assists in distinguishing phrenitis and synocha, as it is not a common symptom in the latter. When delirium does attend synocha, however, it is of the same kind as in phrenitis.

We should, *à priori*, expect in cephalitis considerable derangement in the different organs of sense, which so immediately depend on the state of the brain. The eyes are incapable of bearing the light, and false vision, particularly that termed *muscæ volitantes*, and flashes of light seeming to dart before the eyes, are frequent symptoms. The hearing is often so acute, that the least noise is intolerable: sometimes, on the other hand, the patient becomes deaf; and the deafness, Saalman observes, and morbid acuteness of hearing, sometimes alternate. Affections of the smell, taste, and touch are less observable.

As the organs of sense are not frequently deranged in synocha, the foregoing symptoms farther assist the diagnosis between this complaint and phrenitis.

The pulse is not always so much disturbed at an earlier period, as we should expect from the violence of the other symptoms, compared with what we observe in idiopathic fevers. When this circumstance is distinctly marked, it forms, perhaps, the best diagnosis between phrenitis and synocha, and gives to phrenitis more of the appearance of mania. In many cases, however, the fever runs as high as the delirium: then the case often almost exactly resembles a case of violent synocha, from which it is the more difficult to distinguish it if the pulse be full and strong. In general, however, the hardness is more remarkable than in synocha, and in many cases the pulse is small and hard, which may be regarded as one of the best diagnostics between the two complaints, the pulse in synocha being always strong and full. In cephalitis it is sometimes, though rarely, intermitting. The respiration is generally deep and slow, sometimes difficult, now and then interrupted with hiccough, seldom hurried and frequent; a very unfavourable symptom. In many of the cases mentioned by Saalman, pneumonia supervened.

The deglutition is often difficult, sometimes convulsive. The stomach is frequently oppressed with bile, which is an unfavourable symptom; and complete jaundice, the skin and urine being tinged yellow, sometimes supervenes. Worms in the stomach and bowels are also frequent attendants on phrenitis, and, there is reason to believe, may have a share in producing it. The hydrocephalus internus, which is more allied to phrenitis than dropsy of the brain, properly so called, seems often, in part at least, to arise from derangement of the primæ viæ, particularly from worms. We cannot otherwise account for the frequent occurrence of these complaints.

Instead of a superabundance of bile in the primæ viæ, there is sometimes a deficiency, which seems to afford even a worse prognosis. The alvine fæces being of a white colour, and a black cloud in the urine, are regarded by Lobb as fatal symptoms. The black cloud in the urine is owing to an admixture of blood; when unmixed with blood, it is generally pale.

There is often a remarkable tendency to the worst species of hæmorrhagies, towards the fatal termination of phrenitis. Hæmorrhagy from the eyes has already been mentioned. Hæmorrhagy from the intestines also, tinging the stools with a black colour, is not uncommon. These hæmorrhagies are never favourable; but the hæmorrhagies characteristic of synocha, particularly that from the nose, sometimes occur at an earlier period, and, if copious, generally bring relief. More frequently, however, blood drops slowly from the nose, demonstrating the violence of the disease, without relieving it. In other cases, there is a discharge of thin mucus from the nose.

Tremours of the joints, convulsions of the muscles of the face, grinding of the teeth, the face from being florid suddenly becoming pale, involuntary tears, a discharge of mucus from the nose, the urine being of a dark red or yellow colour, or black, or covered with a pel-

licle, the fæces being either bilious or white, and very fœtid, profuse sweat of the head, neck, and shoulders, paralysis of the tongue, general convulsions, much derangement of the internal functions, and the symptoms of other visceral inflammations, particularly of the pneumonia, supervening, are enumerated by Saalman as affording the most unfavourable prognosis. The delirium changing to coma, the pulse at the same time becoming weak, and the deglutition difficult, was generally the forerunner of death. When, on the contrary, there is a copious hæmorrhagy from the hæmorrhoidal vessels, from the lungs, mouth, or even from the urinary passages, when the delirium is relieved by sleep, and the patient remembers his dreams, when the sweats are free and general, the deafness is diminished or removed, and the febrile symptoms become milder, there are hopes of recovery.

In almost all diseases, if we except those which kill suddenly, as the fatal termination approaches, nearly the same train of symptoms supervenes, viz. those denoting extreme debility of all the functions. Saalman remarks that the blood did not always show the buffy coat.

Cephalitis, like some other complaints, has sometimes assumed an intermitting form, the fits coming on daily, sometimes every second day. When phrenitis terminates favourably, the typhus which succeeds the increased excitement is generally less, in proportion to that excitement, than in idiopathic fevers; a circumstance which assists in distinguishing phrenitis from synocha.

The imperfect diagnosis between these complaints is further assisted by the effects of the remedies employed. For in phrenitis, in removing the delirium and other local symptoms, the febrile symptoms in general soon abate. Whereas in synocha, although the delirium and headach be removed, yet the pulse continues frequent, and other marks of indisposition remain for a much longer time.

It will be of use to present, at one view, the circumstances which form the diagnosis between phrenitis and synocha.

Synocha generally makes its attack in the same manner: its symptoms are few and little varied. The symptoms at the commencement of phrenitis are often more complicated, and differ considerably in different cases. Derangement of the internal functions is comparatively rare in synocha. In phrenitis it almost constantly attends, and often appears very early. The same observation applies to the derangement of the organs of sense. In synocha, the pulse from the commencement is frequent and strong. In phrenitis, symptoms denoting the local affection often become considerable before the pulse is much disturbed. In phrenitis, we have seen that the pulse sometimes very suddenly loses its strength, the worst species of hæmorrhagies, and other symptoms denoting extreme debility, showing themselves; and such symptoms are generally the forerunners of death: but that when the termination is favourable, the degree of typhus which succeeds it is less in proportion to the preceding excitement than in synocha. Lastly, if we succeed in removing the delirium and other symptoms affecting the head, the state of the fever is found to partake of this favourable change more immediately and completely than in synocha, where, although we succeed in relieving the headach or delirium, the fever often suffers little abatement.

With regard to the duration of cephalitis, Eller observes, that when it proves fatal, the patient generally dies within six or seven days. In many fatal cases, however, it is protracted for a longer time, especially where the remissions have been considerable. Upon the whole, however, the longer it is protracted, providing the symptoms do not become worse, the better is the prognosis.

On the first attack of the disease, we must begin by bleeding the patient as largely as his strength will permit: it may be productive of more relief to the head, where the patient cannot spare much blood, if the temporal artery, or the jugular vein, be opened; and in the progress of the complaint, occasional cupping or leeches may materially assist the other means employed. Active cathartics should be given directly after taking blood, calomel with jalap, followed by some saline compound in the infusion of senna, until the bowels are copiously evacuated. The head should be shaved, and kept constantly cool by some evaporating lotion. Antimonial and mercurial preparations may then be given to promote the several discharges, and diminish arterial action: to which purpose digitalis also may powerfully concur. Blisters to the back of the neck, behind the ears, or to the temples, each perhaps successively, when the violence of the disorder is lessened by proper evacuations, may contribute very much to obviate internal mischief. The head should be kept raised, to counteract the accumulation of blood there; and the antiphlogistic regimen must be observed in the fullest extent. Stimulating the extremities by the pediluvium, sinapisms, &c. may be of some use in the decline of the complaint, where an irritable state of the brain appears.

CEPHALO. This term is joined to others to denote the connection of the muscle, artery, nerve, &c. to the head.

CEPHALONO'SUS. (From κεφαλη, the head, and νοσος, a disease.) A disease of the head.

Cephalo-pharyngeus. (From κεφαλη, the head, and φαρυγξ, the throat.) See *Constrictor pharyngis inferior.*

CEPHALOPONIA. (*a, æ.* f.; from κεφαλη, the head, and πονος, pain.) Pain in the head. See *Headach.*

Cepi'ni. Vinegar.

Cepula. Large myrobalans.

CE'RA. (*a, æ.* f. Κηρος.) Wax. Bees' wax. A solid concrete substance, collected from vegetables by bees, and extracted from

their combs after the honey is got out, by heating and pressing them.

It was long considered as a resin, from some properties common to it with resins. Like them, it furnishes an oil and an acid by distillation, and is soluble in all oils; but in several respects it differs sensibly from resins. Like these, wax has not a strong aromatic taste and smell, but a very weak smell, and, when pure, no taste. With the heat of boiling water, no principles are distilled from it: whereas, with that heat, some essential oil, or at least a spiritus rector, is obtained from every resin. Farther, wax is less soluble in alkohol. If wax be distilled with a heat greater than that of boiling water, it may be decomposed, but not so easily as resins can. By this distillation, a small quantity of water is first separated from the wax, and then some very volatile and very penetrating acid, accompanied with a small quantity of a very fluid and very odoriferous oil. As the distillation advances, the acid becomes more and more strong, and the oil more and more thick, till its consistence is such that it becomes solid in the receiver, and is then called butter of wax. When the distillation is finished, nothing remains but a small quantity of coal, which is almost incombustible.

Wax cannot be kindled, unless it is previously heated and reduced into vapours; in which respect it resembles fat oils. The oil of butter of wax may, by repeated distillations, be attenuated and rendered more and more fluid, because some portion of acid is thereby separated from these substances; which effect is similar to what happens in the distillation of other oils and oily concretes: but this remarkable effect attends the repeated distillation of oil and butter of wax, that they become more and more soluble in alkohol; and that they never acquire greater consistence by evaporation of their more fluid parts. Boerhaave kept butter of wax in a glass vessel open, or carelessly closed, during twenty years, without acquiring a more solid consistence. It may be remarked, that wax, its butter, and its oil, differ entirely from essential oils and resins in all the above-mentioned properties, and that in all these they perfectly resemble sweet oils. Hence Macquer concludes, that wax resembles resins only in being an oil rendered concrete by an acid; but that it differs essentially from these in the kind of the oil, which in resins is of the nature of essential oils, while in wax and in other analogous oily concretions (as butter of milk, butter of cocoa, fat of animals, spermaceti, and myrtle-wax,) it is of the nature of mild unctuous oils, that are not aromatic, and not volatile, and are obtained from vegetables by expression. It seems probable, that the acidifying principle, or oxygene, and not an actual acid, may be the leading cause of the solidity, or low fusibility of wax.

In the state in which it is obtained from the combs, it is called yellow wax, *cera flava;* and this, when new, is of a lively yellow colour, somewhat tough, yet easy to break: by age, it loses its fine colour, and becomes harder and more brittle. Yellow wax, after being reduced into thin cakes, and bleached by a long exposure to the sun and open air, is again melted, and formed into round cakes, called virgin wax, or white wax, *cera alba.* The chief medicinal use of wax, is in plasters, unguents, and other like external applications, partly for giving the requisite consistence to other ingredients, and partly on account of its own emollient quality.

Cera alba. See *Cera.*

Cera di cardo. The name, in Apulia, for the Atractylis gummifera.

Cera flava. See *Cera.*

Ceræ'æ. (From *κερας*, a horn.) So Rufus Ephesius calls the cornua or appendages of the uterus.

Ceramium. A Greek measure of nine gallons.

Cerani'tes. (From *κεραννυμι*, to temper together.) A name formerly applied to a pastil, or troch, by Galen.

CE'RAS. (From *κερας*, a horn; so named from its shape.) The wild parsnip.

Cerasa nigra. See *Prunus avium.*

Cerasa rubra. See *Prunus cerasus.*

Cerasia'tum. (From *cerasus*, a cherry.) The name of a purging medicine in Libavius: so called because cherries are an ingredient in it.

CE'RASIN. The name given by Dr. John, of Berlin, to those gummy substances which swell in cold water, but do not readily dissolve in it. Cerasin is soluble in boiling water, but separates in a jelly when the water cools. Water acidulated with sulphuric, nitric, or muriatic acid, by the aid of a gentle heat, forms a permanent solution of cerasin. Gum tragacanth is the best example of this species of vegetable product.

Cera'sius. (From *cerasus*, a cherry.) The name of two ointments in Mesue.

Cera'sma. (From *κεραννυμι*, to mix.) A mixture of cold and warm water, when the warm is poured into the cold.

CE'RASUS. (*us, i.* f., the cherry-tree, and *us, i.* m., and also *um, i.* n., the fruit called the cherry. Κερασος, the cherry-tree; from Κερασουλη, a town in Pontus, whence Lucullus first brought them to Rome: or from *κηρ*, the heart; from the fruit having a resemblance to it in shape and colour.) The cherry-tree. See *Prunus cerasus.*

CE'RATE. See *Ceratum.*

Cera'tia. (From *κερας*, a horn, which its fruit resembles.) *Ceratium. Ceratonia.* See *Ceratonia siliqua.*

Ceratia diphyllus. The name in some writings of the plant from which the gum anime exudes.

Cera'ticum. See *Ceratonia siliqua.*

CE'RATO. (From *κερας*, a horn.) Some muscles have this word as a part of their names, from their shape.

Cerato-glossus. (From *κερας*, a horn, and *γλωσσα*, a tongue.) A muscle, so named

from its shape and insertion into the tongue. See *Hyoglossus.*

CERATO HYOIDEUS. See *Stylo-hyoideus.*

CERATOI'DES. (From κεραῖος, the genitive of κερας, horn, and ειδος, appearance.) Horn-like. A membrane of the eye was so called, because of its horny consistence. See *Sclerotic membrane.*

CERATO'NIA. (*a, æ.* f. Κερατωνια of Galen and Paulus Ægineta: so called from its horn-like pod.) The name of a genus of plants. Class, *Polygamia;* Order, *Triœcia.*

CERATONIA SILIQUA. The systematic name of the plant which affords the sweet pod. Called also *Cacalis, Ceratium, Ceratia,* and *Siliqua dulcis.* The pods are about four inches in length, and as thick as one's finger, compressed and unequal, and mostly bent; they contain a sweet brown pulp, which is given in the form of decoction, as a pectoral in asthmatic complaints and coughs.

CERATOTOME. (*Ceratotomus, i.* m.; from κερας, a horn, and τεμνω, to cut.) Baron Wenzel gave this name to the knife with which he divided the cornea of the eye.

CERA'TUM. (*um, i.* n.; from *cera,* wax, because its principal ingredient is wax.) Cerate.

1. A composition of wax, oil, or lard, with or without other ingredients. The obsolete synonyms are, *cerelæum, ceroma, ceronium, cerotum, ceratomalagma.* Cerates take their name from the wax which enters into their composition, and to which they owe their consistence, which is intermediate between that of plasters and that of ointments; though no very definite rule for this consistence is, in fact, either given or observed.

2. Common cerate. See *Ceratum simplex.*

CERATUM ALBUM. See *Ceratum cetacei.*

CERATUM CALAMINÆ. *Ceratum lapidis calaminaris, Ceratum epuloticum.* Calamine cerate. Take of prepared calamine, yellow wax, of each half a pound; olive oil, a pint. Mix the oil with the melted wax; then remove it from the fire, and, as soon as it begins to thicken, add the calamine, and stir it constantly until the mixture becomes cold. A composition of this kind was first introduced under the name of Turner's cerate. It is well calculated to promote the cicatrisation of ulcers.

CERATUM CANTHARIDIS. Cerate of blistering fly. Take of spermaceti cerate, six drachms; blistering flies, in very fine powder, a drachm. Having softened the cerate by heat, add the flies, and mix them together.

CERATUM CETACEI. *Ceratum spermatis ceti. Ceratum album.* Spermaceti cerate. Take of spermaceti, half an ounce; white wax, two ounces; olive oil, four fluid ounces. Add the oil to the spermaceti and wax, previously melted together, and stir them until the mixture becomes cold. This cerate is cooling and emollient, and applied to excoriations, &c.: it may be used with advantage in all ulcers, where no stimulating substance can be applied, being extremely mild and unctuous.

CERATUM CITRINUM. See *Ceratum resinæ.*

CERATUM CONII. Hemlock cerate. ℞ unguenti conii, ℔j. Spermatis ceti, ℥jj. Ceræ albæ, ℥iii. Misce. One of the formulæ of St. Bartholomew's hospital, occasionally applied to cancerous, scrophulous, phagedenic, herpetic, and other inveterate sores.

CERATUM EPULOTICUM. See *Ceratum calaminæ.*

CERATUM LAPIDIS CALAMINARIS. See *Ceratum calaminæ.*

CERATUM LITHARGYRI ACETATI COMPOSITUM. See *Ceratum plumbi compositum.*

CERATUM PLUMBI ACETATIS. *Unguentum cerussæ acetatæ.* Cerate of acetate of lead. Take of acetate of lead, powdered, two drachms; white wax, two ounces; olive oil, half a pint. Dissolve the wax in seven fluid ounces of oil; then gradually add thereto the acetate of lead, separately rubbed down with the remaining oil, and stir the mixture with a wooden slice, until the whole has united. This cerate is cooling and desiccative.

CERATUM PLUMBI COMPOSITUM. *Ceratum lithargyri acetati compositum.* Compound cerate of lead. Take of solution of acetate of lead, two fluid ounces and a half; yellow wax, four ounces; olive oil, nine fluid ounces; camphire, half a drachm. Mix the wax, previously melted, with eight fluid ounces of oil; then remove it from the fire, and, when it begins to thicken, add gradually the solution of acetate of lead, and constantly stir the mixture with a wooden slice, until it gets cold. Lastly, mix in the camphire, previously dissolved in the remainder of the oil. Its virtues are cooling, desiccative, resolvent against chronic rheumatism, &c.; and as a proper application to superficial ulcers, which are inflamed.

CERATUM RESINÆ. *Ceratum resinæ flavæ; Ceratum citrinum.* Resin cerate. Take of yellow resin, yellow wax, of each a pound; olive oil, a pint. Melt the resin and wax together, over a slow fire; then add the oil, and strain the cerate, while hot, through a linen cloth. Digestive.

CERATUM SABINÆ. Savine cerate. Take of fresh leaves of savine, bruised, a pound; yellow wax, half a pound; prepared lard, two pounds. Having melted together the wax and lard, boil therein the savine leaves, and strain through a linen cloth. This article is of late introduction, for the purpose of keeping up a discharge from blistered surfaces. It was first described by Mr. Crowther, and has since been received into extensive use, because it does not produce the inconveniences that follow the constant application of the common blistering cerate. A thick white layer forms daily upon the part, which requires to be removed, that the cerate may be applied immediately to the surface from which the discharge is to be made.

CERATUM SAPONIS. Soap cerate. Take of hard soap, eight ounces; yellow wax, ten ounces; semi-vitreous oxide of lead, powdered, a pound; olive oil, a pint; vinegar, a gallon.

Boil the vinegar, with the oxide of lead, over a slow fire, constantly stirring, until the union is complete; then add the soap, and boil it again in a similar manner, until the moisture is entirely evaporated; then mix in the wax, previously melted with the oil. Resolvent; against scrophulous tumours, &c. It is a convenient application in fractures, and may be used as an external dressing for ulcers.

CERATUM SIMPLEX. *Ceratum.* Simple cerate. Take of olive oil, four fluid ounces; yellow wax, four ounces: having melted the wax, mix the oil with it.

CERATUM SPERMATIS CETI. See *Ceratum cetacei.*

CE'RBERUS. (Κερϐερος; because, like the dog Cerberus, it has three heads, or principal ingredients, each of which is eminently active.) A fanciful name given to the compound powder of scammony.

CERCHNA'LEUM. (From κερχω, to make a noise.) A wheezing, or bubbling noise, made by the trachea, in breathing.

CE'RCHNUS. (*us, i.* m.; from κερχω, to wheeze.) Wheezing; which is a noisy respiration, such as would be produced by air passing through pipes nearly filled with a rather tenacious fluid. It is a common symptom in catarrh, asthma, peumonia, &c.; but it is occasionally a primary evil, independent of any other complaint. It is caused by some obstruction to the vapour and mucus of the lungs; not being duly absorbed, and thus accumulating, the air, passing and repassing, causes a hissing by moving it. A weakness of the absorbents often produces it. In fat people, and more especially those who are of short stature, short-necked, and oppressed by fat, the obstruction is the result of infarction and pressure: under which circumstances, active purges, strong exercise, and the pectoral warm gums are useful.

CERCHNO'DES. (From κερχω, to wheeze.) *Cerchodes.* One who labours under a dense breathing, accompanied with a wheezing noise.

CERCHO'DES. See *Cerchnodes.*

CE'RCIS. (Κερκις, literally means the spoke of a wheel, and has its name from the noise which wheels often make; from κρεκω, to shriek.) 1. The radial bone of the forearm was formerly so called, from its shape, like a spoke.

2. A pestle, from its shape.

CERCO'SIS. (*is, is.* f.; from κερκος, a tail.) 1. A polypus of the uterus.

2. An enlargement of the clitoris.

CE'REA. (*a, æ.* f.; from *cera*, wax.) The cerumen aurium, or wax of the ear.

CEREA'LIA. (*Cerealis*, pertaining to corn; from *Ceres*, the goddess of corn and tillage.) All sorts of corn, of which bread or any nutritious substance is made, come under the head of *cerealia*, which term is applied by bromatologists as a genus.

CEREBE'LLA URINA. Paracelsus thus distinguishes urine which is whitish, of the colour of the brain, and from which he pretended to judge of some of its disorders.

CEREBE'LLUM. (*um, i.* n.; diminutive of *cerebrum.*) The little brain. A somewhat round viscus, of the same use as the brain; composed, like the brain, of a cortical and medullary substance, divided by a septum into a right and left lobe, and situated under the tentorium, in the inferior occipital fossæ. In the cerebellum are to be observed the *crura cerebelli*, the fourth ventricle, the *valvula magna cerebri*, and the *protuberantiæ vermiformes.* See *Cerebrum.*

CE'REBRUM. (*um, i.* n.; *quasi carabrum*, from καρα, the head.) The brain. A large round viscus, divided superiorly into a *right* and *left hemisphere*, and inferiorly into *six lobes*, two anterior, two middle, and two posterior; situated within the cranium, and surrounded by the dura and pia mater, and tunica arachnoides.

It is contained within the cranium, and the nerves are propagated from it to the organs of the senses, and over the body, bestowing sensation, and acting as the agents of the will. It is the receptacle of sensation, and believed to be the instrument of thought. The substance of the brain is delicate and soft, and possesses a degree of elastic resistance. It is protected and supported by the skull and dura mater: its peculiar matter is supported and nourished by the pia mater. The brain consists distinctly of two very different substances: the cineritious and medullary matter.

The *cineritious* or ash-coloured matter forms the superficial or outer part of the encephalon, and is therefore called the cortical part. It varies much in colour: in the crura cerebri, it is very dark; in the pons varolii, it is redder; in the corpora olivaria, it is yellower. The consistency of this matter also varies considerably in different parts: it is soft in the basis of the brain, between the optic nerves and anterior commissure, and in the third ventricle.

The *medullary* matter is chiefly in the internal part of the brain, forming the central part. In many parts of the brain there is a mixture of the cortical and medullary substances, forming striæ, as in the corpora striata, thalami nervorum opticorum, &c.; and, in some of the eminences, the internal part is cineritious, while the external part is medullary. The cineritious part does not blend gradually with the white medullary matter; but, on the contrary, their line of distinction is abrupt: an intervening substance some have asserted to have found. The cineritious substance seems to have a much greater quantity of blood circulating in it than the medullary substance. Its vessels come, by two distinct routes, partly from the extremities of those arteries which appear in large branches upon the surface of the brain, and partly by vessels which penetrate through the medullary substance from the basis of the brain.

The *white medullary* substance. There is

no peculiarity of structure in it towards the surface of the brain, where it is contiguous to the cortical matter; but towards the origin of the nerves it has a more fibrous appearance. This appearance of fibres is not owing to any peculiarity in the medullary matter, but to the manner in which the pia mater involves it. The medullary matter being chiefly internal, has every where through the brain a communication from the fore to the back part, from the upper part to the base; from the great central part it extends, in form of striæ, into the corpora striata and thalami; it invests the eminences in the lateral ventricles; and those upper parts have communication with the medullary substance at the base.

There are on the brain, and within it, the following projections and irregular surfaces:

The internal projections lie in contact, without adhering, and form what are called the *ventricles*, or cavities, of the brain, which are bedewed with a vapour from a secreting membrane that is continued over them from the pia mater and choroid plexus.

1. The *convolutions*. These are observable all over the external surface of the brain, like vermicular projections, of the size of the little finger. They are formed of the cineritious substance, and the spaces between them are called the intergyral spaces. On the upper surface of the brain they are separated by a large space, which separates the upper substance of the brain into two parts, called *hemispheres;* and on the lower surface, or basis, they are disposed into six projections, called *lobes*, of which there are two anterior, two middle, and two posterior.

2. The *corpus callosum*, a medullary body, the centre of communication between the two hemispheres. It is often called the *great commissure of the brain*. It is seen, without cutting, by merely separating the hemispheres with the fingers. It is a white body, firmer than the rest of the medullary substance. It is but slightly convex upon its upper part, but turns convex downwards upon the fore and back part. As the corpus callosum is the continuation of the internal medullary substance of the brain, it is continued down, anteriorly and posteriorly, and lost in the brain. Upon the surface of the corpus callosum, two parallel medullary raised lines are observable, betwixt which is a kind of rut: this is called the *raphe*, or suture. Other lines, less elevated, are seen running across these. The *centrum ovale* is merely the appearance which the white and internal part of the cerebrum takes when the brain is cut horizontally on the level of the corpus callosum: for then the corpus callosum is the centre of the great medullary mass of the cerebrum, and the external cineritious matter being on the edges only, forms it into an irregular oval.

3. The *septum lucidum*. The two lateral ventricles, lying under the corpus callosum and medullary centre, are divided by a partition which descends from the lower surface of the corpus callosum, and rests upon the fornix: this is the septum lucidum, which, as its name implies, is transparent. It consists of two lamina, and they consist of medullary and cineritious matter. Betwixt these laminæ is the cavity of the septum lucidum, which is very small, and of a triangular shape.

4. Under the corpus callosum and medullary centre are the great cavities called the *lateral ventricles*. They are distinguished into right and left. They are of a very irregular shape, stretching into three prolongations, called *cornua*, or horns, whence they have the name *tricornes*. They are the great ventricles of the brain, the third and fourth being comparatively very small. Following the cavity forwards, we get into the *anterior horn;* and passing backwards, with some considerable curve, with slight inclination downward, we get into the *posterior*. The inferior, or descending horn, is like the continued cavity of the ventricle: it makes a curve backward and outward, and then, turning forwards, it descends into the middle lobe of the brain. The lateral ventricles do not terminate in the other ventricles by any of these horns; but they communicate, upon a very high level, with the third ventricle, and with each other, by a wide opening, formed under the fore part of the arch of the fornix.

5. The *fornix* is a medullary body, flat and of a triangular shape, which divides the two lateral and the third ventricles: its lower surface is towards the third ventricle; its lateral margins are in the lateral ventricle. On its upper surface, it supports the septum lucidum, and under its most anterior part is the communication betwixt the lateral and the third ventricle. The extremities of the fornix are called crura, of which there are two anterior and two posterior.

6. Upon the lower surface of the fornix there are lines which give the appearance of a stringed instrument, or lyre; and hence this part is called the *lyra*, or corpus *psalloides*.

7. The *pes hippocampi*, or *cornu ammonis*. This part, with the next, are seen as continuations of the posterior crura of the fornix, which descend from the corpus callosum: they are very conspicuous in each inferior horn of the lateral ventricle, beginning narrow at their commencement, and enlarging as they descend. They look like a convex pad; in the floor of each ventricle, their extremities turn inward, and take a curve, like a ram's horn. In its whole extent, the pes hippocampi consists of an internal cineritious substance, and a superficial layer of white medullary matter.

8. The *tenia hippocampi*, also called the *corpus fimbriatum*, is the fringed margin of the fornix, which follows the circuit of the pes hippocampi.

9. The *lesser hippocampus*, or *colliculus*. This is a convexity in the floor of the posterior horn of the ventricles, which may be traced backward from the crura of the fornix. It has the same relation to the fornix which

the greater hippocampus has, and lies in the posterior horn, in the same way in which the great hippocampus lies in the inferior one.

10. The *corpora striata* are smooth, cineritious convexities in the fore part of the lateral ventricle. They are somewhat of the shape of a pear; they are obtuse forwards; they approach each other, towards the fore part, with a regular convexity; and they are narrow as they pass backward, separating at the same time. These bodies are called striated, from the intermixture of the medullary matter, which gives the appearance of striæ when cut. They descend to the base, and give origin to the first pair, or olfactory nerves.

11. The *commissura anterior*, a cylindrical medullary cord, which unites the fore and lower part of the corpora striata, and which spreads its connections full an inch and a half into the middle lobe of the brain on each side.

12. The *thalami nervorum opticorum*. These are hid by the posterior angles of the fornix. They are not fully seen until the fornix is lifted, and the plexus choroides removed. They are somewhat of an irregular oval shape; are whiter than the corpora striata, their surface being chiefly of medullary matter. Internally they are cineritious; and the medullary and cineritious matter is blended in striæ like the anterior part of the corpora striata. The thalami nervorum opticorum, having their convex surface towards each other, unite under the fornix by what is called the *commissura mollis*. Towards the fore part of the thalami is an eminence or convexity, called the anterior tubercle.

13. The limits of each thalamus externally are contiguous to the corpus striatum, and betwixt them there intervenes a white medullary tract, the *linea semicircularis geminum*, which marks the limits of the two great projections into the lateral ventricles. The thalami nervorum opticorum give origin to the optic nerves, the *tractus opticus*, the surface of which may be traced in the ventricle.

14. Between the optic thalami is a small furrow, which is the third ventricle: no one would suppose, after seeing the lateral ventricles, that this was the third. It is a longitudinal slit, or gutter-like cavity, which is made irregular, and is divided by the union of the optic thalami. It is covered by the fornix; opens forwards and upwards into the two lateral ventricles; and, under the common communication, it opens into the infundibulum. Backwards, it is continued by a canal, which passes under the tubercula quadrigemina, into the fourth ventricle.

15. The *infundibulum*. This is a funnel of soft cineritious matter, which is continued from the bottom of the third ventricle to the pituitary gland, and which adheres to the back part of the optic nerves. Its cavity becomes contracted before it reaches the sella turcica, in which the gland is seated.

16. The pituitary gland is a reddish body, seated in the sella turcica of the sphenoid bone. It is plain upon its upper surface, or rather, perhaps, a little hollowed; of a globular shape below, and having a division into two lobes. The infundibulum terminates in it.

17. The *tubercula quadrigemina*, or nates and testes. These are seen when the posterior part of the fornix and the corpus callosum are turned back; and, if carefully done, a small heart-like, soft body is seen lying upon them, which is the *pineal gland*. These four tubercles are behind the third ventricle, and above the fourth. As they are immediately in the centre of the brain, they form a kind of commissure; and they both communicate with the tubercles from which the tractus opticus emerge. The uppermost two are the *nates*, the lower are the *testes*; the former are less white than the latter. From the lower part of the testes there projects backwards, connecting itself with the crura cerebelli, a thin medullary lamina, which is the valvula Vieussenii, processus a cerebello ad testes, or velum interjectum. Behind the posterior tubercle, or from this medullary lamina itself, the fourth pair of nerves take their origin.

18. The pineal gland is seated above the tubercula quadrigemina, and behind the thalami nervorum opticorum. It consists of cineritious matter, covered with the pia mater: it adheres firmly to the velum, and is apt to be displaced or torn from its peduncle in lifting that membrane. It is a small, soft, greyish body, irregularly round, or heart-shaped. Its peduncles, or foot-stalks, pass out from a transverse medullary base, which unites it to the posterior commissure. Those peduncles pass on each side to the thalami nervorum opticorum: their extremities pass forward upon the internal surface of the thalami, and are united to the anterior crura of the fornix. This gland, as it is called, has often in or upon it granules of a bony substance, or calculi.

19. The *posterior commissure*. The base of the pineal gland is connected with this, which is seen like a cord, or like the anterior commissure, towards the back part of the third ventricle, before the tubercula quadrigemina, and above the iter a tertio ad quartum ventriculum. This, which appears like a cord, does not deserve the name of commissure, for it does not pass on each side into the substance of the brain, as the anterior one does; it is lost in the neighbouring border of the medullary matter, and is merely this substance reflected, so as to have a rounded edge.

20. The fourth ventricle descends perpendicularly below the cerebellum: it is enclosed above by the valvula cerebri; below by the medulla spinalis; and on the right and left by the crura cerebelli. If the probe be passed obliquely backwards and downwards, under the posterior commissure, it passes into the *iter a tertio ad quartum ventriculum*, or *aqueduct* of *Sylvius*. This passage to the fourth ventricle goes before the tubercula quadrigemina. From the aqueduct there is continued

down, upon the fore part of the fourth ventricle, a kind of fissure, which Vesalius, conceiving it had some resemblance to a writing quill, called *calamus scriptorius*, and three or four or more medullary lines are observed on each side of it. Some are the origins of the auditory nerve, and one or two go to form part of the eighth pair.

In the fourth ventricle, as in the other ventricles, are some convolutions of the plexus choroides.

The several circumstances that have been mentioned, are from viewing the upper surface of the brain, and cutting into the ventricles. We now proceed to those which the basis of the brain presents; and the first appearance which strikes the eye is the great proportion of the medullary matter. The whole upper surface was cineritious: but here the centrical medullary part of the brain is seen emerging from the envelopment of the cineritious matter; and, gathering together from the several internal medullary processes of the brain, it concentrates the essential parts of the encephalon, and gives off the several nerves.

1. Two great medullary prolongations are seen, called the *crura cerebri*. They are composed of a white fibrous medullary matter, in which, also, there is a mixture of cineritious substance. They are formed from the whole central medullary part of the cerebrum, and pass downwards and backwards. The crus of either side of the brain, contracting their diameters, unite at an acute angle, and are united to the pons varolii, formed by the crura cerebelli: they pass on to form the medulla oblongata, and, as they unite with it, they raise it into the eminences called corpora pyramidalia. In the angle of the union of these crura is a part of the floor of the third ventricle. It is perforated with a great many holes, and gives origin to the third pair of nerves, along with the crura themselves.

2. The crura cerebelli are more exposed than those of the cerebrum; the latter lying deeper, and being comparatively smaller. They are formed by the union of the internal medullary part of the cerebellum, or the arbor vitæ. They are altogether composed of medullary matter, except near the pons varolii, where there is a mixture of coloured striæ.

3. The *pons varolii*, called also *tuber annulare*, and *nodus cerebri*, is formed by the union of the crura cerebri and cerebelli. On the surface of this medullary protuberance there are many transverse fibres, which, uniting in a middle line, form a kind of raphe. The fibres upon the surface of this body are uniform, and parallel to each other in the most projecting part; but upon the sides they disperse, to give place to the fifth pair of nerves and the crura cerebelli.

4. The *medulla oblongata*. This is an elongation of the substance of the crura cerebri and cerebelli, and the pons varolii: it is, consequently, the continuation of the encephalon, which, after giving off the nerves that pass through the foramina of the skull, enters the canal of the spine, and becomes the spinal marrow, and supplies the spinal nerves. The medulla oblongata is marked at its upper end by a deep sulcus, dividing it from the pons varolii; but towards the spinal cavity it decreases in thickness, and there is no natural distinction or sulcus to mark the point where the medulla oblongata ends and the medulla spinalis begins; nor, perhaps, is the medulla oblongata to be considered in any other light than as the beginning of the spinal marrow. When it passes the foramen magnum, it ceases to be called the medulla oblongata. There are four eminences to be observed on the medulla oblongata: —

5. The *corpora pyramidalia*, two in number, and so called from their shape, are those in the middle. There is formed, between them and the pons varolii, a little sulcus, which some have called *foramen cæcum*.

6. The *corpora olivaria*, also two in number, one lying on each side of a corpus pyramidale. See also *Cerebellum*.

The membranes which envelope the brain and cerebellum, are the dura and pia mater, and the tunica arachnoides.

The cerebral arteries are branches of the carotid and vertebral arteries. The veins terminate in the sinuses of the dura mater, which return the blood to the jugular veins.

Vauquelin's analysis of the brain is in 100 parts: 80 water, 4·53 white fatty matter, 0·7 reddish fatty matter, 7 albumen, 1·12 osmazome, 1·5 phosphorus, 5·15 acids, salts, and sulphur.

Cerebrum elongatum. The medulla oblongata, and medulla spinalis.

CEREFO'LIUM. (*um, i.* n.; a corruption, most probably, of *chærophyllum.*) See *Chærophyllum.*

Cerefolium hispanicum. See *Scandix odorata.*

Cerefolium sylvestre. See *Chærophyllum sylvestre.*

CERELÆ'UM. (*um, i.* n.; from κηρος, wax, and ελαιον, oil.) 1. A cerate, or liniment, composed of wax and oil.

2. Also the oil of tar.

CEREOLUS. (*us, i.* m.; diminutive of *cereus.*) A wax bougie.

CEREUS. (*us, i.* m.; from *cera*, wax, because it is made of wax.) A wax bougie.

CE'REUS MEDICATUS. See *Bougie.*

CEREVI'SIA. (*a, æ.* f.; *quasi cenerisia*, i. e. *cerealis liquor*, from *ceres*, corn, of which it is made.) Any liquor made from corn, especially ale and strong beer.

For the preparation of beer and ale, the grain is malted and boiled, and hops are then added, and the whole fermented. The grain is first steeped for two or three days in water, until it swells, becomes somewhat tender, and tinges the water of a bright reddish brown colour. The water being then drained away, the barley is spread about two feet thick upon a floor, where it heats spontaneously, and begins to grow, by first shooting out the radicle.

In this state the germination is stopped by spreading it thinner, and turning it over for two days; after which it is again made into a heap, and suffered to become sensibly hot, which usually happens in little more than a day. Lastly, it is conveyed to the kiln, where, by a gradual and low heat, it is rendered dry and crisp. This is malt; and its qualities differ according as it is more or less soaked, drained, germinated, dried, and baked. In this, as in other manufactories, the intelligent operators often make a mystery of their processes from views of profit; and others pretend to peculiar secrets who really possess none.

Indian corn, and probably all large grain, requires to be suffered to grow into the blade, as well as root, before it is fit to be made into malt. For this purpose it is buried about two or three inches deep in the ground, and covered with loose earth; and in ten or twelve days it springs up. In this state it is taken up and washed, or fanned, to clear it from its dirt; and then dried in the kiln for use.

Barley, by being converted into malt, becomes one fifth lighter, or 20 per cent.; 12 of which are owing to kiln-drying, 1·5 are carried off by the steep-water, 3 dissipated on the floor, 3 loss in cleaning the roots, and 0·5 waste or loss.

The degree of heat to which the malt is exposed in this process, gradually changes its colour from very pale to actual blackness, as it simply dries it, or converts it to charcoal.

The colour of the malt not only affects the colour of the liquor brewed from it, but, in consequence of the chemical operation of the heat applied, on the principles that are developed in the grain during the process of malting, materially alters the quality of the beer, especially with regard to the properties of becoming fit for drinking and growing fine.

Beer is made from malt previously ground or cut to pieces by a mill. This is placed in a tun, or tub, with a false bottom; hot water is poured upon it, and the whole stirred about with a proper instrument. The temperature of the water in this operation, called Mashing, must not be equal to boiling; for, in that case, the malt would be converted into a paste, from which the impregnated water could not be separated. This is called Setting. After the infusion has remained for some time upon the malt, it is drawn off, and is then distinguished by the name of Sweet Wort. By one or more subsequent infusions of water, a quantity of weaker wort is made, which is either added to the foregoing, or kept apart, according to the intention of the operator. The wort is then boiled with hops, which gives it an aromatic bitter taste, and is supposed to render it less liable to be spoiled in keeping; after which it is cooled in shallow vessels, and suffered to ferment, with the addition of a proper quantity of yeast. The fermented liquor is beer; and differs greatly in its quality, according to the nature of the grain, the malting, the mashing, the quantity and kind of the hops and the yeast, the purity or admixtures of the water made use of, the temperature and vicissitudes of the weather, &c.

Beer well prepared should be limpid and clear, possess a due quantity of spirit, and excite no disagreeable sweet taste, and contain no disengaged acid. By these properties it is a species of vinous beverage, and is distinguished from wine in the strict sense, and other liquors of that kind, by the much greater quantity of mucilaginous matter which it has received by extraction from the malted grains, but which also makes it more nourishing. Brown beer derives its colour from malt strongly roasted in the kiln, and its bitterish taste from the hops. Pale beer is brewed from malt dried in the air, or but slightly roasted, with but little or no hops at all.

Besides the various qualities of malt liquors of a similar kind, there are certain leading features by which they are distinguished, and classed under different names, and to produce which, different modes of management must be pursued. The principal distinctions are into beer, properly so called; ale; table or small beer; and porter, which is commonly termed beer in London. Beer is a strong, fine, and thin liquor; the greater part of the mucilage having been separated by boiling the wort longer than for ale, and carrying the fermentation farther, so as to convert the saccharine matter into alkohol. Ale is of a more syrupy consistence, and sweeter taste; more of the mucilage being retained in it, and the fermentation not having been carried so far as to decompose all the sugar. Small beer, as its name implies, is a weaker liquor; and is made, either by adding a large portion of water to the malt, or by mashing with a fresh quantity of water what is left after the beer or ale wort is drawn off. Porter was probably made originally from very high dried malt; but it is said that its peculiar flavour cannot be imparted by malt and hops alone.

Mr. Brande obtained the following quantities of alkohol from 100 parts of different species of beers. Burton ale 8·88; Edinburgh ale, 6·2; Dorchester ale, 5·56; the average being = 6·87. Brown stout, 6·8; London porter (average) 4·2; London small beer (average) 1·28.

As long ago as the reign of Queen Anne, brewers were forbid to mix sugar, honey, Guinea pepper, essentia bina, coculus indicus, or any other unwholesome ingredient, in beer, under a certain penalty; from which we may infer that such, at least, was the practice of some; and writers, who profess to discuss the secrets of the trade, mention most of these, and some other articles, as essentially necessary. The essentia bina is sugar boiled down to a dark colour, and empyreumatic flavour. Broom-tops, wormwood, and other bitter plants were formerly used to render beer fit for keeping, before hops were introduced into this country; but are now prohibited to be used in beer made for sale.

By the present law of this country, nothing

is allowed to enter into the composition of beer, except malt and hops. Quassia and wormwood are often fraudulently introduced; both of which are easily discoverable by their nauseous bitter taste. They form a beer which does not preserve so well as hop beer. Sulphate of iron, alum, and salt, are often added by the publicans, under the name of *beer heading*, to impart a frothing property to beer, when it is poured out of one vessel into another. Molasses, and extract of gentian root, are added with the same view. Capsicum, grains of paradise, ginger root, coriander seed, and orange peel, are also employed to give pungency and flavour to weak or bad beer. The following is a list of some of the unlawful substances seized at different breweries, and brewers' druggists' laboratories in London, as copied from the minutes of the committee of the House of Commons. Coculus indicus multum (an extract of the coculus), colouring, honey, hartshorn shavings, Spanish juice, orange powder, ginger, grains of paradise, quassia, liquorice, caraway seeds, copperas, capsicum, mixed drugs. Sulphuric acid is very frequently added to *bring beer forward*, or make it hard, giving new beer instantly the taste of what is 18 months old. According to Mr. Accum, the present *entire* beer of the London brewer is composed of all the waste and spoiled beer of the publicans, the bottoms of butts, the leavings of the pots, the drippings of the machines for drawing the beer, the remnants of beer that lay in the leaden pipes of the brewery, with a portion of brown stout, bottling beer, and mild beer. He says that opium, tobacco, nux vomica, and extract of poppies, have been likewise used to adulterate beer. By evaporating a portion of beer to dryness, and igniting the residuum with chlorate of potash, the iron of the copperas will be procured in an insoluble oxide. Muriate of barytes will throw down an abundant precipitate from beer contaminated with sulphuric acid or copperas; which precipitate may be collected, dried, and ignited. It will be insoluble in nitric acid.

Beer appears to have been of ancient use, as Tacitus mentions it among the Germans, and has been usually supposed to have been peculiar to the northern nations: but the ancient Egyptians, whose country was not adapted to the culture of the grape, had also contrived this substitute for wine; and Mr. Park has found the art of making malt, and brewing from it very good beer, among the negroes in the interior parts of Africa. See *Wheat*.

Cerevisiæ cataplasma. See *Cataplasma cerevisiæ*.

Cerevisiæ fermentum. See *Fermentum cerevisiæ*.

CE'RIA. (*a, æ.* f.; from *cereus*, soft, pliant.) 1. The flat worm which breeds in the intestines. Never used. See *Tænia*.

2. (From *ceres*, corn.) Ale; beer.

CERIN. 1. The name given by Dr. John to the part of common wax which dissolves in alkohol.

2. Subercerin. A peculiar substance which precipitates on evaporation from alkohol, which has been digested on cork.

3. The name of a variety of the mineral *allanite*.

CE'RION. (From κηριον, a honeycomb.) An eruptive disorder of the head. See *Achor*.

CERITE. A rare mineral, of a rose-red colour, found only in the copper mine of Bastnacs, in Sweden.

CERIUM. (*um, ii.* n.; so called, because it is obtained from the mineral called *cerite*.) The name of a metal, none of the compounds of which are yet introduced into the materia medica.

CER'NUUS. Bent. In *Botany*, applied to stems, petioles, &c.; thus the petiole or flower-stalk of the frill, or crown imperial, is so much bent that the flower looks to the earth, and is so stiff that it cannot be straightened without breaking,

CERO'MA. (*a, atis.* n.; from κηρος, wax.) *Ceronium*. Terms used by the ancient physicians for an unguent, or cerate, though originally applied to a particular composition which the wrestlers used in their exercises.

CEROPI'SSUS. (*us, i.* m.; from κηρος, wax, and πισσα, pitch.) A plaster composed of pitch and wax.

CEROTUM. (*um, i.* n. Κερωτον.) A cerate.

CERU'MEN. (*en, inis.* n.; diminutive of *cera*, wax.) Wax. See *Cera*.

Cerumen aurium. The waxy secretion of the ear; called also, *Aurium sordes*, *Marmorata aurium*, *Cypsele*, *Cypselis*, and *Fugile*; situated in the meatus auditorius externus.

CERU'SSA. (*a, æ.* f.; Arabian.) Cerusse. See *Plumbi subcarbonas*.

Cerussa acetata. See *Plumbi acetas*.

Cervi spina. See *Rhamnus catharticus*.

CERVI'CAL. (*Cervicalis*; from *cervix*, the neck.) Belonging to the neck; as cervical nerves, cervical muscles, &c.

Cervical artery. *Arteria cervicalis*. A branch of the subclavian.

Cervical vertebræ. The seven uppermost of the vertebræ, which form the spine. See *Vertebræ*.

CERVICA'RIA. (*a, æ.* f.; from *cervix*, the neck: so named because it was supposed to be efficacious in disorders and ailments of the throat and neck.) The herb throat-wort. The *Thapsia*, and the lesser *Lebanotis* of Theophrastus, have been so called, and more commonly the *Campanula trachelium* of Linnæus.

CE'RVIX. (*ix, icis.* f.; quasi *cerebri via*, as being the channel of the spinal marrow.) 1. The neck. That part of the body which is between the head and shoulders.

2. Applied also to portions of organs which have some extent, to distinguish their parts; as the *cervix uteri*, neck of the uterus;

cervix vesicæ, neck of the bladder, neck of a bone, &c.

CERVUS. (*us, i.* m.; from κερας, a horn: so called because of its great horns.) The name of a genus of quadrupeds in the order *Pecora*. This genus has several species:

1. *Cervus alces.* The elk.
2. *C. tarandus.* The rein-deer.
3. *C. elephas.* The stag.
4. *C. dama.* The fallow deer.
5. *C. virginianus.* The Virginian deer.
6. *C. axis.*
7. *C. porcinus.* The porcine deer.
8. *C. africanus.* The spotted porcine deer.
9. *C. mexicanus.* The Mexican deer.
10. *C. capreolus.*
11. *C. muntjac.* The rib-faced deer.
12. *C. guineensis.* The grey deer.

These several species all afford flesh for man, which is much esteemed. See *Venison.* And the horns of many afford some valuable medicines. See *Cornu cervi.*

CESPITITIUS. (From *cespes*, a sod or turf.) Belonging to the turf. Cespititious plants are such as have only radical leaves; as primrose, &c. See *Cespitose.*

CESPITOSE. (*Cespitosus*, from *cespes*, a sod, or turf.) A plant is so called which produces many stems from one root, thereby forming a close thick carpet on the surface of the earth.

CESTRI'TES. (From κεςρον, betony.) Wine impregnated with betony.

CE'STRUM. (*um, i.* n.; from κεςρα, a dart: so called from the shape of its flowers, which resemble a dart; or because it was used to extract the broken ends of darts from wounds.) See *Betonica officinalis.*

CETACEOUS. (*Cetaceus*; from *cete*, a whale.) Appertaining to the whale.

CETA'CEUM. (*um, ii.* n.; from *cetus*, a whale.) See *Physeter macrocephalus.*

CETE. (From the Chaldean word *kota.*) The whale.

CE'TERACH. (*Ceterach.* Blanchard says this word is corrupted from *Pteryga*, πτηρυξ, q. v. as *peteryga*, *ceteryga*, and *ceterach.*) See *Asplenium ceterach.*

CETERACH OFFICINALIS. See *Asplenium ceterach.*

CETIC. (*Ceticus*; from *cetus*, a whale.) Of or belonging to a whale.

CETIC ACID. *Acidum ceticum.* The name given by Chevreuil to a supposed peculiar principle of spermaceti, which he has lately found to be the substance he has called *margarine*, combined with a fatty matter.

CETINE. The name given by Chevreuil to spermaceti. See *Fat.*

CETUS. The whale.

CEVADATE. *Cevadas.* A salt formed by the combination of the cevadic acid with earthy, alkaline, and metallic bases.

CEVADIC. (*Cevadicus*; from *cevadilla*, the name of the plant.) Appertaining to cevadilla.

CEVADIC ACID. *Acidum cevadicum.* By the action of potash on the fat matter of the cevadilla, a plant that comes from Senegal, called by the French *petite orge*, there is obtained, in the same way as the delphinic acid, an acid which is called the cevadic.

CEVADILLA. (*a, æ.* f.; diminutive of *ceveda*, the Spanish for barley. See *Veratrum sabatilla.*

Ceyenne pepper. See *Capsicum annuum.*

CEYLANITE. The mineral which comes from Ceylon, commonly in round pieces, but occasionally in crystals, of an indigo blue colour, and splendent internally.

CHABASITE. A mineral of a white or with a tinge of rose colour, and sometimes transparent.

CHACARI'LLA. See *Cascarilla.*

CHÆROFO'LIUM. (*um, ii.* n.) See *Scandix cerefolium.*

CHÆROPHYLLUM. (*um, i.* n. Χαιροφυλλον, from χαιρω, to rejoice, and φυλλον, a leaf: so called from the abundance of its leaves.) Chervil. 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia.*

2. The pharmacopœial name of some plants. See *Scandix*, and *Chærophyllum sylvestre.*

CHÆROPHYLLUM SYLVESTRE. The systematic name of the bastard hemlock, called, in the pharmacopœias, *Cicutaria. Chærophyllum —caule lævi striato; geniculis tumidiusculis*, of Linnæus. It is often mistaken for the true hemlock. It may with great propriety be banished from the list of officinals, as it possesses no remarkable property.

CHAFF. See *Palea.*

CHAFFY. See *Acerosus.*

CHÆ'TA. (From χεω, to be diffused.) An obsolete name of the human hair.

CHALA'SIS. (From χαλαω, to relax.) Relaxation.

CHALA'STICUS. (From χαλαω, to relax.) A medicine which relaxes.

CHALA'ZION. (*Chalazium, ii.* n.; from χαλαζα, a hail-stone.) *Chalaza.* An indolent, moveable tubercle on the margin of the eyelid, like a hail-stone. A species of hordeolum. It is that well-known affection of the eye, called a stye, or stian. It is white, hard, and encysted, and differs from the *crithe*, another species, only in being moveable. Writers mention a division of Chalazion into scirrhous, cancerous, cystic, and earthy.

CHA'LBANE. Χαλβανη. Galbanum.

CHALCA'NTHUM. (*um. i.* n.; from χαλκος, brass, and ανθος, a flower.) *Chalcanthon.* The flowers of brass. Vitriol; or rather vitriol calcined red.

CHALCEDONIUS. 1. The chalcedony.

2. A medicine used by Galen in disorders of the ears.

CHALCOI'DEUM OS. The cuneiform bone of the foot. See *Tarsus.*

CHALEITIS. See *Colcothar.*

CHALI'CRATUM. (From χαλις, an old word that signifies pure wine, and κεραννυμι, to mix.) Wine mixed with water.

CHALI'NOS. *Chalinus.* That part of the cheeks, which, on each side, is contiguous to the angles of the mouth.

CHALK. A very common species of calcareous earth, or carbonate of lime, of a white colour, which forms the white cliffs of our shores, and is found abundantly in most parts of the world.

CHALK, BLACK. Drawing slate, found in primitive mountains, and used in crayon drawing.

CHALK, RED. A clay, with oxide of iron.

CHALK-STONE. *Calculus podagricus.* A name given to the concretions in the hands and feet of people violently afflicted with the gout, from their resembling chalk, though chemically different. Dr. Wollaston first demonstrated their true composition to be uric acid combined with soda, and thus explained the mysterious pathological relation between gout and gravel.

Gouty concretions are soft and friable. They are insoluble in cold, but slightly in boiling water. An acid being added to this solution, seizes the soda, and the uric acid is deposited in small crystals. These concretions dissolve readily in water of potash. An artificial compound may be made by triturating uric acid and soda with warm water, which exactly resembles gouty concretions in its chemical constitution. See *Calculus.*

CHALY'BEATE. (*Chalybeatus*; from *chalybs*, iron, or steel.) Of or belonging to iron. Any medicine into which iron enters; as chalybeate mixture, pills, waters, &c., and any mineral water which abounds with iron; such as the water of Tunbridge, Spa, Pyrmont, Cheltenham, Scarborough, and Hartfel; and many others.

CHALYBIS RUBIGO PRÆPARATA. See *Ferri subcarbonas.*

CHA'LYBS. (Χάλυψ. *Chalybs, ybis.* m.; from *Chalybes*, a people in Pontus, who dug iron out of the earth.) The best, hardest, finest, and the closest-grained forged iron. See *Iron.*

CHALYBS TARTARIZATUS. See *Ferrum tartarizatum.*

CHAMA. (*a, æ.* f.; from χαω, to gape.) The cockle.

CHAMÆBA'LANUS. (*us, i.* m.; from χαμαι, on the ground, and βαλανος, a nut.) Wood pea; earth nut. Probably the *Orobus tuberosus* of Linnæus, or the *Bunium bulbocastanum*, and not the *Acharis.*

CHAMÆBU'XUS. (*us, i.* f.; from χαμαι, on the ground, and πυξος, the box-tree.) The dwarf box-tree. The *Polygala chamæbuxus* of Linnæus.

CHAMÆCE'DRUS. (*us, i.* f.; from χαμαι, on the ground, and κεδρος, the cedar-tree.) *Chamæcedrys.* A species of dwarf abrotanum.

CHAMÆCI'SSUS. (*us, i.* f.; from χαμαι, on the ground, and κισσος, ivy.) Ground-ivy.

CHAMÆCLE'MA. (*a, atis,* n.; from χαμαι, on the ground, and κλημα, ivy.) The ground-ivy.

CHAMÆCRISTA. (*a, æ.* f.; from χαμαι, on the ground, and *crista*, a plume or tuft.) The *Cassia chamæcrista* of Linnæus, a decoction of which, drank liberally, is said to be serviceable against the poison of the night-shade.

CHAMÆ'DRYS. (*ys, yos.* f.; from χαμαι, on the ground, and δρυς, the oak: so called from its leaves resembling those of the oak.) See *Teucrium chamædrys.*

CHAMÆDRYS FRUTESCENS. A name for some species of teucrium.

CHAMÆDRYS INCANA MARITIMA. See *Teucrium marum.*

CHAMÆDRYS PALUSTRIS. See *Teucrium scordium.*

CHAMÆDRYS SPURIA. See *Veronica officinalis.*

CHAMÆDRYS SYLVESTRIS. See *Veronica chamædrys.*

CHAMÆLE'A. (*a, æ.* f.; from χαμαι, on the ground, and ελαια, the olive-tree.) See *Daphne alpina.*

CHAMÆLÆA'GNUS. (From χαμαι, on the ground, and ελαιαγνος, the wild olive.) See *Myrica gale.*

CHAMÆ'LEON. (*on, ontis* and *onis.* m.; from χαμαι, on the ground, and λεων, a lion, *i. e.* dwarf lion.) 1. The chamæleon, an animal supposed to be able to change his colour at pleasure. See *Cameleon.*

2. The name of many thistles, so named from the variety and uncertainty of their colours.

CHAMÆLEON ALBUM. See *Carlina acaulis.*

CHAMÆLEON VERUM. See *Cnicus.*

CHAMÆLEU'CE. (*e, es.* f.; from χαμαι, on the ground, and λευκη, the herb colt's-foot.) See *Tussilago farfara.*

CHAMÆLI'NUM. (*um, i.* n.; from χαμαι, on the ground, and λινον, flax.) Purging flax. See *Linum catharticum.*

CHAMÆMELON. See *Chamæmelum.*

CHAMÆME'LUM. (*um, i.* n.; from χαμαι, on the ground, and μηλον, an apple: because it grows upon the ground, and has the smell of an apple.) See *Anthemis nobilis.*

CHAMÆMELUM CANARIENSE. The *Chrysanthemum frutescens* of Linnæus.

CHAMÆMELUM CHRYSANTHEMUM. The *Bupthalmum germanicum* of Linnæus.

CHAMÆMELUM FŒTIDUM. The *Anthemis cotula* of Linnæus.

CHAMÆMELUM NOBILE. See *Anthemis.*

CHAMÆMELUM VULGARE. See *Matricaria.*

CHAMÆ'MORUS. (*us, i.* f. Χαμαιμορεα; from χαμαι, on the ground, and μορεα, the mulberry-tree.) See *Rubus chamæmorus.*

CHAMÆPEU'CE. (*e, is.* f.; from χαμαι, on the ground, and πευκη, the pine-tree.) See *Camphorosma Monspeliensis.*

CHAMÆ'PITYS. (*ys, yos.* f.; from χαμαι, on the ground, and πιτυς, the pine-tree.) See *Teucrium chamæpitys.*

CHAMÆPITYS MOSCHATA. See *Teucrium iva.*

CHAMÆ'PLION. See *Erysimum.*

CHAMÆRA'PHANUS. (From χαμαι, on the ground, and ραφανος, the radish.) 1. The upper part of the root of apium, according to P. Ægineta.

2. The smallage, or parsley.

3. The dwarf radish.

CHAMÆ'RIPHES. (*Chamæropes*, more properly *Chamæriphes, um.* m. pl.) The *Chamærops humilis*, or dwarf palm.

CHAMÆRODODE'NDRON. (*um, i.* n.; from χαμαι, on the ground, and ροδοδενδρον, the rose laurel.) The *Azalæa pontica* of Linnæus.

CHAMÆROPS. (*ops, opis.* f.; from χαμαι, on the ground, and ρωψ, *virgulum.*) A species of germander. See *Teucrium.*

CHAMÆRUBUS. (*us, i.* m. and f.; from χαμαι, on the ground, and *rubus*, the bramble.) See *Rubus chamæmorus.*

CHAMÆSPA'RTIUM. (*um, ii.* n.; from χαμαι, on the ground, and σπαρτιον, Spanish broom.) See *Genista tinctoria.*

CHAMBER. *Camara.* The space between the capsule of the crystalline lens and the cornea of the eye, is divided by the iris into two spaces, called chambers: the space before the iris is termed the anterior chamber; and that behind it, the posterior. They are filled with an aqueous fluid. See *Eye.*

CHAMBERLEN, HUGH, a native of London, about the middle of the 17th century. He invented an instrument, the obstetric forceps, which greatly facilitated delivery in many cases, and often saved the child.

CHAMOMILE. See *Anthemis nobilis.*

Chamomile, stinking. See *Anthemis cotula.*

CHAMOMI'LLA. (*a, æ.* f.; from χαμαι, on the ground, and μηλον, an apple.) See *Anthemis nobilis.*

CHAMOMILLA NOSTRAS. See *Matricaria.*

CHAMOMILLA ROMANA. See *Anthemis.*

CHAMPIGNION. See *Agaricus pratensis.*

CHA'NCRE. (A French word.) A sore which arises from the direct application of the venereal poison to any part of the body. Of course it mostly occurs on the genitals. Such venereal sores as break out from a general contamination of the system, in consequence of absorption, never have the term chancre applied to them. See *Syphilis.*

Channelled. See *Canaliculatus.*

CHAOMA'NTIA SIGNA. So Paracelsus calls those prognostics that are taken from observations of the air; and the skill of doing this, he calls *Chaomancia.*

CHAO'SDA. Paracelsus uses this word as an epithet for the plague.

CHA'RABE. An Arabian name for amber.

CHARACTER. (*er, eris.* m.; χαρακτηρ, description, form.) This term is in general use in all the departments of science, and means an assemblage of marks, symptoms, &c. by which the thing is known and distinguished from others.

CHA'RADRA. (From χαρασσω, to excavate.) The bowels, or sink of the body.

CHARANTIA. See *Momordica elaterium.*

CHARCOAL. See *Carbon.*

CHA'RDONE. The artichoke.

CHARISTOLO'CHIA. (*a, æ.* f.; from χαρις, joy, and λοχια, the lochia: so named from its supposed usefulness to women in childbirth.) See *Artemisia vulgaris.*

CHARLTON, WALTER, born in Somersetshire, 1619, was physician to Charles I., and was one of the first members of the Royal Society. He was author of *Exercitationes Pathologicæ*, and *Natural History of Nutrition, Life*, and *voluntary Motion.* He died in 1707.

CHA'RME. (From χαιρω, to rejoice.) *Charmis.* A cordial mentioned by Galen.

CHA'RPIE. The French for scraped linen, or lint.

CHARR. See *Salmo alpinus.*

CHA'RTA. (*a, æ.* f.; Chaldean.)

1. Paper.

2. The amnios, or interior fœtal membrane, was called the *charta virginea*, from its likeness to a piece of fine paper.

CHA'RTREUX, POUDRE DE. (So called because it was said to have been invented by some friars of the Carthusian order.) A hydrosulphuret of antimony.

CHA'SME. (From χαινω, to gape.) *Chasmus.* Oscitation or gaping.

CHASTE TREE. See *Agnus castus.*

CHA'TE. The *Cucumus ægyptia.*

Chay. See *Oldenlandia umbellata.*

Chaya. See *Oldenlandia umbellata.*

CHEEK BONE. See *Jugale os.*

CHEESE. *Caseus.* The coagulum of milk, obtained by a mixture of rennet, vegetable or mineral acids, and other substances, which have the property of coagulating milk. When prepared from rich milk, and well made, it is very nutritious in small quantities; but mostly indigestible when hard and ill prepared, especially to weak stomachs.

CHEILOCA'CE. (*e, es.* f.; from χειλος, a lip, and κακον, an evil.) A swelling of the lips, or canker in the mouth.

CHEIME'LTON. (From χειμα, winter.) A chilblain. See *Pernio.*

CHEIRA'NTHUS. (*us, i.* m.; from χειρ, a hand, and ανθος, a flower: so named from the likeness of its blossoms to the fingers of the hand.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliquosa.*

CHEIRANTHUS CHEIRI. The systematic name of the wall-flower; called also *Leucoium luteum*, and *Viola lutea.* The flowers of this plant, *Cheiranthus—foliis lanceolatis, acutis, glabris; ramis angulatis; caule fruticoso*, of Linnæus, are recommended as possessing nervine and deobstruent virtues. They have a moderately strong, pleasant smell, and a nauseous, bitter, somewhat pungent taste.

CHEIRA'PSIA. (*a, æ.* f.; from χειρ, the hand, and απτομαι, to touch.) The act

of scratching; particularly the scratching one hand with another, as in the itch.

CHEI'RI. (An Arabian word, or from χειρ, the hand; so called from the resemblance of the flowers to the fingers.) 1. See *Cheiranthus Cheiri.*

2. In old alchemistical and chemical books applied, from the colour, to cinnabar, and some other metallic salts.

CHEIRIA'TER. (From χειρ, the hand, and ιατρος, a physician.) A surgeon whose office it is to remove maladies by operations of the hand.

CHEIRI'SMA. (*a, æ.* f.; from χειριζομαι, to labour with the hand.) 1. Handling.

2. A manual operation.

CHEIRI'XIS. (*is, is.* f.; from χειριζομαι, to labour with the hand.) The art of surgery.

CHEIRONO'MIA. (*a, æ.* f.; from χειρονομεω, to exercise with the hands.) An exercise mentioned by Hippocrates, which consisted of gesticulations with the hands, like our dumb-bells.

CHE'LA. (*a, æ.* f. Χηλη, *forceps;* from χεω, to take.) 1. A forked probe, for drawing a polypus out of the nose.

2. A fissure in the feet, or other places.

3. The claw of crabs, which lays hold like forceps.

CHELÆ CANCRORUM. See *Cancer.*

CHELI'DON. (*on, onis.* n.) 1. The bend of the arm.

2. The swallow.

CHELIDO'NIUM. (*um, ii.* n.; from χελιδων, the swallow: so named from an opinion that it was pointed out as useful for the eyes by swallows, who are said to open the eyes of their young by it; or because it blossoms about the time when swallows appear.) 1. A genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Monogynia.*

2. The herb celandine.

CHELIDONIUM MAJUS. Tetterwort, and great celandine; called, in some pharmacopœias, *Papaver corniculatum, luteum; Curcum.* The herb and root of this plant, *Chelidonium—pedunculis umbellatis,* of Linnæus, have a faint, unpleasant smell, and a bitter, acrid, durable taste, which is stronger in the roots than the leaves. They are aperient and diuretic, and recommended in icterus, when not accompanied with inflammatory symptoms. The chelidonium should be administered with caution, as it is liable to irritate the stomach and bowels. Of the dried root, from ʒss. to ʒj. is a dose; of the fresh root, infused in water, or wine, the dose may be about ℥ss. The decoction of the fresh root is used in dropsy, cachexy, and cutaneous complaints. The fresh juice is used to destroy warts, and films in the eyes; but, for the latter purpose, it is diluted with milk.

CHELIDONIUM MINUS. See *Ranunculus ficaria.*

CHELO'NE. (*e, es.* f. Χελωνη.) 1. The tortoise.

2. An instrument for extending a limb, and so called because, in its slow motions, it represents a tortoise. This instrument is mentioned in Oribasius.

CHELO'NION. (From χελωνη, the tortoise; so called from its resemblance to the shell of a tortoise.) A hump, or gibbosity in the back.

CHELTENHAM. The name of a village, now become a large and populous town, in Gloucestershire. It is celebrated for its purging waters, the reputation of which is daily increasing, as it possesses both a saline and chalybeate principle. When first drawn, it is clear and colourless, but somewhat brisk; has a saline, bitterish, chalybeate taste. It does not keep, nor bear transporting to any distance; the chalybeate part being lost by precipitation of the iron, and in the open air it even turns fœtid. The salts, however, remain. Its heat in summer was from 50° to 55° or 59°, when the medium heat of the atmosphere was nearly 15° higher. On evaporation, it is found to contain a calcareous earth, mixed with ochre and a purging salt. A general survey of the component parts of this water, according to a variety of analyses, shows that it is decidedly saline, and contains much more salt than most mineral waters. By far the greater part of the salts are of a purgative kind, and therefore an action on the bowels is a constant effect, notwithstanding the considerable quantity of selenite and earthy carbonates, which may be supposed to have a contrary tendency. Cheltenham water is, besides, one of the strongest chalybeates we are acquainted with. The iron is suspended entirely by the carbonic acid, of which gas the water contains about an eighth of its bulk; but, from the abundance of earthy carbonates, and oxide of iron, not much of it is uncombined. It has, besides, a slight impregnation of sulphur, but so little as to be scarcely appreciable, except by very delicate tests. The sensible effects produced by this water, are generally, on first taking it, a degree of drowsiness, and sometimes headach, but which soon go off spontaneously, even previous to the operation on the bowels. A moderate dose acts powerfully, and speedily, as a cathartic, without occasioning griping, or leaving that faintness and languor which often follow the action of the rougher cathartics. It is principally on this account, but partly too from the salutary operation of the chalybeate, and perhaps the carbonic acid, that the Cheltenham water may be, in most cases, persevered in, for a considerable length of time, uninterruptedly, without producing any inconvenience to the body; and during its use, the appetite will be improved, the digestive organs strengthened, and the whole constitution invigorated. A dose of this water, too small to operate directly on the bowels, will generally determine pretty powerfully to the kidneys. As a purge, this water is drank from one to three

pints; in general, from half a pint to a quart is sufficient. Half a pint will contain half a drachm of neutral purging salts, four grains of earthy carbonates, and selenite, about one third of a grain of oxide of iron; together with an ounce in bulk of carbonic acid, and half an ounce of common air, with a little sulphuretted hydrogene. Cheltenham water is used, with considerable benefit, in a number of diseases, especially of the chronic kind, and particularly those called bilious: hence it has been found of essential service in the cure of glandular obstructions, and especially those that affect the liver, and the other organs connected with the functions of the alimentary canal. Persons who have injured their biliary organs, by a long residence in hot climates, and who are suffering under the symptoms, either of excess of bile or deficiency of bile, and an irregularity in its secretion, receive remarkable benefit from a course of this water, judiciously exhibited. Its use may be here continued, even during a considerable degree of debility; and, from the great determination to the bowels, it may be employed with advantage to check the incipient symptoms of dropsy, and general anasarca, which so often proceed from an obstruction of the liver. In scrophulous affections, the sea has the decided preference; in painful affections of the skin, called scorbutic eruptions, which make their appearance at stated intervals, producing a copious discharge of lymph, and an abundant desquamation, in common with other saline purgative springs, this is found to bring relief; but it requires to be persevered in for a considerable time, keeping up a constant determination to the bowels, and making use of warm bathing. The season for drinking the Cheltenham water is during the whole of the summer months.

CHE'LYS. (*ys, yos.* f. Χελυς, a shell.) The breast is so called, as resembling, in shape and office, the shell of some fishes.

CHELY'SCION. (From χελυς, the breast.) A dry, short cough, in which the muscles of the breast are very sore.

CHE'MA. A measure mentioned by the Greek physicians, supposed to contain two small spoonfuls.

CHE'MIA. (*a, æ.* f.; from χεω.) See *Chemistry.*

CHE'MICAL. Of or belonging to chemistry.

CHEMICUS. A chemist.

CHEMISTRY. (*Chemia, æ.* f. Χυμια, and sometimes χημια. *Chamia*, from *chama*, to burn, Arab., this science being the examination of all substances by fire.) *Chimia, Chymia.* The learned are not yet agreed as to the most proper definition of chemistry. Boerhaave seems to have ranked it among the arts. According to Macquer, it is a science, the object of which is to discover the nature and properties of all bodies by their analysis and combinations. Dr. Black says, it is a science which teaches, by experiments, the effects of heat and mixture on bodies; and Fourcroy defines it a science which teaches the mutual actions of all natural bodies on each other. "Chemistry," says Jacquin, "is that branch of natural philosophy which unfolds the nature of all material bodies, determines the number and properties of their component parts, and teaches us how those parts are united, and by what means they may be separated and recombined." Mr. Heron defines it, "that science which investigates and explains the laws of that attraction which takes place between the minute component particles of natural bodies." Dr. Ure's definition is, "the science which investigates the composition of material substances, and the permanent changes of constitution which their mutual actions produce." The objects to which the attention of chemists is directed, comprehend the whole of the substances that compose the globe.

CHEMO'SIS. (*is, eos.* f.; from χαινω, to gape: because it gives the appearance of a gap, or aperture.) Inflammation of the conjunctive membrane of the eye, in which the white of the eye is distended with blood, and elevated above the margin of the transparent cornea. See *Ophthalmitis.*

CHENOCOPRUS. (From χην, a goose, and κοπρος, dung.) Goose-dung; which was formerly given, when dried, in the dose of half a drachm to a drachm, as a powerful resolvent and diuretic, and particularly against jaundice!

CHENOPODIO-MORUS. (From *chenopodium*, and *morus*, the mulberry; so called, because it is a sort of chenopodium, with leaves like a mulberry.) The herb mulberry-blight. The *Blitum capitatum* of Linnæus.

CHENOPO'DIUM. (*um, ii.* n.; from χην, a goose, and πους, a foot: so called from its supposed resemblance to a goose's foot.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*. The herb chenopody: goose's foot.

CHENOPODIUM AMBROSIOIDES. The systematic name of the Mexican tea-plant. Mexico tea, Spanish tea, and Artemisian botrys. *Botrys Mexicana, Botrys ambrosioides Mexicana, Chenopodium Mexicanum, Botrys Americana.*

Chenopodium — foliis lanceolatis dentatis, racemis foliatis simplicibus, of Linnæus. A decoction of this plant is recommended in paralytic cases. Formerly the infusion was drank instead of Chinese tea.

CHENOPODIUM ANTHELMINTICUM. The seeds of this plant, *Chenopodium — foliis ovato-oblongis dentatis, racemis aphyllis*, of Linnæus, though in great esteem in America, for the cure of worms, are seldom exhibited in this country. They are powdered and made into an electuary, with any proper syrup, or conserve.

CHENOPODIUM BONUS HENRICUS. The systematic name of the English mercury. Called also, *Tota bona*, and *Lapathum unctuosum.*

Chenopodium—*foliis triangulari-sagittatis, integerrimis, spicis compositis aphyllis axillaribus*, of Linnæus. The plant to which these names are given, is a native of this country, and common in waste grounds from June to August. It differs little from spinach when cultivated; and in many places the young shoots are eaten in spring like asparagus. The leaves are accounted emollient, and have been made an ingredient in decoctions for glysters. They are applied by the common people to flesh wounds and sores, under the notion of drawing and healing.

Chenopodium botrys. The systematic name of the Jerusalem oak; called also, *Botrys*, *Botrys vulgaris*, *Ambrosia*, *Artemisia chenopodium*, *Atriplex odorata*, and *suaveolens*. *Chenopodium*—*foliis oblongis sinuatis, racemis nudis multifidis*, of Linnæus. This plant was formerly administered in form of decoction in some diseases of the chest; as humoral asthma, coughs, and catarrhs. It is now fallen into disuse.

Chenopodium fœtidum. See *Chenopodium vulvaria*.

Chenopodium vulvaria. The systematic name for the stinking orach; called, in some pharmacopœias, *Atriplex fœtida*, *Atriplex olida*, *Vulvaria*, *Garosmum*, *Raphex*, *Chenopodium fœtidum*, and *Blitum fœtidum*. The very fœtid smell of this plant, *Chenopodium*—*foliis integerrimis rhombeo ovatis, floribus conglomeratis axillaribus*, of Linnæus, induced physicians to exhibit it in hysterical diseases. It is now superseded by more active preparations. Messrs. Chevalier and Lassaigne have detected ammonia in this plant in an uncombined state, which is probably the vehicle of the remarkably nauseous odour which it exhales, strongly resembling that of putrid fish. When the plant is bruised with water, and the liquor expressed, and afterwards distilled, we procure a fluid which contains the subcarbonate of ammonia, and an oily matter, which gives the fluid a milky appearance. If the expressed juice of the chenopodium be evaporated to the consistence of an extract, it is found to be alkaline; there seems to be acetic acid in it. Its basis is said to be of an albuminous nature. It is stated also to contain a small quantity of the substance which the French call osmazome, a little of an aromatic resin, and a bitter matter, soluble both in alkohol and water, as well as several saline bodies.

Chenopus. The same as chenopodium.

Che'ras. (From χεω, to pour out.) An obsolete name of struma, or scrophula.

Cherefo'lium. See *Chæræphyllum*.

CHE'RMES. See *Kermes*.

Cherni'bium. *Chernobion*. In Hippocrates it signifies an urinal.

Chero'nia. See *Chironia*.

CHERRY. See *Prunus cerasus*.

Cherry, bay. See *Prunus*.

Cherry-laurel. See *Prunus*.

Cherry, winter. See *Physalis*.

CHERVIL. See *Scandix cerefolium*.

CHERVI'LLUM. (*um, i.* n.) See *Scandix cerefolium*.

CHESELDEN, William, was born in Leicestershire, 1688. After serving his apprenticeship to a surgeon at Leicester, he came to study at St. Thomas's Hospital, to which he afterwards became surgeon. He began to give lectures at the early age of 22, and two years after he published his *Anatomical Description of the Human Body*, with some select cases in surgery, which passed through several editions; in one of which he detailed his success in the operation of lithotomy by the lateral method, as it is termed, which he found not so liable to failure as the high operation. He also gave, in the Philosophical Transactions, an interesting account of a grown person whom he restored to sight after being blind from infancy; and furnished some other contributions to the same work.

CHESTNUT. See *Æsculus* and *Fagus*.

Chestnut, horse. See *Æsculus hippocastanum*.

Chestnut, sweet. See *Fagus castanea*.

Cheu'sis. (From χεω, to pour out.) Infusion. Obsolete.

CHEVA'STER. *Chevastre*. A double-headed roller, applied by its middle below the chin; then running on each side, it is crossed on the top of the head; then passing to the nape of the neck, is there crossed; it then passes under the chin, where crossing, it is carried to the top of the head, &c. until it is all taken up.

CHEYNE, George, was born in Scotland, 1670. After graduating, he came to London, at the age of 30, and published a Theory of Fevers, and five years after a work on Fluxions. In 1722, he wrote a treatise on the gout, &c., and two years after greatly enlarged on the same subject, in his celebrated "Essay on Health and Long Life." His "English Malady, or Treatise on Nervous Diseases," which he regarded as especially prevalent in this country, a very popular work, was published in 1733.

CHEZANA'NCE. (From χεζω, to go to stool, and αναγκη, necessity.) 1. Any thing that creates a necessity to go to stool.

2. In P. Ægineta, it is the name of an ointment, with which the anus is to be rubbed, for promoting stools. Obsolete.

CHI'A. (*a, æ.* f.; from Χιος, an island where they were formerly propagated.)

1. A sweet fig of the island of Cyprus, Chio, or Scio.

2. An earth from the island of Chio, formerly used in fevers.

3. A species of turpentine. See *Pistachia terebinthus*.

Chi'acus. (From Χιος, the island of Scio.) An epithet of a collyrium, the chief ingredient of which was wine of Chios.

Chi'adus. In Paracelsus it signifies the same as furunculus.

Chia'smus. See *Chiastre*.

CHIASTOLITE. A mineral found in Britany and Spain, somewhat like steatite.

CHIA'STOS. See *Chiastre.*

CHIA'STRE. (*Chiasmus, i.* m.; from χιαζω, to form like the Greek letter χ, chi.) *Chiastos.* The name of a bandage for the temporal artery. It is a double-headed roller, the middle of which is applied to the side of the head, opposite to that in which the artery is opened, and, when brought round to the part affected, it is crossed upon the compress that is laid upon the wound, and then, the continuation is over the coronal suture, and under the chin; then crossing on the compress, the course is, as at the first, round the head, &c. till the whole roller is taken up.

CHI'BOU. A spurious species of gum elemi, spoken of by the faculty of Paris, but not known in England.

CHI'BUR. Sulphur.

CHICHI'NA. Contracted from China chinæ. See *Cinchona.*

CHICKEN. The young of the gallinaceous order of birds, especially of the domestic fowl. See *Phasianus gallus.*

CHICKEN-POX. See *Varicella.*

CHICK-WEED. See *Alsine media.*

CHICOYNEAU, FRANCIS, was born at Montpelier in 1672. He published in 1721, in conjunction with the other physicians, an account of the *Plague at Marseilles*, in which the opinion is advanced, that the disease was not contagious.

CHI'LBLAIN. See *Pernio.*

Child-bed Fever. See *Puerperal fever.*

CHI'LI, BALSAMUM DE. Salmon speaks, but without any proof, of its being brought from Chili. The Barbadoes tar, in which are mixed a few drops of the oil of aniseed, is usually sold for it.

CHILIODY'NAMON. (From χιλιοι, a thousand, and δυναμις, virtue.) The name in Dioscorides for an herb, given on account of its many virtues. It is very probably the wood sage, or *Teucrium scorodonia* of Linnæus.

CHILIOPHYLLON. (From χιλιοι, a thousand, and φυλλον, a leaf, because of the great number of leaflets.) See *Achillea millefolium.*

CHI'LON. (Χειλων, from χειλος, the lip.) An inflamed and swelled lip.

CHILPELA'GUA. A variety of capsicum.

CHIME'THLON. A chilblain.

CHI'MIA. Chemistry.

CHIMIA'TER. See *Chymiater.*

CHIMO'LEA LAXA. Paracelsus means, by this word, the sublimed powder which is separated from the flowers of saline ores.

CHI'NA. (*a, æ.* f.; so named because it comes from China.) See *Smilax China.*

CHINA CHINÆ. The Peruvian bark.

CHINA OCCIDENTALIS. American or West Indian China. *China spuria nodosa. Smilax pseudo-China. Smilax Indica spinosa.* This root is chiefly brought from Jamaica, in large round pieces full of knots. In scrophulous disorders, it has been preferred to the oriental kind. In other cases it is of similar but inferior virtue.

CHINA SUPPOSITA. See *Senecio pseudochina.*

CHINCHI'NA. See *Cinchona.*

CHINCHI'NA CARIBÆA. See *Cinchona Caribæa.*

CHINCHINA DE SANTA FE'. There are several species of bark sent from Santa Fé; but neither their particular natures, nor the trees which afford them, are yet accurately determined.

CHINCHINA DE ST. LUCIA. See *Cinchona floribunda.*

CHINCHINA JAMAICENSIS. See *Cinchona Caribæa.*

CHINCHINA RUBRA. See *Cinchona oblongifolia.*

CHINCOUGH. See *Pertussis.*

CHINE'NSIS. Chinese: applied to articles which come from China. See *Citrus aurantium.*

Chinese Smilax. See *Smilax China.*

Chio turpentine. See *Pistacia terebinthus.*

CHI'OLI. In Paracelsus it is synonymous with furunculus. A boil.

CHIRÆ. (*Chiræ.* pl. *Celsus.*) Eruptions on the feet. Hence Celsus observes, those who have them are called *Chiropedes.*

CHIRA'GRA. (*a, æ.* f.; from χειρ, the hand, and αγρα, a seizure.) The gout in the joints of the hands. See *Arthritis.*

CHIRO'NES. (From χειρ, the hand.) Small pustules on the hand and feet; variously described by the ancients.

CHIRO'NIA. (*a, æ.* f.; from *Chiron*, the centaur, who discovered its use.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia.*

2. (From χειρ, the hand.) An affection of the hand, where it is troubled with chirones.

CHIRONIA CENTAURIUM. The systematic name of the officinal centaury: called also, *Centaurium minus vulgare, Centaurium parvum, Centaurium minus*, and *Libadium.*

Chironia — corollis quinquefidis infundibuliformibus, caule dichotomo, pistillo simplici, of Linnæus. This plant is justly esteemed to be the most efficacious bitter of all the medicinal plants indigenous to this country. It has been recommended, by Cullen, as a substitute for gentian, and by several is thought to be a more useful medicine. The tops of the centaury plant, or *cacumina*, are directed for use by the colleges of London and Edinburgh, and are most commonly given in infusion; but they may also be taken in powder, or prepared into an extract.

CHIRO'NIUM. (From Χειρων, the centaur, who is said to have been the first who healed it.) A malignant ulcer, callous on its edges, and difficult to cure.

CHIROPEDES. (*es, edis.* f.) See *Chiræ.*

CHIROTHE'CA. (*a, æ.* f.; from χειρ, the hand, and τιθημι, to put.) A glove of the scarfskin, with the nails, which is brought off from the dead subject, after the cuticle is

loosened, by putrefaction, from the parts under it.

CHIR'URGIA. (*a, æ.* f.; from χειρ, the hand, and εργον, a work: because surgical operations are performed by the hand.) Chirurgery, or surgery.

CHIRURGICE. (*e, es.* f.; from χειρ, the hand, and εργον, a work.) Surgery.

CHIRURGICUS. Surgical: appertaining to surgery.

CHIRURGUS. (*us, i.* m.; from χειρ, the hand, and εργον, a work, or performance.) A surgeon.

CHI'TON. Χιτων. A coat, or membrane.

CHI'UM. (From Χιος, the island where it was produced.) A wine made at Scio.

CHIVALRY. See *Alusia.*

CHIVE. See *Stamen.*

CHLIA'SMA. (From χλιαινω, to make warm.) A warm fomentation.

CHLORA'SMA. (From χλωρος, green.) See *Chlorosis.*

CHLORATE. (*Chloras, atis.* f.) A compound of chloric acid with a salifiable basis. The chlorates of soda, potash, and lime, are used in medicine.

CHLORATE OF LIME. *Calcis chloras.* This is extremely deliquescent, liquefies at a low heat, is very soluble in alkohol, produces much cold in solution, and has a sharp bitter taste. The chlorates and chlorides of lime and soda are found to possess great power in destroying the infection and contagion of diseases. They are to be diluted with pure water, and the weak solution is to be sprinkled about the floor, and the woollen and other clothes very frequently.

CHLORATE OF POTASH. *Potassæ chloras.* This salt has been long known, and may be procured by receiving chlorine, as it is formed, into a solution of potash. When the solution is saturated, it may be evaporated gently, and the first crystals produced will be the salt desired, this crystallising before the simple muriate, which is produced at the same time with it. Its crystals are in shining hexaëdral laminæ, or rhomboidal plates.

The effects of this salt on inflammable bodies are very powerful. Rub two grains into powder in a mortar, add a grain of sulphur, mix them well by gentle trituration, then collect the powder into a heap, and press upon it suddenly and forcibly with the pestle, a loud detonation will ensue. If the mixture be wrapped in strong paper, and struck with a hammer, the report will be still louder. Five grains of the salt, mixed in the same manner with two and a half of charcoal, will be inflamed by strong trituration, especially if a grain or two of sulphur be added, but without much noise. If a little sugar be mixed with half its weight of the chlorate, and a little strong sulphuric acid poured on it, a sudden and vehement inflammation will ensue; but this experiment requires caution, as well as the following:—To one grain of the powdered salt in a mortar, add half a grain of phosphorus; it will detonate, with a loud report, on the gentlest trituration. In this experiment the hand should be defended by a glove, and great care should be taken that none of the phosphorus get into the eyes. Phosphorus may be inflamed by it under water, putting into a wine-glass one part of phosphorus and two of the chlorate, nearly filling the glass with water, and then pouring in, through a glass tube reaching to the bottom, three or four parts of sulphuric acid. This experiment, too, is very hazardous to the eyes. If olive or linseed oil be taken instead of phosphorus, it may be inflamed by similar means on the surface of the water. This salt should not be kept mixed with sulphur, or perhaps any inflammable substance, as in this state it has been known to detonate spontaneously. As it is the common effect of mixtures of this salt with inflammable substances of every kind, to take fire on being projected into the stronger acids, Chenevix tried the experiment with it, mixed with diamond powder in various proportions, but without success.

CHLORATE OF SODA. *Sodæ chloras.* This may be prepared in the same manner as the chlorate of potash, by substituting soda for potash; but it is not easy to obtain it separate, as it is nearly as soluble as the muriate of soda, requiring only 3 parts of cold water. In its other properties it resembles the chlorate of potash.

CHLORIC. (*Chloricus,* from *chlorium.*) Of or belonging to chlorine.

CHLORIC ACID. *Acidum chloricum.* This acid is without colour and smell; its taste is very acid, and it reddens litmus without destroying the colour. M. Vauquelin says its taste is not only acid, but astringent, and its odour, when concentrated, is somewhat pungent. It differs from chlorine, in not precipitating gelatine.

Chloric acid combines with the bases, and forms the *chlorates,* a set of salts formerly known by the name of the *hyperoxygenated muriates.* They may be formed either directly, by saturating the alkali or earth with the chloric acid, or by the old process of transmitting chlorine through the solutions of the bases, in Woolf's bottles. In this case the water is decomposed. Its oxygene unites to one portion of the chlorine, forming chloric acid, while its hydrogene unites to another portion of chlorine, forming muriatic acid; and hence, chlorates and muriates must be contemporaneously generated, and must be afterwards separated by crystallisation, or peculiar methods.

CHLORIC OXIDE. *Oxydum chlorii.* Deutoxide of chlorine. This gas has a much more intense colour than euchlorine. Water absorbs more of it than euchlorine. Its taste is astringent. It destroys vegetable blues without reddening them. It has a peculiar aromatic odour, unmixed with any smell of chlorine. It has not yet been applied to any use in the cure of diseases. A little chlorine

is always absorbed by the mercury during the explosion of the gas. Hence the small deficiency of the resulting measure is accounted for. At common temperatures, none of the simple combustibles which Sir H. Davy tried decomposed the gas, except phosphorus. The taste of the aqueous solution is extremely astringent and corroding, leaving for a long while a very disagreeable sensation. The action of liquid nitric acid on the chlorate of potash affords the same gas, and a much larger quantity of this acid may be safely employed than of the sulphuric. But as the gas must be procured by solution of the salt, it is always mixed with about one fifth of oxygene.

CHLORIDE. A compound of chlorine with different bodies.

Chloride of azote. See *Nitrogene.*

Chloride of lime. See *Chlorate of lime.*

Chloride of soda. See *Chlorate of soda.*

CHLORINE. See *Chlorium.*

CHLORIODATE. (*Chloriodas, atis.* f.; so called, because chlorium is a necessary component part.) A compound of the chloriodic acid, with a salifiable basis.

Chloriode acid. *Acidum chloriodatum.* See *Chloriodic acid.*

CHLORIODIC. (*Chloriodicus,* a compound of *chlorium* and iodium.) Of or belonging to the compound of chlorium and iodium.

Chloriodic acid. *Acidum chloriodicum.* An acid composed of chlorine and iodine; formed by admitting chlorine in excess to known quantities of iodine, in vessels exhausted of air, and repeatedly heating the sublimate. It is a very volatile substance, of a bright yellow colour.

CHLORITE. A mineral, usually friable, or very easy to pulverize, composed of a multitude of little spangles, or shining small grains, falling to powder under the pressure of the fingers.

CHLO'RIUM. (*um, i.* n.; from χλωρος, green: so applied, from its colour. Chlorine. The introduction of this term originated from the researches of Sir H. Davy on the oxymuriatic acid gas of the French school; a substance which, after resisting the most powerful means of decomposition which he could invent, he declared to be an elementary body, and not a compound of muriatic acid and oxygene, as was previously imagined, and as its name seemed to denote. He accordingly assigned to it the term chlorine, descriptive of its colour. The following is a summary view of the preparation and properties of chlorium:—

Mix in a mortar 3 parts of common salt and 1 of black oxide of manganese. Introduce them into a glass retort, and add 2 parts of sulphuric acid. Gas will issue, which must be collected in the water-pneumatic trough. A gentle heat will favour its extrication. In practice, the above pasty-consistenced mixture is apt to boil over into the neck. A mixture of liquid muriatic acid and manganese is therefore more convenient for the production of chlorium. A very slight heat is adequate to its expulsion from the retort. Instead of manganese, red oxide of mercury, or puce-coloured oxide of lead, may be employed.

This gas is of a greenish yellow colour, easily recognised by day-light, but scarcely distinguishable by that of candles. Its odour and taste are disagreeable, strong, and so characteristic, that it is impossible to mistake it for any other gas. When we breathe it, even much diluted with air, it occasions a sense of strangulation, constriction of the chest, and a copious discharge from the nostrils. If respired in larger quantity, it excites violent coughing, with spitting of blood, and would speedily destroy the individual, amid violent distress. Its sp. gr. is 2·4733. In its perfectly dry state, it has no effect on dry vegetable colours. With the aid of a little moisture, it bleaches them into a yellowish-white.

If a lighted wax taper be immersed rapidly into this gas, it consumes very fast, with a dull reddish flame, and much smoke. The taper will not burn at the surface of the gas. Hence, if slowly introduced, it is apt to be extinguished.

The alkaline metals, as well as copper, tin, arsenic, zinc, antimony, in fine laminæ or filings, spontaneously burn in chlorine. *Metallic chlorides* result.

Phosphorus also takes fire at ordinary temperatures, and is converted into a chloride.

Sulphur may be melted in the gas without taking fire. It forms a liquid chloride, of a reddish colour.

Water, with $1\frac{1}{2}$ times its volume of chlorine, forms *aqueous* chlorine, formerly called liquid *oxymuriatic acid.* This combination is best made in the second bottle of a Woolf's apparatus, the first being charged with a little water, to intercept the muriatic acid gas, while the third bottle may contain potash-water, or milk of lime, to condense the superfluous gas. It should be kept in a dark place.

Aqueous chlorine attacks almost all the metals at an ordinary temperature, forming muriates or chlorides, and heat is evolved.

A mixture of chlorine and *hydrogene* forms *muriatic acid gas.* See *Muriatic acid.*

Chlorine and *nitrogene* combine into a remarkable detonating compound.

Chlorine is the most powerful agent for destroying contagious *miasmata.* The disinfecting phials of Morveau evolve this gas."—*Ure.*

CHLOROCARBONIC. (*Chlorocarbonicus:* so called, because it is a compound of carbon and chlorine.) Of or belonging to the compound of chlorine and carbon.

Chlorocarbonic acid. *Acidum chlorocarbonium.* This acid is a compound of the protoxide of carbon with chlorine. Chlorine has no immediate action on carbonic oxide, when they are exposed to each other in common day-light over mercury:

not even when the electric spark is passed through them. But they combine rapidly when exposed to the direct solar beams; and one volume of each is condensed into one volume of the compound. The resulting gas possesses very curious properties, approaching to those of an acid. From the peculiar potency of the sunbeam in effecting this combination, Dr. Davy called it *phosgene gas*. It has not yet been applied to any medical use.

CHLOROCYANIC. (*Chlorocyanicus:* so called, from its being a compound of chlorine and hydrocyanic acid.) Appertaining to the compound of chlorine and prussic acid.

CHLOROCYANIC ACID. *Acidum chlorocyanicum.* An acid composed of hydrocyanic acid and chlorine.

CHLOROPHANE. A violet fluor spar, found in Siberia.

CHLOROPHILE. (*Chlorophyllum;* from χλωρος, green, and φυλλον, a leaf.) The name lately given, by Pelletier and Caventou, to the green matter of the leaves of plants. It is supposed to be a peculiar proximate principle.

CHLOROPRUSSIC. (*Chloroprussicus:* so called, because it is a compound of chlorine and prussic acid.) Of or belonging to the compound of chlorine and prussic acid. See *Chlorocyanic acid.*

CHLOROPRUSSIC ACID. See *Chlorocyanic acid.*

CHLORO'SIS. (*is, is.* f.; from χλωρος, green, pale; from χλοα, or χλοη, *herba virens:* and hence χλωρασμα and χλωριασις, *viror, pallor:* so called, from the yellow-greenish look those have who are affected with it.) The green sickness. Love sickness. A disease which affects young females who labour under a retention or suppression of the menses. Heaviness, listlessness to motion, fatigue on the least exercise, palpitations of the heart, pains in the back, loins, and hips, flatulency and acidities in the stomach and bowels, a preternatural appetite for chalk, lime, and various other absorbents, together with many dyspeptic symptoms, usually attend on this disease. As it advances in its progress, the face becomes pale, or assumes a yellowish hue: the whole body is flaccid, and likewise pale; the feet are affected with œdematous swellings; the breathing is much hurried by any considerable exertion of the body; the pulse is quick, but small; and the person is apt to be affected with many of the symptoms of hysteria. To procure a flow of the menses, proves in some cases a very difficult matter; and where the disease has been of long standing, various morbid affections of the viscera are often brought on, which at length prove fatal. Dissections of those who have died of chlorosis, have usually shown the ovaria to be in a scirrhous, or dropsical state. In some cases, the liver, spleen, and mesenteric glands, have likewise been found in a diseased state.

The cure is to be attempted by increasing the tone of the system, and exciting the action of the uterine vessels. The first may be effected by a generous nutritive diet, with the moderate use of wine; by gentle and daily exercise, particularly on horseback; by agreeable company, to amuse and quiet the mind; and by tonic medicines, especially the preparations of iron, joined with myrrh, &c. Griffith's chalybeate, which is a compound of these, is very generally used, and with great success. See *Mistura ferri composita,* and the *Pillulæ ferri compositæ.* Bathing will likewise help much to strengthen them, if the temperature of the bath be made gradually lower, as the patient bears it; and sometimes drinking the mineral chalybeate waters may assist. The bowels must be kept regular, and occasionally a gentle emetic will prepare for the tonic plan. The other object of stimulating the uterine vessels may be attained by the exercises of walking and dancing; by frequent friction of the lower extremities; by the pediluvium, hip-bath, &c.; by electric shocks, passed through the region of the uterus; by active purgatives, especially those formulæ containing aloes, which acts particularly on the rectum. These means may be resorted to with more probability of success, when there appear efforts of the system to produce the discharge, the general health having been previously improved. Various remedies have been dignified with the title of emmenagogues, though mostly little to be depended on, as madder, &c. In obstinate cases, the tinctura cantharidis, or savine, may be tried, but with proper caution, as the most likely to avail.

CHLOROUS. (*Chlorosus,* from *chlorium.*) Of or belonging to chlorine.

CHLOROUS ACID. *Acidum chlorosum.* From the absorbability of the chlorous oxide by water, from the strongly acrid taste of the solution, approaching to sour, and its giving a red tint to vegetable blues, it is considered as approaching to an acid in its nature.

CHLOROUS OXIDE. *Oxidum chlorii.* Euchlorine. Protoxide of chlorine. To prepare it, put chlorate of potash into a small retort, and pour in twice as much muriatic acid as will cover it, diluted with an equal volume of water. By the application of a gentle heat, the gas is evolved. It must be collected over mercury.

Its tint is much more lively, and more yellow than chlorine; and hence its discoverer named it *euchlorine.* Its smell is peculiar, and approaches to that of burnt sugar. It is not respirable. It is soluble in water, to which it gives a lemon colour.

Chlorure of iodine. The chloriodic acid.

CHNUS. (From χνανω, to grind, or rasp.) 1. Chaff; bran.

2. Fine wool, or lint, which is, as it were, rasped from lint.

CHO'ANA. (Χοανα, a funnel; from χεω, to pour out.) 1. A funnel.

2. The infundibulum of the kidney and brain.

CHO'ANUS. A furnace made like a funnel, for melting metals.

CHO'COLATE. (Dr. Alston says this word is compounded of two Indian words, *choco*, sound, and *atte*, water; because of the noise made in its preparation.) An article of diet prepared from the cacao-nut. See *Theobroma cacao*.

Chocolate-tree. See *Theobroma cacao*.

CHŒ'NICIS. (From χοινικις, the nave of a wheel.) The trepan: so called by Galen and P. Ægineta. Obsolete.

CHŒ'RADES. (From χοιρος, a swine.) The same as scrofula. Obsolete.

CHŒRADOLE'THRON. (From χοιρος, a swine, and ολεθρος, destruction: so named from its being dangerous if eaten by hogs.) Hogbane. A name in Aëtius for the *Xanthium*, or louse-bur.

CHOI'RAS. (*as, adis*. f.; from χοιρος, a swine: so called because hogs are diseased with it.) See *Scrofula*.

CHOKE-DAMP. (*Damp*, from the German *dampff*, a vapour or exhalation.) The name given by miners, in Cornwall and other mining regions, to all irrespirable gases or vapours. See *Carbonic acid*.

CHO'LADES. (From χολη, the bile.) So the smaller intestines are called, because they contain bile.

CHOLÆUS. (Χολαιος, bilious.) Biliary.

CHOLA'GO. See *Cholas*.

CHOLAGO'GUE. (*Cholagogus*, *i*. m.; from χολη, bile, and αγω, to evacuate.) By cholagogue, the ancients meant only such purging medicine as expelled the internal fæces, which resembled the cystic bile in their yellow colour, and other properties.

CHO'LAS. (From χολη, the bile.) *Cholago*. 1. All the cavity of the right hypochondrium, and part of the neighbourhood, is so called, because it contains the liver which is the strainer of the gall.

2. *Cholades intestina*. The bowels, as containing the bile.

CHO'LE. (Χολη. *Chole, es*. f.) The bile.

CHOLE'DOCHUS. (From χολη, bile, and δεχομαι, to receive.) Receiving or retaining the gall. That which receives or retains the bile: applied to a duct.

CHOLEDOCHUS DUCTUS. *Ductus communis choledochus*. The common biliary duct, which conveys both cystic and hepatic bile into the duodenum.

CHOLE'GON. See *Cholagogue*.

CHOLERA. (*a, æ*. f. Celsus derives it from χολη, and ρεω, literally a flow of bile, and Trallian, from χολας, and ρεω, intestinal flux.) *Felliflua passio*. *Cholera morbus*. It is a purging and vomiting of bile, with anxiety, painful gripings, spasms of the abdominal muscles, and those of the calves of the legs. There are two species of this genus: 1. *Cholera spontanea*, which happens, in hot seasons, without any manifest cause. 2. *Cholera accidentalis*, which occurs after the use of food that digests slowly, and irritates. In warm climates it is met with at all seasons of the year, and its occurrence is very frequent; but in England, and other cold climates, it is apt to be most prevalent in the middle of summer, particularly in the month of August; and the violence of the disease has usually been observed to be greater in proportion to the intenseness of the heat. The spontaneous species is produced by causes which influence the liver, so as to cause a superabundant secretion of bile, mostly of an acrimonious quality, such as suppressed perspiration in very hot weather, from cold or damp incautiously applied to the feet, and by taking cold drinks, especially when the body is considerably heated by exercise. This species is mostly epidemic at the close of summer, or the beginning of autumn: Sydenham says, as certainly as the appearance of swallows in the spring, or cuckoos about the dog-days. At this time the heat of the sun stimulates the liver to an inordinate secretion of bile, so that the alimentary canal becomes overloaded with it, the blood somewhat impregnated, while the liver itself is debilitated by undue action. The accidental species is generally caused by cold and indigestible fruits, as unripe apples and pears, cucumbers, melons, mushrooms; drastic purges, sudden fright, &c. It usually comes on with soreness, pain, distension, and flatulency in the stomach and intestines, succeeded quickly by a severe and frequent vomiting, and purging of bilious matter, heat, thirst, a hurried respiration, and frequent but weak and fluttering pulse. When the disease is not violent, these symptoms, after continuing for a day or two, cease gradually, leaving the patient in a debilitated and exhausted state; but where the disease proceeds with much violence, there arises great depression of strength, with cold clammy sweats, considerable anxiety, a hurried and short respiration, and hiccoughs, with a sinking and irregularity of the pulse, which quickly terminate in death; an event that not unfrequently happens within the space of twenty-four hours.

The appearances generally observed on dissection are, a quantity of bilious matter in the primæ viæ; the ducts of the liver relaxed and distended; and several of the viscera have been found displaced, probably by the violent vomiting. In the early period of the disease, when the strength is not much exhausted, the object is to lessen the irritation, and facilitate the discharge of the bile, by tepid demulcent liquids, frequently exhibited. It will likewise be useful to procure a determination to the surface by fomentations to the abdomen, the pediluvium, or even the warm bath. But where the symptoms are urgent, and the patient appears rapidly sinking from the continued vomiting, violent pain, &c., it is necessary to give opium freely, but in a small bulk; from one to two grains, or even more, in a table-spoonful of linseed infusion, or with an effervescing saline draught; which must be repeated at short intervals, every hour perhaps, till relief be obtained. Some-

times where the stomach could not be got to retain the opium, it has answered in the form of clyster; or a liniment containing it may be rubbed into the abdomen; or a blister, applied over the stomach, may lessen the irritability of that organ. Afterwards the bile may be allowed to evacuate itself downwards; or mild aperients, or clysters given, if necessary, to promote its discharge. When the urgent symptoms are relieved, the strength must be restored by gentle tonics, as the aromatic bitters, calumba, and the like, with a light nutritious diet: strong toast and water is the best drink, or a little burnt brandy may be added if there is much languor. Exposure to cold must be carefully avoided, particularly keeping the abdomen and the feet warm; and great attention is necessary to regulate the bowels, and procure a regular discharge of bile, lest a relapse should happen. It will also be proper to examine the state of the abdomen, whether pressure give pain at any part, because inflammation in the primæ viæ is very liable to supervene, often in an insidious manner: should that be the case, leeches, blistering the part, and other suitable means, must be promptly resorted to.

CHOLE'RICUS. (From χολερα, the cholera.) Appertaining to, or that which relieves the cholera.

CHOLESTERIC. (*Chloresterícus*, from *Chlorestine*, a substance so called.) Of or belonging to chlorestine.

CHOLESTERIC ACID. *Acidum cholestericum*. When chloresterine, or the fat matter of the human biliary calculi is treated with nitric acid, there is formed a peculiar acid, which is called the cholesteric. It has not yet been applied to any medicinal use.

CHOLESTERINE. (*Cholesterina, æ.* f.; from χολη, bile, and ςερεος, solid.) A pearly substance, and one of the principles found in human biliary calculi. It consists of 72 carbon, 6·66 oxygene, and 21·33 hydrogene. See *Gall-stone*.

CHOLICE'LE. (From χολη, bile, and χηλη, a tumour.) A swelling formed by the bile accumulated in the gall-bladder.

CHOLŒUS. (Χολάιος, *biliosus*.) Biliary.

CHOLOLITHIC. (*Chololithicus*, from χολη, and λιθος.) Of or belonging to gall-stone.

CHOLOLITHUS. (*us, i.* m.; from Χολη, bile, and λιθος, a stone, gall-stone.) A gall-stone. See *Gall-stone*.

CHOLO'MA. (From χωλος, lame, or maimed.) 1. A halting, or lameness in the leg.

2. Galen says that, in Hippocrates, it signifies any distortion of a limb.

CHONDRILLA. (*a, æ.* f.; from χονδρον, a grain of any corn: and so called because it emits small particles of gum which resemble grains.) Condrilla. Though formerly used medicinally, it is not thought of in the practice of the present day, and properly so.

CHONDRO. Some muscles have this word forming a part of their name, because they are connected with a particular cartilage.

CHONDROGLO'SSUS. (From χονδρον, a cartilage, and γλωσση, the tongue.) A muscle so named from its insertion, which is in the basis or cartilaginous part of the tongue. See *Hyoglossus*.

CHONDRO'LOGY. (*Chondrologia, æ.* f.; from χονδρος, a cartilage, and λογος, a discourse.) A discourse on cartilages.

CHONDRO-PHARYNGÆUS. (From χονδρος, a cartilage, and φαρυγξ, the upper part of the fauces.) A muscle so named because it rises in the cartilaginous part of the tongue, and is inserted in the pharynx.

CHO'NDROS. (Χονδρος. *us, i.* m.)
1. A cartilage.
2. A food of the ancients. See *Alica*.
3. A grumous concretion.

CHONDROSYNDE'SMUS. (*us, i.* m.; from χονδρος, a cartilage, and συνδεω, to tie together.) A cartilaginous ligament.

CHO'NDRUS. A cartilage.

CHO'NE. Χωνη. The infundibulum.

CHO'RA. Χωρα. A region. Galen, in his book De Usu Partium, expresses by it particularly the cavities of the eyes; but in other of his writings, he intimates by it any void space.

CHO'RDA. (*a, æ.* f.; from χορδη, which properly signifies an intestine, or gut, of which a chord may be made.) 1. A cord, or assemblage of fibres.

2. The tendon of a muscle.

3. A painful tension of the penis in the venereal disease. See *Chordee*.

4. Sometimes the intestines are called chordæ.

CHORDA MAGNA. See *Tendo Achillis*.

CHORDA TENDINEA. The tendinous and cord-like substance which connects the *carneæ columnæ* of the ventricles of the heart to the auricular valves.

CHORDA TYMPANI. A branch of the seventh pair of nerves. The portio dura of the seventh pair of nerves, having entered the tympanum, sends a small branch to the stapes, and another more considerable one, which runs across the tympanum from behind forwards, passes between the long leg of the incus and the handle of the malleus, then goes out at the same place where the tendon of the anterior muscle of the malleus enters. It is called chorda tympani, because it crosses the tympanum as a cord crosses the bottom of a drum. Dr. Monro thinks that the chorda tympani is formed by the second branch of the fifth pair, as well as by the portio dura of the seventh.

CHORDA WILLISII. The small fibres which cross the sinuses of the dura mater. They are so termed, because Willis first described them.

CHORDA'PSUS. (From χορδη, a cord, and απτω, to knit.) A painful colic, where the intestines appear to be twisted into knots. See *Ileac passion*.

CHORDEE'. (*Chordé*. French.) A

spasmodic contraction of the penis, that sometimes attends the inflammation of the urethra, which is caused by the venereal poison; it is often followed by a hæmorrhage. See *Clap*.

CHO'REA. (*a, æ.* f. Χορεια, from χορος, a chorus, which of old accompanied dancing. It is called St. Vitus's dance, because some devotees of St. Vitus exercised themselves so long in dancing, that their intellects were disordered, and could only be restored by dancing again at the anniversary of St. Vitus.) *Chorea Sancti Viti. Convulsio habitualis.* St. Vitus's dance. Convulsive motions of the limbs, as if the person were dancing.

One of the best general descriptions of chorea, is the following of Dr. Hamilton, contained in his treatise on the utility of purgatives:— "Chorea Sancti Viti attacks boys and girls indiscriminately; and those chiefly who are of a weak constitution, or whose natural good health and vigour have been impaired by confinement, or by the use of scanty or improper nourishment. It appears most commonly from the eighth to the fourteenth year. I saw it in two young women who were from sixteen to eighteen years of age. The approaches of chorea are slow. A variable and often a ravenous appetite, loss of usual vivacity and playfulness, a swelling and hardness of the lower belly, and, in general, a constipated state of the bowels, aggravated as the disease advances, and slight, irregular, involuntary motions of different muscles, particularly those of the face, which are thought to be the effect of irritation, precede the more violent convulsive motions, which now attract the attention of the friends of the patient.

"These convulsive motions vary. The muscles of the extremities and of the face, those moving the lower jaw, the head, and the trunk of the body, are, at different times, and in different instances, affected by it. In this state, the patient does not walk steadily: his gait resembles a jumping or starting; he sometimes cannot walk at all, and seems palsied; he cannot perform the common and necessary motions with the affected arms. This convulsive motion is more or less violent; and is constant, except during sleep, when, in most instances, it ceases altogether. Although different muscles are sometimes successively convulsed, yet, in general, the muscles affected in the early part of the disease remain so during the course of it. Articulation is now impeded, and is frequently completely suspended. Deglutition is also occasionally performed with difficulty. The eye loses its lustre and intelligence; the countenance is pale, and expressive of vacancy and languor. These circumstances give the patient a fatuous appearance. When the complaint has subsisted for some time, fatuity to a certain extent interrupts the exercise of the mental faculties."

In some instances, the disease has continued with considerable violence from an early period to old age, without making any inroad whatever on the mind, or even spreading to any other joints, limbs, or muscles, than those at first affected.

There is a singular form of this disease which has been called by some writers *Malleeatio*, consisting in a convulsive action of one or both hands, which strike the knee like a hammer.

The predisponent cause of this disease is an irritability of the nervous system, chiefly dependent upon debility, and particularly a debility of the stomach and its collatitious organs: the ordinary occasional causes being bad nursing, innutritious diet, accumulated fæces, worms, or some other intestinal irritant.

About the age of puberty there is another kind of general irritation that pervades the system; and where this change does not take place kindly in females, which is frequently the case in weakly habits, the irritation assumes a morbid character, and is exacerbated by a congestive state of the vessels that constitute its more immediate seat: and chorea takes its rise from this cause.

In effect, where the predisponent cause of an irritable state of the nervous system is very active and predominant, a local or temporary excitement of any organ, and almost at any period of life, increasing the irregular flow or disturbed balance of the nervous fluid, will give rise to the convulsive movements of chorea.

From this view of the general nature and origin of the disease, we can be at no loss to account for the great benefit which has been derived from a steady course of brisk purging in recent cases, or those of early life: for this, while it carries off the causal acrimony, or unloads the infarcted viscera, seems at the same time to act the part of a revellent, and to prohibit the return of the paroxysm by a new excitement. It may appear, perhaps, strange to those who have not thought upon the subject, that where the disease has proceeded from intestinal irritation, it should be carried off by intestinal irritation also. But the irritations are of very different kinds: and it is so far from following of necessity that, because one kind of irritation applied to a particular organ excites a particular effect in a remote part, another will do the same; that the converse is more commonly true, and that any other kind of irritation applied to the same organ, by exciting a new action, will be the most effectual way of taking off or preventing such effect.

The principle being a general one, it does not seem of much consequence what purgative is employed, provided it be sufficiently powerful.

There is no malady whatever, perhaps, that calls so peremptorily for stimulating the abdominal viscera into increased action; and as chorea often precedes puberty, or occurs about this period of life, we have another

reason for directing an augmented stimulus to the lower regions of the living frame, and rousing into energy the tardy developement of the sexual organs.

But it is necessary to attend to the state of the system generally as well as locally; to take off the constitutional weakness and irritability, as well as the topical acrimony, and especially where the disorder has acquired a chronic character. And hence other remedies must be had recourse to as well as purgatives. The use of antispasmodics and sedatives, and especially musk, belladonna, and foxglove, have been strongly recommended with a view of allaying the irregular action. But the advantage derivable from these seems to be merely palliative; and the stimulant tonics and alterants promise a better success.

The metallic salt and oxides have been tried in every form, with apparent benefit in a few individual cases, but without any decided or general success. The most popular of these were at one time the flowers of zinc. When the stomach has reached its full dose of this medicine, it will still bear a full dose of ammoniated copper in conjunction with it, by which means the metallic power may be very much increased. Thus a delicate stomach will rarely bear more than two grains of either of these without nausea; yet it has been found that the same stomach will continue at ease under a mixed powder of two grains of the former, and two and a half of the latter, at a dose.

The preparations of iron have, for the most part, been found too stimulant: but silver, in the form of its nitrate, seems to have been radically successful in various well-established cases. It has commonly been given in the guise of pills, from one to two or more grains to a dose. Yet the metal that seems by far most entitled to credit in the present day, is arsenic; for it is difficult to resist the evidence from various quarters in which it seems not only to have produced benefit, but to have established a perfect cure. It is commonly given in the form of the solution of the London College, in doses of six minims to a youth of twelve or fourteen years of age, three times a day, increasing the dose as there may be occasion.

In this disease, however, as in various others, it will often be found, and the remark is well worth attending to, that different remedies are required for different individuals, even where the cause is obviously the same; and that what produces no benefit in one case, is highly advantageous in another. Camphire in large doses has succeeded, where the nitrate of silver has completely failed; and a brisk purgative plan has sometimes answered, where all the preceding have proved of no use whatever.

Cold bathing, and sponging the body with cold salt or sea water, is of great service, especially when the disease has become chronic. Electricity also has been by some recommended.

CHO'RION. (From χωρεω, to escape: because it always escapes from the uterus with the fœtus; or from χωρα, a receptacle. It is also said to have its name from the chorus, or crowd of blood vessels which are spread upon it.) The second or external membrane, or involving membrane of the fœtus. On the inside it is smooth, and betwixt it and the amnion a gelatinous fluid is interposed. In the earlier months it is much stronger than the amnion, but in an advanced stage it is in contact with it, no fluid being betwixt them: and in proportion as the amnion gains strength to be of essential service in dilating the orifice of the womb during labour, the chorion becomes relatively very thin and weak. On the outside the chorion is shaggy and vascular, and constitutes those minute extremities of the vascular system of the ovum which attach to the surface of the womb, or rather to the flocculent membrane which it throws out. The use of this membrane seems to be to convey the maternal supply of blood to the umbilical chord of the fœtus.

CHO'ROID. (*Choroides:* from χοριον, the chorion, and ειδος, resemblance.) Resembling the chorion: applied to a membrane of the eye.

CHOROID MEMBRANE. *Membrana choroides.* The second tunic of the eye, lying immediately under the sclerotica, to which it is connected by vessels. The true knowledge of this membrane is necessary to a perfect idea of the iris and uvea. The tunica choroidea commences at the optic nerve, and passes forwards, with the sclerotic coat, to the beginning of the cornea transparens, where it adheres very firmly to the sclerotic membrane, by means of a cellular membrane, in the form of a white fringe, called the *ciliary circle.* It then recedes from the sclerotica and cornea and ciliary circle, directly downwards and inwards, forming a round disk, which is variously coloured; hence blue, black eyes, &c. This coloured portion, reflected inwards, is termed the *iris,* and its posterior surface is termed *uvea.* The choroid membrane is highly vascular, and its external vessels are disposed like stars, and termed *vasa vorticosa.* The internal surface of this membrane is covered with a black pigment, called the pigment of the choroid membrane.

CHOROID PLEXUS. *Plexus choroides.* A plexus of blood vessels, situated in the lateral ventricles of the brain.

Choroid tunic. See *Choroid membrane.*

CHRI'SIS. (From χριω, to anoint.) An inunction, or anointing of any part.

Christmas-rose. See *Helleborus niger.*

CHRIS'TUM. (From χριω, to anoint.) An unguent, or ointment of any kind.

CHRO'MAS. (*as, atis.* f.; so called from the chromic acid, with which it is formed.) A chromate, or salt, formed by the union of chromic acid with salifiable bases; as chromate of lead, &c.

CHROMATI'SMUS. (From χρωματιζω, to colour.) The morbid discolouration of any of the secretions, as of the urine, or blood.

CHRO'MIC. (*Chromicus*, from *chromium*, a metal so called.) Of or belonging to the metal called chromium.

Chromic acid. *Acidum chromicum.* This acid is extracted from the red lead ore of Siberia, by treating it with carbonate of potash, and separating the alkali by means of a more powerful acid. In this state it is a red or orange-coloured powder, of a peculiar rough metallic taste, which is more sensible in it than in any other metallic acid. Neither this acid, its oxide, nor any of its combinations, are used medicinally.

CHROMIUM. (*um, i.* n.; from χρωμα, colour: because it is remarkable for giving colour to its combinations.) The name of a metal, which may be extracted either from the native chromate of lead or of iron. It resists all the acids except nitromuriatic, which, at a boiling heat, oxidises it and forms a muriate. Thénard describes only one oxide of chromium; but there are probably two, besides the acid already described: a *protoxide* and a *deutoxide*.

CHRO'NIC. (*Chronicus*; from χρονος, time.) Of long continuance: applied to diseases, and used in opposition to the term acute. See *Acute*.

CHRU'PSIA. (*a, æ.* f.; from χροα, colour, and οψις, sight.) *Visus coloratus.* A disease of the eyes, in which the person perceives objects of a different colour from their natural one.

CHRYSALIS. (*is, is.* f. Χρυσαλις.) The middle state in which all lepidopterous and most other insects remain for some time, between the caterpillar form and their appearance as perfect insects.

CHRYSA'NTHEMUM. (*um, i.* n.; from χρυσος, gold, and ανθεμον, a flower.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia*. Sun-flower, or marigold.

2. Many herbs are so called, the flowers of which are of a bright yellow colour.

Chrysanthemum leucanthemum. The systematic name of the great ox-eye daisy, or Maudlin-wort; called also, *Bellis-major*, *Buphthalmum majus*, *Leucanthemum vulgare*, *Bellidioides*, *Consolida media*, and *Oculus bovis*. The *Chrysanthemum — foliis amplexicaulibus, oblongis, supernè serratis, infernè dentatis*, of Linnæus. The flowers and herb were formerly esteemed in asthmatic and phthisical diseases, but have now deservedly fallen into disuse.

Chry'se. (From χρυσος, gold.) A yellow plaster.

CHRYSELE'CTRUM. (From χρυσος, gold, and ηλεκτρον, amber.) Amber, of a golden yellow colour.

Chrysi'ppea. (From *Chrysippus*, its discoverer.) An herb enumerated by Pliny.

Chrysi'tis. (From χρυσος, gold.) 1. Litharge.

2. The yellow foam of lead.

3. The herb yarrow, from the golden colour of its flower.

CHRYSOBA'LANUS. (*us, i.* m.; from χρυσος, gold, and βαλανος, a nut: so named because of its colour, which, before it is dried, is yellow.) The nutmeg.

CHRYSOBERYL. A mineral of an asparagus green colour and vitreous lustre, found in the Brazil, and Ceylon.

CHRYSOCO'LLA. (*a, æ.* f.; from χρυσος, gold, and κολλη, cement.) Gold solder; borax.

CHRYSO'COMA. (*a, æ.* f.; from χρυσος, gold, and κομη, hair: so called from its golden, hair-like appearance.) See *Achillea millefolium*.

Chrysogo'nia. (From χρυσος, gold, and γινομαι, to become.) A tincture of gold.

Chrysola'chanon. (From χρυσος, gold, and λαχανον, a pot-herb: so named from its having a yellow leaf.) A species of atriplex, or orach.

CHRYSOLITE. Topaz of the ancients, while our topaz is their chrysolite. The hardest of all gems, of a pistachio-green colour.

CHRYSOPRASE. A variety of calcedony.

CHRYSOSPLE'NIUM. (*um, ii.* n.; from χρυσος, gold, and ασπλενιον, spleenwort.) The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Digynia*. Golden saxifrage.

Chrysu'lcus. (From χρυσος, gold, and ελκω, to take away.) The aqua regia was so called, because it has the property of dissolving gold.

CHUSITE. A yellowish-green translucent mineral, found in the cavities of porphyries, in the environs of Limbourg.

CHYAZIC. (*Acidum chyazicum.* So called from the initial letters of carbon, hydrogene, and azote.) The name of an acid.

Chyazic acid. See *Prussic acid*.

Chyla'ria. (From χυλος, chyle.) A discharge of a whitish mucous urine, of the colour and consistence of chyle.

CHYLE. (*Chylus, i.* m.; chyle, from χυλὸς, the juice; so called from χυω, juice.) The milk-like liquor observed, some hours after eating, in the lacteal vessels of the mesentery, and in the thoracic duct. It is separated by digestion from the chyme, and is that fluid substance from which the blood is formed. See *Digestion*.

" The chyle may be studied under two different forms: —

1st. When it is mixed with chyme in the small intestine.

2d. Under the liquid form, circulating in the chyliferous vessels, and the thoracic duct.

No person having particularly engaged in the examination of the chyle during its stay in the small intestine, our knowledge on this point is little. The liquid chyle contained in the chyliferous vessels has been examined with great care.

In order to procure it, the best manner

consists in giving food to an animal, and, when the digestion is supposed to be in full activity, to strangle it, or cut the spinal marrow behind the occipital bone. The whole length of the breast is cut open; the hand is thrust in so as to pass a ligature which embraces the aorta, the œsophagus, and the thoracic duct, the nearest to the neck possible; the ribs of the left side are then twisted or broken, and the thoracic duct is seen, closely adhering to the œsophagus. The upper part is detached, and carefully wiped to absorb the blood; it is cut, and the chyle flows into the vessel intended to receive it.

The ancients were acquainted with the existence of the chyle, but their ideas of it were very inexact: it was observed anew at the beginning of the seventeenth century; and being, in certain conditions, of an opake white, it was compared to milk: the vessels that contain it were even named *lacteal vessels*, a very improper expression, since there is very little other similarity between chyle and milk except the colour.

It is only in modern times, and by the labours of Dupuytren, Vauquelin, Emmert, and Marcet, that positive notions concerning the chyle have been acquired.

We shall give the observations of these learned men, with the addition of our own.

If the animal, from which the chyle is extracted, has eaten animal or vegetable substances of a fatty nature, the liquid drawn from the thoracic duct is of a milky white, a little heavier than distilled water, of a strong spermatic odour, of a salt taste, slightly adhering to the tongue, and sensibly alkaline.

Chyle, very soon after it has passed out of the vessel that contained it, becomes firm, and almost solid: after some time it separates into three parts; the one solid that remains at the bottom, another liquid at the top, and a third that forms a very thin layer at the surface of the liquids. The chyle, at the same time, assumes a vivid rose colour.

When the chyle proceeds from food that contains no fat substance, it presents the same sort of properties, but instead of being opake white, it is opaline, and almost transparent; the layer which forms at the top is less marked than in the former sort of chyle.

Chyle never takes the hue of the colouring substances mixed in the food, as many authors have pretended.

Animals that were made to eat indigo, saffron, and madder, furnished a chyle the colour of which had no relation to that of the substances.

Of the three substances into which the chyle separates when abandoned to itself, that of the surface, of an opake white colour, is a fatty body; the solid part is formed of fibrin and a little colouring matter; the liquid is like the serum of the blood.

The proportion of these three parts is variable, according to the nature of the food. There are species of chyle, such as that of sugar, which contain very little fibrin; others, such as that of flesh, contain more. The same thing happens with the fat matter, which is very abundant when the food contains grease or oil, whilst there is scarcely any seen when the food is nearly deprived of fatty bodies.

The absorption of the chyle has been attributed to the capillarity of the lacteal radicles, to the compression of the chyle by the sides of the small intestine, &c. Latterly, it has been pretended that it takes place by virtue of the proper sensibility of the absorbing mouths, and of the insensible organic contractility that they are supposed to possess. It first enters the threads of the lacteal vessels, it then traverses the mesenteric glands, it arrives at the thoracic duct, and at last enters the subclavian vein.

The causes that determine its motion are the contractility proper to the chyliferous vessels, the unknown cause of its absorption, the pressure of the abdominal muscles, particularly in the motions of respiration, and, perhaps, the pulsation of the arteries of the abdomen.

If we wish to have a correct idea of the velocity with which the chyle flows into the thoracic duct, we must open this canal in a living animal, at the place where it opens into the subclavian vein. We find that this rapidity is not very great, and that it increases every time that the animal compresses the viscera of the abdomen by the abdominal muscles: a similar effect is produced by compressing the belly with the hand.

However, the rapidity of the circulation of the chyle appears to be in proportion to the quantity formed in the small intestine: this last is in proportion to the quantity of the chyme; so that if the food is in great abundance, and of easy digestion, the chyle will flow quickly: if, on the contrary, the food is in small quantity, or, which is the same thing, if it is of difficult digestion, as less chyle will be formed, so its progress will be more slow.

It would be difficult to appreciate the quantity of chyle that would be formed during a given digestion, though it ought to be considerable. In a dog of ordinary size that had eaten animal food at discretion, an incision into the thoracic duct of the neck (the dog being alive) gave about half an ounce of liquid in five minutes, and the running was not suspended during the whole continuance of the formation of the chyle, that is, during several hours.

It is not known whether there is any variation in the rapidity of the motion of the chyle during the same digestion; but supposing it uniform, there would enter six ounces of chyle per hour into the venous system. We may presume that the proportion of chyle is more considerable in man, whose chyliferous organs are more voluminous, and in whom the digestion is, in general, more rapid than in the dog."—*Magendie's Physiology.*

The chyle is mixed with the albuminous

and gelatinous lymph in the thoracic duct, which receives them from the lymphatics.

The uses of the chyle are, 1. To supply the matter from which the blood and other fluids of our body are prepared; from which fluids the solid parts are formed. 2. By its acescent nature, it somewhat restrains the putrescent tendency of the blood: hence the dreadful putridity of the humours from starving; and thus milk is an excellent remedy against scurvy. 3. By its very copious aqueous latex, it prevents the thickening of the fluids, and thus renders them fit for the various secretions. 4. The chyle secreted in the breasts of puerperal women, under the name of milk, forms the most excellent nutriment of all aliments for new-born infants.

CHYLIFICA'TION. (*Chylificatio, onis,* f.; from *chylus,* and *fio,* to become.) The process carried on in the small intestines, and principally in the duodenum, by which the chyle is separated from the chyme. See *Digestion.*

Chyli'sma. (From χυλος, juice.) An expressed juice.

CHYLOPOIE'TIC. (*Chylopoieticus;* from χυλος, chyle, and ποιεω, to make.) Any thing connected with the formation of chyle; thus chylopoietic viscera, chylopoietic vessels, &c.

CHYLO'SIS. (*is, is.* f.; from χυλος, juice.) Chylification, or the changing the food into chyle.

Chylosta'gma. (From χυλος, juice, and ςαζω, to distil.) The distillation or expression of any juice, or humid part, from the rest.

Chylostagma diaphoreticum. A name given by Mindererus to a distillation of Venice treacle and mithridate.

CHYLUS. See *Chyle.*

CHYME. (*Chymus, i.* m.; from χυμος, which signifies humour, or juice.) The ingested mass of food that passes from the stomach into the duodenum, and from which the chyle is prepared in the small intestines by the admixture of the bile, &c. See *Digestion.*

CHY'MIA. (*a, æ.* f. Χυμια, chemistry.) *Chimia.* Chemistry.

CHYMIA'TER. (*er, ri.* m.; from χυμια, chemistry, and ιατρος, a physician.) *Chimiater.* A chemical physician.

CHYMIA'TRIA. (*a, æ.* f.; from χυμια, chemistry, and ιαομαι, to heal.) The art of curing diseases by the application of chemistry to the uses of medicine.

Chymo'sis. See *Chemosis.*

Chy'nlen radix. A cylindrical root, of the thickness of a goose-quill, brought from China. It has a bitterish taste, and imparts a yellow tinge to the saliva. The Chinese hold it in great estimation as a stomachic, infused in wine.

Chy'sis. (From χυω, to pour out.) Fusion, or the reduction of solid bodies into fluid, by heat.

Chy'tlon. (From χυω, to pour out.) An anointing with oil and water.

CIBA'LIS. (From *cibus,* food.) Of or belonging to food.

CIBA'TIO. (*o, onis.* f.; from *cibus,* food.) The taking of food.

Ci'bur. An obsolete term for sulphur.

CICATRISANT. (*Cicatrisans;* from *cicatrizo,* to skin over.) That which disposes wounds and ulcers to dry up and heal, and to be covered with a skin.

CICATRISA'TUS. *Cicatrised.* 1. In *Surgery,* applied to parts formerly ulcerated, on which the skin has formed.

2. In *Botany,* it means scarred.

CICA'TRIX. (*ix, icis.* f.; from *cicatrizo,* to heal up or skin over.) A scar upon the skin after the healing of a sore or ulcer.

CICATRIZATION. (*Cicatrizatio, onis.* f.; from *cicatrizo,* to heal.) That process by which ulcers and sores are healed.

Cicely, sweet. See *Scandix odorata.*

CI'CER. (*er, eris.* n.; a plant so called. The *Cicerones* had their name from this pulse, as the *Pisones* had from the pisum or pea, and the *Lentuli* from the lens or lentil.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.* The vetch.

2. The pharmacopœial name of the common cich or ciches.

Cicer arietinum. The systematic name of the cicer plant, which is called *Erebinthus* in some pharmacopœias.

Cicer—foliis serratis, of Linnæus. The seeds have been employed medicinally, but are now fallen into disuse. In some places they are toasted, and used as coffee; and in others, ground into a flour for bread. The colour of the arillus of the seed is sometimes white, red, or black; hence the distinction into *cicer album, rubrum,* and *nigrum.*

Ci'cera. (From *cicer,* the vetch.) A small pill of the size of a vetch.

Cicera tartari. A small pill, composed of turpentine and cream of tartar, of the size of a vetch.

CICHO'RIUM. (*um, i.* n.; originally, according to Pliny, an Egyptian name, and adopted by the Greeks. It is written sometimes Κιχορειον: whence Horace has *cichoreæ, levesque malvæ:* sometimes Κιχοριον, or Κιχωριον. It is supposed by some to have this name, παρα το δια των χωριων κιειν, from its creeping through the fields. Others derive it from κιχεω, *invenio;* on account of its being so readily found, or so common.) Succory. 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

2. The pharmacopœial name of the wild cichory. See *Cichorium intybus.*

Cichorium endivia. The systematic name of the endive.

Cichorium—floribus solitariis, penduncu-latis, foliis integris; crenatis, of Linnæus. It is an extremely wholesome salad, possessing bitter and anodyne qualities.

Cichorium intybus. The systematic name of the wild succory; called also, *Pancratium,*

Cichorium, Cichoreum, Cichorium sylvestre, Cichorium officinarum.

Cichorium — floribus geminis, sessilibus; foliis runcinatis, of Linnæus. It belongs to the same family with the garden endive, and by some botanists has been supposed to be the same plant in its uncultivated state; but the endive commonly used as salad, is an annual, or at most a biennial plant, and its parent is now known to be the *cichorium endivia.* Wild succory, or cichory, abounds with a milky juice, of a penetrating bitterish taste, and of no remarkable smell, or particular flavour: the roots are more bitter than the leaves or stalks, and these much more so than the flowers. By culture in gardens, and by blanching, it loses its bitterness, and may be eaten early in the spring in salads. The roots, if gathered before the stem shoots up, are also eatable, and when dried may be made into bread. The roots and leaves of this plant are stated by Lewis to be very useful aperients, acting mildly and without irritation, tending rather to abate than to increase heat, and which may therefore be given with safety in hectic and inflammatory cases. Taken freely, they keep the belly open, or produce a gentle diarrhœa; and when thus continued for some time, they have often proved salutary in the beginning obstructions of the viscera, in jaundices, cachexies, hypochondriacal and other chronical disorders. A decoction of this herb, with others of the like kind, in whey, and rendered purgative by a suitable addition of polychrest salt, was found an useful remedy in cases of biliary calculi, and promises advantage in many complaints requiring what have been termed attenuants and resolvents. The virtues of succory, like those of dandelion, reside in its milky juice; and we are warranted, says Dr. Woodville, in asserting, that the expressed juice of both these plants, taken in large doses frequently repeated, has been found an efficacious remedy in phthisis pulmonalis, as well as the various other affections above mentioned. The milky juice may be extracted by boiling in water, or by pressure. The wild and the garden sorts are used indifferently. If the root is cut into small pieces, dried, and roasted, it resembles coffee, and is sometimes a good substitute for it.

CI'CHORY. See *Cichorium intybus.*

Cichory, wild. See *Cichorium intybus.*

CICINDE'LA. (A diminutive of *candela,* a little candle: so called from its light.) The glow-worm. By some thought to be anodyne, lithontriptic, though probably neither. Not used in the present day.

Cici'num oleum. (From κικι, the ricinus.) An oil, obtained by boiling the bruised seeds of the *Jatropha curcas* of Linnæus. It is somewhat similar in its properties to castor oil.

Ci'cla. A name for the white beet.

CICU'TA. (*a, æ.* f.; *quasi cæcuta,* blind: because it destroys the sight of those who use it. Cicuta signifies also the internode, or space between two joints of a reed; or the hollow stem of any plant which the shepherds used for making their rural pipes. *Est mihi disparibus septem conjuncta cicutis fistula.* Virgil.) 1. Hemlock. See *Conium.*

2. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Cicuta aquatica. See *Cicuta virosa.*

Cicuta virosa. The systematic name of the long-leaved water hemlock and cow-bane: called also, *Cicuta aquatica, Cicutaria virosa, Sium majus alterum angustifolium,* and *Sium erucæ folio.* This plant — *Cicuta, umbellis oppositifoliis; petiolis marginatis obtusis,* of Linnæus — is seldom employed medicinally in the present day. It is an active poison, and has occasionally been eaten by mistake for the *Apium graveolens,* of Linnæus; when it produces tremors, vertigo, a violent burning at the stomach, epilepsy, convulsions, spasms of the jaw, a flowing of blood from the ears, tumefaction of the abdomen, and death.

CICUTA'RIA. (*a, æ.* f.; from *cicuta,* hemlock.) See *Chærophyllum sylvestre.*

Cicutaria aquatica. See *Phellandrium aquaticum.*

Cicutaria virosa. See *Cicuta virosa.*

CIDO'NIUM. See *Pyrus cydonia.*

CIGMES. A two drachm measure.

CILIA. (*a, æ.* f.; from *cilium:* because it resembles the eyelash.) A species of pubescence of plants which consists of hairs on the margin of a leaf or petal, giving it a fringed appearance.

CI'LIAR. (*Ciliaris;* from *cilium,* the eyelid.) Belonging to the eyelid.

Ciliar ligament. *Ligamentum ciliare.* The circular portion that divides the choroid membrane from the iris, and which adheres to the sclerotic membrane. It appears like a white circular ring. See *Choroid membrane.*

Ciliaris musculus. That part of the musculus orbicularis palpebrarum which lies nearest the cilia, considered by Riolan as a distinct muscle.

Ciliary processes. The white folds at the margin of the uvea in the eye, covered with a black matter, which proceed from the uvea to the crystalline lens, upon which they lie.

CILIATUS. Fringed, bordered: applied to leaves, corolla, petals, &c.: hence *folium ciliatum, petala ciliata,* &c. See *Leaf, Corolla, Petalum.* Fimbriated is synonymous with this term.

CI'LIUM. (*um, ii.* n.; from *cilleo,* to move about.) The eyelid or eyelash.

Ci'llo. (From *cilium,* the eyelid.) One who is affected with a spasm or trembling of the eyelids.

CILLO'SIS. (From *cilium,* the eyelid.) A spasmodic trembling of the eyelids.

Cimeter-shaped. See *Leaf.*

CIMEX. (*ex, icis.* m.; from κειμαι, to inhabit: so called because it infests houses.) The name of a genus of insects in the Linnæan system. The wall-louse, or bug.

Cimex domesticus. Of this small insect six or seven are given inwardly to cure the

ague, just before the fits come on, and have the same effect with every thing nauseous and disgusting.

CIMO'LIA. (*a, æ.* f.; from Κιμωλος, Cimolus, an island in the Cretan sea, where it is procured.) See *Cimolite.*

Cimolia alba. See *Cimolite.*

Cimolia purpurescens. Fullers' earth.

CIMOLITE. *Cimolia.* Cimolian earth, of a greyish white colour, which consists of silex, alumina, oxide of iron, and water.

Ci'na cinæ. See *Cinchona.*

Ci'næ semen. See *Artemisia santonica.*

CI'NARA. (*a, æ.* f.; from κινεω, to move; *quasi movet ad venerem vel urinam.*) Artichoke. 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

2. The pharmacopœial name for the common artichoke. See *Cinara scolymus.*

Cinara scolymus. The systematic name of the artichoke: called, in the pharmacopœias, *Alcocalum, Agriocinara, Articocalus, Artischocas lævis, Costus nigra, Carduus sativus non spinosus, Cinara hortensis, Scolymus sativus, Carduus domesticus capite majore,* and *Carduus altilis.*

Cinara—foliis subspinosis pinnatis indivisique, calycinis squamis ovatis, of Linnæus. A native of the southern parts of Europe, but cultivated here for culinary purposes. The leaves are bitter, and afford, by expression, a considerable quantity of juice, which, when strained, and mixed with an equal quantity of white wine, has been given successfully in dropsies, in the dose of 3 or 4 table-spoonfuls night and morning; but it is very uncertain in its operation.

CINAROCEPHALUS. (*us, i.* m.; from κιναρα, the artichoke, and κεφαλη, a head: having a head like the artichoke.) *Cynarocephalus.* Many plants have received this name; as the thistle, globe thistle, burdock, blue bottle, &c.

CINCHO'NA. (*a, æ.* f. Geoffroy states that the use of this bark was first learned from the following circumstance: — Some of these trees being thrown by the winds into a pool of water, lay there till the water became so bitter that every body refused to drink it. However, one of the neighbouring inhabitants being seized with a violent paroxysm of fever, and finding no other water to quench his thirst, was forced to drink of this, by which he was perfectly cured. He afterwards related the circumstance to others, and prevailed upon some of his friends, who were ill of fevers, to make use of the same remedy, with whom it proved equally successful. The use of this excellent remedy, however, was very little known till about the year 1638, when a signal cure having been performed by it on the Spanish viceroy's lady, the Countess del Cinchon, at Lima, it came into general use, and hence it was distinguished by the appellation of *cortex cinchonæ,* and *pulvis comitissæ,* or the Countess's powder. On the recovery of the Countess, she distributed a large quantity of the bark to the Jesuits, in whose hands it acquired still greater reputation, and by them it was first introduced into Europe, and thence called *cortex,* or *pulvis jesuiticus, pulvis patrum;* and also Cardinal del Lugo's powder, because that charitable prelate bought a large quantity of it at a great expense for the use of the religious poor at Rome.)

I. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* Cinchona, or Peruvian bark-tree.

II. The pharmacopœial name of several kinds of Peruvian barks; which have been called, *Cortex; Cortex Chinæ; Chinchina, Kina kina, Kinkina, Quina quina,* and *Quinquina.* The trees which afford these barks grow wild in the hilly parts of Peru; the bark is stripped from the branches, trunk, and root, and dried. Three kinds of bark are now in use: —

1. *Cortex cinchonæ cordifoliæ.* The plant which affords this species is the *Cinchona cordifolia,* of Zea; the *Cinchona officinalis,* of Linnæus; the *Cinchona macrocarpa,* of Willdenow. Heart-leaved cinchona. The bark of this tree is called *yellow bark,* because it approaches more to that colour than either of the others does. It is in flat pieces, not convoluted like the pale, nor dark-coloured like the red; externally smooth, internally of a light cinnamon colour, friable and fibrous; has no peculiar odour different from the others, but a taste incomparably more bitter, with some degree of astringency. It is from this species of cinchona that a new alkali, called *quina,* has been obtained, which, in combination with sulphuric acid, forms a sulphate of quinine. See *Quinæ sulphas,* and *Cinchonine.*

2. *Cortex cinchonæ lancifoliæ.* This species is obtained from the *Cinchona lancifolia* of Zea. Lance-leaved cinchona. This is the *quilled bark,* which comes in small quilled twigs, breaking close and smooth, friable between the teeth, covered with a rough coat of a brownish colour, internally smooth, and of a light brown; its taste is bitter, and slightly astringent; flavour slightly aromatic, with some degree of mustiness.

3. *Cortex cinchonæ oblongifoliæ.* This kind is procured from *Cinchona oblongifolia* of Zea. Oblong-leaved cinchona. This is the *red bark:* it is in large thick pieces, externally covered with a brown rugged coat, internally more smooth and compact, but fibrous, of a dark red colour; taste and smell similar to that of the *cinchonæ lancifoliæ cortex,* but the taste rather stronger.

From the general analysis of bark, it appears to consist, besides the woody matter which composes the greater part of it, of gum, resin, gallic acid, of very small portions of tannin and essential oil, and of several salts having principally lime for their basis. Seguin also supposed the existence of gelatine in it, but without sufficient proof. Cold water infused on pale bark for some hours, acquires a bitter taste, with some share of its odour;

when assisted by a moderate heat, the water takes up more of the active matter; by decoction, a fluid, deep coloured, of a bitter styptic taste, is obtained, which, when cold, deposits a precipitate of resinous matter and gallic acid. By long decoction, the virtues of the bark are nearly destroyed, owing to the oxygenation of its active matter. Magnesia enables water to dissolve a larger portion of the principles of bark, as does lime, though in an inferior degree. Alkohol is the most powerful solvent of its active matter. Brandy and other spirits and wines, afford also strong solutions, in proportion to the quantity of alkohol they contain. A saturated solution of ammonia is also a powerful solvent; vinegar is less so even than water. By distillation, water is slightly impregnated with the flavour of bark: it is doubtful whether any essential oil can be obtained.

The action of menstrua on the red bark is nearly the same, the solutions only being considerably stronger, or containing a larger quantity of resinous matter, and of the astringent principle.

The analysis of the yellow bark, shows that its active principles are more concentrated than in either of the others, affording to water, alkohol, &c. tinctures much stronger, both in bitterness and astringency; especially in the former principle.

Vauquelin made infusions of all the varieties of cinchona he could procure, using the same quantities of the barks and water, and leaving the powders infused for the same time. He observed, 1. That certain infusions were precipitated abundantly by infusion of galls, by solution of glue and tartar emetic. 2. That some were precipitated by glue, but not by the two other re-agents; and, 3. That others were, on the contrary, by nut-galls, and tartar emetic, without being affected by glue. 4. And that there were some which yielded no precipitate by nut-galls, tannin, or emetic tartar. The cinchonas that furnished the first infusion were of excellent quality; those that afforded the fourth were not febrifuge; while those that gave the second and third were febrifuge, but in a smaller degree than the first. Besides mucilage, kinate of lime, and woody fibre, he obtained in his analysis a resinous substance, which appears not to be identic in all the species of bark. It is very bitter, very soluble in alkohol, in acids, and alkalies; scarcely soluble in cold water, but more soluble in hot. It is this body which gives to infusions of cinchona the property of yielding precipitates by emetic tartar, galls, gelatine; and in it the febrifuge virtue seems to reside. It is this substance in part which falls down on cooling decoctions of cinchona, and from concentrated infusions. A table of precipitations by glue, tannin, and tartar emetic, from infusions of different barks, has been given by Vauquelin.

Pelletier and Caventou analysed the *Cinchona condaminæa*, grey bark, and found it composed of, 1. cinchonina, united to kinic acid; 2. green fatty matter; 3. red colouring matter, slightly soluble; 4. tannin; 5. yellow colouring matter; 6. kinite of lime; 7. gum; 8. starch; 9. lignine.

The red bark has been considered as superior to the pale; the yellow is represented, apparently with justice, as being more active than either of the others.

The effects of Peruvian bark are those of a powerful and permanent tonic, so slow in its operation that its stimulating property is scarcely perceptible by any alteration in the state of the pulse, or of the temperature of the body. In a large dose, it occasions nausea and headach; in some habits it operates as a laxative; in others it occasions costiveness. It is one of those medicines, the efficacy of which, in removing disease, is much greater than could be expected, *à priori*, from its effects on the system in a healthy state.

Intermittent fever is the disease for the cure of which bark was introduced into practice, and there is still no remedy which equals it in power. The disputes respecting the mode of administering it are now settled. It is given as early as possible, after clearing the stomach and bowels, in the dose of from one scruple to a drachm every second or third hour, during the interval of the paroxysm; and it may even be given during the hot fit, but it is then more apt to excite nausea. See *Ague*.

In remittent fever it is given with equal freedom, even though the remission of the fever may be obscure.

In some forms of continued fever which are connected with debility, as in typhus, cynanche maligna, confluent small-pox, &c. it is regarded as one of the most valuable remedies. It may be prejudicial, however, in those diseases where the brain, or its membranes are inflamed, or where there is much irritation, marked by subsultus tendinum, and convulsive motions of the extremities; and in pure typhus it appears to be less useful in the beginning of the disease, than in the convalescent stage.

Even in fevers of an opposite type, where there are marks of inflammatory action, particularly in acute rheumatism, bark has been found useful after blood-letting. In erysipelas, in gangrene, in extensive suppuration and venereal ulceration, the free use of bark is of the greatest advantage.

In the various forms of passive hæmorrhagy, in many other diseases of chronic debility, dyspepsia, hypochondriasis, paralysis, rickets, scrofula, dropsy, and in a variety of spasmodic affections, epilepsy, chorea, and hysteria, it is administered as a powerful and permanent tonic, either alone, or combined with other remedies suited to the particular case.

The officinal preparations of bark are an infusion, decoction, an extract, a resinous extract, a simple tincture, an ammoniated and a compound tincture. The usual dose is half a drachm of the powder. The only

inconvenience of a larger dose is its sitting uneasy on the stomach. It may therefore, if necessary, be frequently repeated, and in urgent cases may be taken to the extent of an ounce, or even two ounces, in twenty-four hours.

The saline compound of quinine is, perhaps, the most active of all the preparations of bark; and next to it the powder, which may be given in wine, in any spirituous liquor, or, if it excite nausea, combined with an aromatic. The cold infusion is the least powerful, but most grateful: the decoction contains much more of the active matter of the bark, and is the preparation generally used when the powder is rejected; its dose is from two to four ounces. The spirituous tincture, though containing still more of the bark, cannot be extensively used on account of the menstruum; but is principally employed, occasionally, and in small doses of two or three drachms, as a stomachic. The extract is a preparation of considerable power, when properly prepared, and is adapted to those cases where the remedy requires to be continued for some time. It is then given in the form of pill, in doses of from five to fifteen grains.

Bark is likewise sometimes given in the form of enema; one scruple of the extract, or two drachms of the powder, being diffused in four ounces of starch mucilage. The decoction is also sometimes applied as a fomentation to ulcers.

CINCHONA CARIBÆA. The systematic name of the Caribæan bark-tree. It grows in Jamaica, where it is called the sea-side beech. According to Dr. Wright, the bark of this tree is not less efficacious than that of the cinchona of Peru, for which it will prove an useful substitute; but by the experiments of Dr. Skeete, it appears to have less astringent power.

CINCHONA CONDAMINŒA. See *Cinchonine.*

CINCHONA CORDIFOLIA. See *Cinchona.*

CINCHONA FLAVA. See *Cinchona.*

CINCHONA FLORIBUNDA. The systematic name of the plant which affords the Saint Lucè bark. *Cinchona — floribus paniculatis glabris, capsulis turbinatis lævibus, foliis ellipticis acuminatis glabris,* of Linnæus. It has an astringent, bitter taste, somewhat like gentian. It is recommended in intermittents, putrid dysentery, and dyspepsia: it should always be joined with some aromatic. Dr. Withering considers this bark as greatly inferior to that of the other species of this genus. In its recent state it is considerably emetic and cathartic, properties which in some degree it retains on being dried; so that the stomach does not bear this bark in large doses, and in small ones, its effects are not such as to give it any peculiar recommendation.

CINCHONA LANCIFOLIA. See *Cinchona.*

CINCHONA OBLONGIFOLIA. See *Cinchona.*

CINCHONA OFFICINALIS. See *Cinchona.*

CINCHONA RUBRA. See *Cinchona.*

CICHONA SANCTA FE'. Several species of cinchona have been lately discovered at Sancta Fé, yielding barks both of the pale and red kind; and which, from their sensible qualities, are likely, upon trial, to become equally useful with those produced in the kingdom of Peru.

CINCHONIA. See *Cinchonine.*

Cinchonic acid. See *Kinic acid.*

CINCHONINE. (*Cinchonina, æ. f.*; so called, because obtained from the *cinchona* bark.) Cinchonine is the salifiable base, or alkali, discovered in the *Cinchona condaminæa*, by Pelletier and Caventou. Quinine is that which is found in the yellow bark, or *cinchona cordifolia.* The person, however, who first recognised its existence, though he did not ascertain its alkaline nature, or its combinations with acids, was Gornis of Lisbon.

The following process for extracting cinchonine is that of Henry, the younger, which the above chemists approve. A kilogramme of bark reduced into a fine powder, is to be acted on twice with heat, by a dilute sulphuric acid, consisting of 50 or 60 grammes, diluted with 8 kilogrammes of water for each time. The filtered decoctions are very bitter, have a reddish colour, which assumes, on cooling, a yellowish tint. To discolour (blanch) these liquors, and saturate the acid, either pulverised quicklime or magnesia may be employed. The liquors, entirely deprived of colour, are to be passed through a cloth, and the precipitate which forms is to be washed with a small quantity of water, to separate the excess of lime (if this earth has been used). The deposit on the cloth, well drained and almost completely deprived of moisture for twelve hours, after having been put three successive times to digest in alkohol of 36° (0·837), will furnish, by distilling of the liquid alkohol, a brown viscid matter, becoming brittle on cooling. It is to be acted on with water, sharpened with sulphuric acid, and the refrigerated liquor will afford about thirty grammes of white crystals, entirely soluble in alkohol, scarcely soluble in cold water, but more in boiling water, particularly if this be slightly acidulated. They consist of pure sulphate of cinchonine. They ought to be brilliant, crystallised in parallelopipeds, very hard, and of a glassy white. It should burn without leaving any residuum. Other processes have been given, of which a full account will be found in the 12th volume of the Journal of Science, p. 325. From a solution of the above salt, the cinchonine may be easily obtained by the addition of any alkali. The cinchonine falls down, and may be afterwards dissolved in alkohol, and crystallised by evaporation. Its form is a rhomboidal prism, of 108° and 72°, terminated by a bevelment. It has but little taste, requiring 7000 parts of water for its solution; but when dissolved in alkohol, or an acid, it has the bitter taste of bark. When heated, it does not fuse before decomposition. It consists of oxygene, hydrogene, and carbon, the latter being predominant. It dissolves in only very small quantities in the oils, and in sulphuric ether.

The sulphate is composed of cinchonine, 100; sulphuric acid, 13: whence the prime equivalent would appear to be 38·5.

The muriate is more soluble. It consists of cinchonine, 100; muriatic acid, 7·9.

Gallic, oxalic, and tartaric acids, form neutral salts with cinchonine, which are soluble only with excess of acid. Hence infusion of nut-galls gives, with a decoction of good cinchona, an abundant precipitate of gallate of cinchonine.

Robiquet gives as the composition of a subsulphate of cinchonine of the first crystallisation, sulphuric acid, 11·3; cinchonina, 79·0.

The alkaline base found in yellow barks is called *Quina*, or quinine. It is extracted in exactly the same way. Red bark contains a mixture of these two alkalies.

The febrifuge virtue of the sulphates of both alkalies is considered to be very great.

Cinchoninæ sulphas. See *Cinchonine.*

Cinci'nnus. The hair on the temples.

CINCLE'SIS. (From κιγκλιζω, to move.) *Cinclismus.* An involuntary winking.—*Vogel.*

CINERA'RIUM. (*um, ii.* n.; from *cinis*, ashes.) The ash-hole of a chemical instrument.

Ci'neres. (Plural of *cinis*, ashes.) Ashes. See *Potassa impura.*

CINEREOUS. (*Cinereus*, from *cinis.*)

1. Belonging to ashes.
2. Of the colour of ashes.

Cineres clavellatæ. See *Potassa impura.*

Cineres russici. See *Potassa impura.*

CINERI'TIOUS. (*Cineritius;* from *cinis*, ashes.) Of the colour of ashes. A name applied to the cortical substance of the brain, from its resemblance to an ash colour.

CINERI'TIUM. (From *cinis*, ashes: so named from its being commonly made of the ashes of vegetables or bones.) A cupel or test.

Cine'rulam. A name for spodium.

CINETICUS. (Κινητικος, having the power of motion.) Appertaining to the powers of motion, and consequently the muscles.

Cine'tus. The diaphragm.

CINGENS. Binding round.

Cingula'ria. (From *cingulum*, a girdle; because it grows in that shape.) Most probably the lycopodium selago, of Linnæus.

CI'NGULUM. (*um, i.* n.; from *cingo*, to bind.) A girdle or belt about the loins.

Cingulum mercuriale. A mercurial girdle; called also *cingulum sapientiæ*, and *singulum stultitiæ*. It was an invention of Rulandus's: different directions are given for making it, but the following is one of the neatest: — "Take three drachms of quicksilver; shake it with two ounces of lemon-juice until the globules disappear; then separate the juice, and mix with the extinguished quicksilver, half the white of an egg; gum-dragon, finely powdered, a scruple; and spread the whole on a belt of flannel."

Cingulum Sancti Johannis. A name of the artemisia.

Cinifica'tum. A name for calcinatum.

CINIS. (*is, eris.* m.; in the plural *cineres.*) The ash which remains after burning any thing.

CI'NNABAR. (*is, is.* f. Pliny says the Indians call by this name a mixture of the blood of the dragon and elephant, and also many substances which resemble it in colour, particularly the minium; but it now denotes the red sulphuret of mercury.)

1. An ore of mercury, consisting of that mineral united to sulphur. A native sulphuret of mercury. See *Hydrargyri sulphuretum rubrum.*

2. An artificial compound of mercury and sulphur, called factitious cinnabar, red sulphuret of mercury, and vermilion. See *Hydrargyri sulphuretum rubrum.*

CINNABARINE. *Cinnabarinus.* A red lead or cinnabar colour: applied generally in natural history.

Cinnabaris factitia. Factitious cinnabar. See *Hydrargyri sulphuretum rubrum.*

Cinnabaris græcorum. The sanguis draconis and cinnabar.

Cinnabaris nativa. Native cinnabar. See *Hydrargyri sulphuretum rubrum.*

CINNAMO'MUM. (*um, i.* n.; from *kinamon*, Arabian.) Cinnamon. See *Laurus cinnamomum.*

CINNAMON. 1. The name of a tree. See *Laurus cinnamomum.*

2. The name of a stone, which is a rare mineral found in the sand of rivers in Ceylon, of a blood and hyacinth red, passing into orange yellow.

CINQUEFOIL. See *Potentilla reptans.*

CI'ON. (Κιων, a column; from κιω, to go.) 1. The uvula was formerly so named, from its pyramidal shape.

2. An enlargement of the uvula.

Cio'nis. (From κιων, the uvula.) An enlargement and painful swelling of the uvula.

CIPOLIN. The name of a marble from Rome and Autun.

CIRCÆ'A. (*a, æ.* f.; from *Circe*, the enchantress: so named from the opinion that it was used by Circe in her enchanted preparations.) 1. The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.* Enchanter's nightshade.

2. The name, in some pharmacopœias, for the *Circæa lutetiana*, which is now fallen wholly into disuse.

Circium arvense. The *Serratula arvensis.*

CIRCOCE'LE. See *Cirsocele.*

CI'RCOS. (From κιρκος, a circle.) A ring. It is sometimes used for the sphincter muscle, which is round like a ring.

CIRCULAR. *Circularis.* Round: very generally used in anatomy, and the different branches of natural history. See *Circulus.*

CIRCULA'TION. (*Circulatio, onis.* f.; from *circulo*, to compass about.) *Circulatio sanguinis.* The circulation of the blood. A

vital action performed by the heart in the following manner: the blood is returned by the descending and ascending venæ cavæ into the right auricle of the heart, which, when distended, contracts, and sends its blood into the right ventricle; from the right ventricle it is propelled through the pulmonary artery to circulate through, and undergo a change in, the lungs, being prevented from returning into the right auricle by the closing of the valves, which are situated there for that purpose. Having undergone this change in the lungs, it is brought to the left auricle of the heart by the four pulmonary veins, and from thence it is evacuated into the left ventricle. The left ventricle, when distended, contracts, and throws the blood through the aorta to every part of the body, to be returned by the veins into the two venæ cavæ. It is prevented from passing back from the left ventricle into the auricle by a valvular apparatus; and the pulmonary artery and aorta at their origin are also furnished with similar organs, to prevent its returning into the ventricles. This is a brief outline of the circulation, the particulars of which we shall now describe.

"The best-informed physiologists avow that the circulation of the venous blood is still very little understood. We shall describe here only its most apparent phænomena, leaving the most delicate questions until we treat of the relation of the flowing of the blood in the veins, with that in the arteries. We will then speak of the cause that determines the entrance of the blood into the venous radicles.

To have a general, but just idea of the course of the blood in the veins, we must consider that the sum of the small veins forms a cavity much larger than that of the larger but less numerous veins, into which they pass; that these bear the same relation to the trunks in which *they* terminate: consequently the blood which flows in the veins from branches towards the trunks, passes always from a larger to a smaller cavity. Now, the following principle of hydrodynamics may here be perfectly applied:—

When a liquid flows in a tube which it fills completely, the quantity of this liquid which traverses the different sections of the tube in a given time ought to be every where the same: consequently, when the tube increases, the velocity diminishes; when the tube diminishes, the velocity increases in rapidity.

Experience confirms this principle, and its just application to the current of venous blood. If a very small vein is cut, the blood flows from it very slowly; it flows quicker from a larger vein, and it flows with considerable rapidity from an open venous trunk.

Generally there are several veins to transport the blood that has traversed an organ towards the larger trunks. On account of their anastomoses, the compressure or ligature of one or several of these veins does not prevent or diminish the quantity of blood that returns to the heart; it merely acquires a greater rapidity in the veins which remain free.

This happens when a ligature is placed on the arm for the purpose of bleeding. In the ordinary state, the blood, which is carried to the fore-arm and the hand, returns to the heart by four deep veins, and at least as many superficial ones; but as soon as the ligature is tightened, the blood passes no longer by the subcutaneous veins, and it traverses with difficulty those which are deeper seated. If one of the veins is then opened at the bend of the arm, it passes out in form of a continued jet, which continues as long as the ligature remains firm, and stops as soon as it is removed.

Except in particular cases, the veins are not much distended by the blood; however, those in which it moves with the greatest rapidity are much more so: the small veins are scarcely distended at all. For a reason very easy to be understood, all the circumstances that accelerate the rapidity of the blood in a vein, produce also an augmentation in the distension of the vessel.

The introduction of blood into the veins taking place in a continued manner, every cause which arrests its course produces distension of the vein, and the stagnation of a greater or less quantity of blood in its cavity, below the obstacle.

The size of the veins seems to have but a small influence upon the motion of the blood: they easily give way when the quantity augments, and return to their usual form when it diminishes: but their contraction is limited; it is not sufficiently strong to expel the blood completely from the vein, and therefore those of dead bodies always contain some.

A great number of veins, such as those of the bones, of the sinuses of the *dura mater*, of the testicles, of the liver, &c. the sides of which adhere to an inflexible canal, can have evidently no influence upon the motion of the blood that flows in their cavity.

However, it is to the elasticity of the sides of the veins, and not to a contraction similar to that of the muscles, that we must attribute the faculty which they possess of diminishing the size when the column of blood diminishes: this diminution is also much more marked in those that have the thickest sides, such as the superficial veins.

If the veins have themselves very little influence upon the motion of the blood, many other accessary causes exert a very evident effect. Every continued or alternate pressure upon a vein, when strong enough to flatten it, may prevent the passage of the blood: if it is not so strong, it will oppose the dilatation of the vein by the blood, and consequently favour its motion. The constant pressure which the skin of the members exerts upon the veins that are below it, renders the flow of the blood more easy and rapid in these vessels. We cannot doubt this: for all the circumstances that diminish

the contractility of the tissue of the skin, are sooner or later followed by a considerable dilatation of the veins, and in certain cases by varix; we know also that mechanical compression, exerted by a proper bandage, reduces the veins again to their ordinary dimensions, and also regulates the motion of the blood within them.

In the abdomen, the veins are subject to the alternate pressure of the diaphragm, and of the abdominal muscles, and this cause is equally favourable to the flow of the venous blood in this part.

The veins of the brain support also a considerable pressure, which must produce the same result.

Whenever the blood runs in the direction of its weight it flows with greater facility; the contrary takes place when it flows against the direction of its gravity.

We must not neglect to notice the relations of these accessary causes with the disposition of the veins. Where they are very marked, the veins present no valves, and their sides are very thin, as is seen in the abdomen, the chest, the cavity of the skull, &c.; where these have less influence, the veins present valves, and have thicker sides; lastly, where they are very weak, as in the subcutaneous veins, the valves are numerous, and the sides have a considerable thickness.

We must take care, however, not to confound amongst the circumstances favourable to the motion of the blood in the veins, causes which act in another manner. For example, it is generally known that the contraction of the muscles of the fore-arm and the hand, during bleeding, accelerate the motion of the blood which passes through the opening of the vein; physiologists say, that the contraction of the muscles compresses the deep veins, and expels the blood from them, which then passes into the superficial veins. Were it thus, the acceleration would be only instantaneous, or at least of short duration, whilst it generally continues as long as the contraction. We shall see farther on, how this phænomenon ought to be explained.

When the feet are plunged some time in hot water, the subcutaneous veins swell, which is generally attributed to the rarefaction of the blood; though the true cause is the augmentation of the quantity of blood in the feet, but particularly at the skin,—an augmentation which ought naturally to accelerate the motion of the blood in the veins, since they are in a given time traversed by a greater quantity of blood.

After what has preceded, we can easily suppose, that the venous blood must be frequently stopped or hindered in its course, either by the veins suffering too strong a pressure in the different positions of the body, or by other bodies pressing upon it, &c.: hence the necessity of the numerous anastomoses that exist not only in the small veins, but amongst the large, and even amongst the largest trunks. By these frequent communications, one or several of the veins being compressed in such a way that they cannot permit the passage of the blood, this fluid turns and arrives at the heart by other directions. One of the uses of the azygos vein appears to be, to establish an easy communication between the superior and inferior vena cava: its principal utility, however, seems to consist in its being the common termination of most of the intercostal veins.

There is no obscurity in the action of the valves of the veins: they are real valves, which prevent the return of the blood towards the venous radicles, and which do this so much better in proportion as they are large; that is to say, more suitably disposed to stop entirely the cavity of the vein.

The friction of the blood against the sides of the veins, its adhesion to the sesame sides, and the want of fluidity, must modify the motion of the blood in the veins, and tend to retard it; but in the present state of physiology and hydrodynamics, it is impossible to assign the precise effect of each of these particular causes.

We ought to perceive, by what has been said upon the motion of the venous blood, that it must undergo great modifications, according to an infinity of circumstances.

At any rate, the venous blood of every part of the body arrives at the right auricle of the heart by the trunks that we have already named, viz. two very large, the venæ cavæ; and one very small, the coronary vein.

The blood probably flows in each of these veins with different rapidity: what is certain is, that the three columns of liquid make an effort to pass into the auricle, and that the effort must be considerable. If it is contracted, this effort has no effect; but, as soon as it dilates, the blood enters its cavity, fills it completely, and even distends the sides a little: it would immediately enter the ventricle, if it did not contract itself at this instant. The blood then confines itself to filling up exactly the cavity of the auricle; but this very soon contracts, compresses the blood, which escapes into the place where there is least compression. Now it has only two issues: 1st, by the vena cava; 2dly, by the opening which conducts into the ventricle. The columns of blood which are coming to the auricle, present a certain resistance to its passage into the cavæ or coronary veins. On the contrary, it finds every facility to enter the ventricle, since the latter dilates itself with force, tends to produce a vacuum, and consequently draws on the blood instead of repulsing it.

However, all the blood that passes out of the auricle does not enter the ventricle: it has been long observed that, at each contraction of the auricle, a certain quantity of blood flows back into the superior and inferior venæ cavæ; the undulation produced by this cause, is sometimes felt as far as the external iliac veins, and into the jugulars; it has a sensible influence upon the flowing of the

blood in several organs, and particularly in the brain.

The quantity of blood which flows back in this manner, varies according to the facility with which this liquid enters the ventricle. If, at the instant of its dilatation, the ventricle still contains much blood, which has not passed into the pulmonary artery, it can only receive a small quantity of that of the auricle, and then the reflux will be of greater extent.

This happens when the flowing of the blood in the pulmonary artery is retarded, either by obstacles in the lungs, or by the want of sufficient force in the ventricle. This reflux, of which we speak, is the cause of the beating which is seen in the veins of certain sick persons, and which bears the name of *venous pulse.* Nothing similar can take place in the coronary vein, for its opening is furnished with a valve, which shuts on the instant of the contraction of the auricle.

The instant in which the auricle ceases to contract, the ventricle enters into contraction, the blood it contains is strongly pressed, and tends to escape in every direction: it would return so much more easily into the auricle, that, as we have already frequently said, it dilates just at this instant; but the tricuspid valve which shuts the *auriculo-ventricular* opening prevents this reflux. Being raised by the liquid introduced below it, and which tends to pass into the auricle, it gives way until it has become perpendicular to the axis of the ventricle: its three divisions then shut almost completely the opening; and, as the tendons of the *columnæ carneæ* do not permit them to go farther, the valve resists the effort of the blood, and thus prevents it from passing into the auricle.

It is not the same with the blood which, during the dilatation of the ventricle, corresponded to the auricular surface of the valve; it is evident that in the motion of the ventricle it is carried forward into the auricle, where it mixes with that which comes from the *venæ cavæ* and coronary veins.

Not being able to overcome the resistance of the tricuspid valve, the blood of the ventricle has no other issue than the pulmonary artery, into which it enters by raising the three sigmoid valves that supported the column of blood contained in the artery during the dilatation of the ventricle.

Suppose the artery full of blood, and left to itself, the liquid will be pressed in the whole extent of the vessel by the sides which tend to contract upon the cavity; the blood being thus pressed will endeavour to escape in every direction: now it has only two ways to pass, by the cardiac orifice, and by the numerous small vessels that terminate the artery in the tissue of the lungs.

The orifice of the pulmonary artery in the heart being very large, the blood would easily pass into the ventricle, if there were not a particular apparatus at this orifice intended to prevent this; the three sigmoid valves. Being pressed against the sides of the artery, at the instant that the ventricle sends a wave of blood that way, these folds become perpendicular to its axis: as soon as the blood tends to flow back into the ventricle, they place themselves so as to shut up the cavity of this vessel completely.

On account of the bag-like form of the sigmoid valves, they are swelled by the blood that enters into their cavity, and their margin tends to assume a circular figure. Now, three circular portions, placed upon each other, necessarily leave a space between them.

When the valves, therefore, of the pulmonary artery are lowered by the blood, there ought to remain an opening by which this liquid may flow back into the ventricle.

If each valve were alone, it would undoubtedly take a semicircular form; but there are three of them: being pressed by the blood, they lie all close together; and, as they cannot extend as far as their fibres permit them, they press upon each other, on account of the small space in which they are contained, and which does not permit their extending themselves. The valves then assume the figure of three triangles, whose summit is in the centre of the artery, and the sides are in *juxtaposition*, so as completely to intercept the cavity of the artery. Perhaps the *knots* or *buttons*, which are upon the summit of some of the triangles, are intended to shut more perfectly the centre of the artery.

Finding no passage into the ventricle, the blood will pass into the radicles of the pulmonary veins, with which the small arteries that terminate the pulmonary artery form a continuation, and this passage will continue as long as the sides of the artery press the contained blood with sufficient force; and, except in the trunk and the principal branches, this effect continues until the whole of the blood is expelled.

We might suppose the smallness of the vessels that terminate the pulmonary artery an obstacle to the flowing of the blood: that might be if they were not numerous, or if the capacity of the whole were less, or even equal to that of the trunk; but as they are innumerable, and their capacity is much greater than that of the trunk, there is no difficulty in the motion. It is true that the distension or subsidence of the lungs, renders this passage more or less easy.

In order that this flowing may take place with facility, the force of contraction of the different divisions of the artery ought to be every where in relation to their size: if, on the contrary, that of the small were greater than that of the large, as soon as the first had expelled the blood by which they were filled, they would not be sufficiently distended by the blood coming from the second, and the flowing of the blood would be retarded: now, what takes place is quite the contrary of this supposition. If the pulmonary artery of a living animal were tied immediately above the heart, almost all the blood contained in the artery, at the instant of the ligature, would

pass quickly into the pulmonary veins, and arrive at the heart.

This is what happens when the blood contained in the pulmonary artery is exposed to the single action of this vessel; but in the common state, at each contraction of the right ventricle, a certain quantity of blood is thrown with force into the artery; the valves are immediately raised; the artery, and almost all its divisions, are so much more distended, in proportion as the heart is more forcibly contracted, and as the quantity of blood injected into the artery is greater. The ventricle dilates immediately after its contraction, and at this instant the sides of the artery contract also; the sigmoid valves descend and shut the pulmonary artery, until they are raised by a new contraction of the ventricle.

Such is the second cause of the motion of the blood in the artery that goes towards the lungs: we see it is intermittent; let us endeavour to appreciate its effects: for which purpose let us consider the most apparent phænomena of the flow of the blood in the pulmonary artery.

It has been just observed, that in the instant the ventricle injects the blood into the artery, the trunk, and all the divisions of a certain size, undergo an evident dilatation. This phænomenon is called the *pulsation* of the artery. The pulsation is very sensible near the heart; it becomes feeble in proportion to its distance from it; when the artery, by being divided, has become very small, it ceases.

Another phænomenon, which is only the consequence of the preceding, is observed when the artery is opened.

If it be near the heart, and in a place where the beating is sensible, the blood spouts out by jerks; if the opening be made far from the heart, and in a small division, the jet is continued and uniform; lastly, if one of the very small vessels that terminate the artery be opened, the blood flows, but without forming any jet: it flows uniformly in a sheet.

We see at first in these phænomena a new application of the principle of hydrodynamics, as already mentioned, with regard to the influence of the size of the tube upon the liquid that flows in it: the greater the tube is, the rapidity is the less. This capacity of the vessel increasing according as it advances towards the lungs, the quickness of the blood necessarily diminishes.

With regard to the pulsation of the artery, and the jet of blood that escapes from it when it is open, we see plainly that these two effects depend on the contraction of the right ventricle, and the introduction of a certain quantity of blood into the artery, which takes place by this means while flowing through the small vessels that terminate the artery, and that give commencement to the pulmonary veins: the venous blood changes its nature by the effect of the contact of the air; it acquires the qualities of arterial blood: it is this change in the properties of the blood which essentially constitutes respiration.

At the instant in which the venous blood traverses the small vessels of the pulmonary lobules, it assumes a scarlet colour; its odour becomes stronger, and its taste more distinct; its temperature rises about a degree; a part of its serum disappears in the form of vapour in the tissue of the lobules, and mixes with the air. Its tendency to coagulate augments considerably, which is expressed by saying that its *plasticity* becomes stronger, its specific gravity diminishes, as well as its capacity for caloric. The venous blood, having acquired these characters, now becomes arterial blood, and enters the radicles of the pulmonary veins, which have their origin, like the veins properly so called, in the tissue of the lungs; that is, they form at first an infinite number of radicles, which appear to be the continuation of the pulmonary artery. These radicles unite to form thicker roots, which become still thicker. Lastly, they all terminate in four vessels, which open, after a short passage, into the left auricle. The pulmonary veins are different from the other veins, in their not anastomosing after they have acquired a certain thickness: a similar disposition has been seen in the divisions of the artery which is distributed to the lungs.

The pulmonary veins have no valves, and their structure is similar to that of the other veins; their middle membrane is, however, a little thicker, and it appears to possess more elasticity. The blood passes into the radicles of the pulmonary veins, and very soon reaches the trunk of these veins: in this passage it presents a gradually accelerated motion, in proportion as it passes from the small veins into the larger: finally, it does not at all flow by jerks, and it appears nearly equally rapid in the four pulmonary veins. From the pulmonary veins the left auricle receives the blood.

The mechanism by which the blood traverses the left auricle and ventricle is the same as that by which the venous blood traverses the right cavities.

When the left auricle dilates, the blood of the four pulmonary veins enters and fills it; when it contracts, part of the blood passes into the ventricle, and part flows back into the pulmonary veins: when the ventricle dilates, it receives the blood which comes from the auricle, and a small quantity of that of the *aorta*; when it contracts, the mitral valve is raised, it shuts the *auriculo-ventricular* opening, and the blood, not being able to return into the auricle, it enters into the aorta by raising the three sigmoid valves, which were shut during the dilatation of the ventricle.

It is necessary to remark, however, that the fleshy columns having no existence in the auricle, their influence cannot exist, and the arterial ventricle being much thicker than the venous, it compresses the blood with a much greater force than the right, which was indispensable on account of the distance to which it has to send this liquid.

Course of the blood in the aorta, and its

divisions. Notwithstanding the differences which exist between this and the pulmonary artery, the phænomena of the motion of the blood are nearly the same in both: thus a ligature being applied upon this vessel, near the heart, in a living animal, it contracts in its whole length, and, except a small quantity that remains in the principal arteries, the blood passes immediately into the veins.

Some authors doubt the fact of the contraction of the arteries; the following experiment may be made to convince them: uncover the carotid artery of a living animal the length of several inches; take the transverse dimension of the vessel with compasses, tie it at two different points at the same time, and you may then have any length whatever of artery full of blood; make a small opening in the sides of this portion of the artery, you will immediately see almost the whole of the blood pass out, and it will even spout to a certain distance. Then measure the breadth with the compasses, and there will be no doubt of the artery being much contracted, if the rapid expulsion of the blood has not already convinced you. This experiment also proves that the force with which the artery contracts is sufficient to expel the blood that it contains.

Passage of the blood of the arteries into the veins. When, in the dead body, an injection is thrown into an artery, it immediately returns by the corresponding vein: the same thing takes place, and with still more facility, if the injection is thrown into the artery of a living animal. In cold-blooded animals, the blood can be seen, by the aid of a microscope, passing from the arteries into the veins. The communication between these vessels is then direct, and very easy: it is natural to suppose that the heart, after having forced the blood to the last arterial twigs, continues to make it move into the venous radicles, and even into the veins. Harvey, and a great number of celebrated anatomists, thought so. Lately, Bichât has been strongly against this doctrine: he has limited the influence of the blood; he pretends that it ceases entirely in the place where the arterial is changed into venous blood, that is, in the numerous small vessels that terminate the arteries and commence the veins. In this place, according to him, the *action of the small vessels alone*, is the cause of the motion of the blood.

Remarks on the Movements of the Heart. A. The right auricle and ventricle, and the left auricle and ventricle, the action of which we have studied separately, in reality form only one organ, which is the heart.

The auricles contract and dilate together; the same thing takes place with the ventricles, whose movements are simultaneous.

When the contraction of the heart is spoken of, that of the ventricle is understood. Their contraction is called *systole*, their dilatation *diastole*.

B. Every time that the ventricles contract, the whole of the heart is rapidly carried forward, and the point of this organ strikes the left lateral side of the chest, opposite the internal of the sixth and seventh true ribs.

C. The number of the pulsations of the heart is considerable; it is generally greater in proportion as the person is younger.

At birth it is from	130 to 140 in a minute.
At one year	120 to 130.
At two years	100 to 110.
At three years	90 to 100.
At seven years ...	85 to 90.
At fourteen years	80 to 85.
At adult age	75 to 80.
At first old age ...	65 to 75.
At confirmed old age	60 to 65.

But these numbers vary according to an infinity of circumstances, sex, temperament, individual disposition, &c.

The affections of the mind have a great influence upon the rapidity of the contractions of the heart: every one knows that even a slight emotion immediately modifies the contractions, and generally accelerates them. In this respect great changes take place also by diseases.

D. Many researches have been made to determine with what force the ventricles contract. In order to appreciate that of the left ventricle, an experiment has been made, which consists in crossing the legs, and placing upon one knee the ham of the other leg, with a weight of 55 pounds appended to the extremity of the foot. This considerable weight, though placed at the extremity of such a long lever, is raised at each contraction of the ventricle, on account of the tendency to straighten the accidental curvature of the popliteal artery, when the legs are crossed in this manner.

This experiment shows that the force of contraction of the heart is very great; but it cannot give the exact value of it. Mechanical physiologists have made great efforts to express it in numbers. Borelli compares the force which keeps up the circulation to that which would be necessary to raise 180,000 pounds; Hales believes it to be 51 pounds 5 ounces, and Keil reduces it to from 15 to 8 ounces. Where shall we find the truth in these contradictions?

It seems impossible to know exactly the force developed by the heart in its contraction; it very probably varies according to numerous causes, such as age, the volume of the organ, the size of the individual, the particular disposition, the quantity of blood, the state of the nervous system, the action of the organs, the state of health or of sickness, &c.

All that has been said of the force of the heart relates only to its contraction, its dilatation having been considered as a passive state, a sort of repose of the fibres; however, when the ventricles dilate, it is with a very great force, for example, capable of raising a weight of twenty pounds, as may be observed in animals recently dead. When the heart of a living animal is taken hold of by the hand, however small it may be, it is impossible by any effort to prevent the dilatation of the ven-

tricles. The dilatation of the heart, then, cannot be considered as a state of inaction or repose.

E. The heart moves from the first days of existence of the embryo to the instant of death by decrepitude.

Why does it move? This question has been asked by ancient and modern philosophers and physiologists. The *wherefore* of phænomena is not easy to be given in physiology: almost always what is taken for such is only, in other terms, the expression of the phænomena: but it is remarkable how easily we deceive ourselves in this respect: one of the strongest proofs of it is afforded by the different explanations of the motion of the heart.

The ancients said that there was a *pulsific virtue* in the heart, a *concentrated fire*, that gave motion to this organ. Descartes imagined that *an explosion as sudden as that of gunpowder* took place in the heart. The motion of the heart was afterwards attributed to the *animal spirits*, to the *nervous fluid*, to the *soul*, to the *process of the nervous system*, to the *archea*: Haller considered it as an effect of irritability. Lately, Legallois has endeavoured to prove, by experiments, that the principle or cause of the motion of the heart has its seat in the spinal marrow.

Remarks upon the circular motion of the blood. We now know all the links of the circular chain that the sanguiferous system represents: we know how the blood is carried from the lungs towards all the other parts of the body, and how it returns from these parts to the heart. Let us examine these phænomena in a general manner, in order to show the most important.

A. The quantity of blood contained in the system is very considerable. It has been estimated by several authors at from 24 to 30 pounds. This value cannot be at all exact, for the quantity of blood varies according to numerous causes.

The relation of the mass of the arterial with that of the venous blood, is somewhat better known. This last, contained in vessels larger than that of the arteries, is necessarily in greater quantity, though we cannot say exactly how much greater its mass is than that of the arterial blood.

B. The circulatory path of the blood being continuous, and the capacity of the canal variable, the rapidity of this fluid must be variable also; for the same quantity must pass through all the points in a given time: observation confirms this. The rapidity is great in the trunk, and the principal divisions of the pulmonary artery and aorta; it diminishes much in the secondary divisions; it diminishes still more at the instant of the passage from the arteries into the veins; it continues to augment in proportion as the blood passes from the roots of the veins into larger roots, and, lastly, into the large veins; but the rapidity is never so great in the venæ cavæ as in the aorta. In the trunks and the principal arterial divisions, the course of the blood is not only continued under the influence of the contraction of the arteries, but, besides, it flows in jerks by the effect of the contraction of the ventricles. This jerking manifests itself in the arteries by a simple dilatation in those that are straight, and by a dilatation and tendency to straighten in those which are flexuous.

The pulse is formed by the first of these phænomena, to which the second is sometimes joined. It is not easy to study, in man or in the animals, except where the arteries are laid close upon a bone, because they do not then retire from under the finger when it is placed upon them, as happens to arteries in soft parts.

In general, the pulse makes known the principal modification of the contraction of the left ventricle, its quickness, its intensity, its weakness, its regularity, its irregularity. The quantity of the blood is also known by the pulse. If it is great, the artery is round, thick, and resisting. If the blood is in small quantity, the artery is small and easily flattened. Certain dispositions in the arteries have an influence also upon the pulse, and may render it different in the principal arteries.

C. The beating of the arteries is necessarily felt in the organs which are next them, and so much more in proportion as the arteries are more voluminous, and as the organs give way with less facility. The jerk which they undergo is generally considered as favourable to their action, though no positive proof of it exists.

In this respect none of the organs ought to be more affected than the brain. The four cerebral arteries unite in circles at the base of the skull, and raise the brain at each contraction of the ventricle, as it is easy to be convinced of by laying bare the brain of an animal, or by observing this organ in wounds of the head. Probably, the numerous angular bendings of the internal carotid arteries, and of the vertebrals before their entrance into the skull, are useful for moderating this shaking; these bendings must also necessarily retard the course of the blood in these vessels.

When the arteries penetrate in a voluminous state into the parenchyma of the organs, as the liver, the kidneys, &c., the organ must also receive a jerk at each contraction of the heart. The organs into which the vessels enter, after being divided and subdivided, can suffer nothing similar.

D. From the lungs to the left auricle the blood is of the same nature; however, it sometimes happens that it is not the same in the four pulmonary veins. For instance, if the lungs are so changed that the air cannot penetrate into the lobules, the blood which traverses them will not be changed from venous to arterial blood: it will arrive at the heart without having undergone this change; but in its passage through the left cavities it will be intimately mixed with that of the lungs opposite. The blood is necessarily homogeneous from the left ventricle to the last divisions of the aorta; but, being arrived at these

small divisions, its elements separate; at least there exists a great number of parts, such as the serous membranes, the cellular tissue, the tendons, the aponeuroses, the fibrous membranes, &c., into which the red part of the blood is never seen to penetrate, and the capillaries of which contain only serum.

This separation of the elements of the blood takes place only in a state of health; when the parts that I have mentioned become diseased, it often happens that their small vessels contain blood, possessed of all its characteristic properties.

There have been endeavours to explain this particular analysis of the blood by the small vessels. Boerhaave, who admitted several sorts of globules of different sizes in the blood, said, that globules of a certain largeness could only pass into vessels of an appropriate size: we have seen that globules, such as they were admitted by Boerhaave, do not exist.

Bichât believed that there existed in the small vessels a particular sensibility, by which they admitted only the part of the blood suitable to them. We have already frequently contested ideas of this kind; neither can they be admitted here, for the most irritating liquids introduced into the arteries pass immediately into the veins, without any opposition to their passage by the capillaries.

F. The elements of the blood separate in traversing the small vessels: sometimes the serum escapes, and spreads upon the surface of the membrane: sometimes the fatty matter is deposited in cells; here the mucus, there the fibrin; elsewhere are the foreign substances, which were accidentally mixed with the arterial blood. In losing these different elements, the blood assumes the qualities of venous blood. At the same time that the arterial blood supplies these losses, the small veins absorb the substances with which they are in contact. In the intestinal canal, for example, they absorb the drinks; on the other hand, the lymphatic trunks pour the lymph and chyle into the venous system: it is certain, then, that the venous blood cannot be homogeneous, and that its composition must be variable in the different veins; but having reached the heart, by the motions of the right auricle and ventricle, and the disposition of the fleshy columns, the elements all mix together, and, when they are completely mixed, they pass into the pulmonary artery.

F. A general law of the economy is, that no organ continues to act without receiving arterial blood: from this results, that all the other functions are dependent on the circulation; but the circulation, in its turn, cannot continue without the respiration by which the arterial blood is formed, and without the action of the nervous system, which has a great influence upon the rapidity of the flowing of the blood, and upon its distribution in the organs. Indeed, under the action of the nervous system, the motions of the heart, and, consequently, the general quickness of the course of the blood, are quickened or retarded. Thus, when the organs act voluntarily or involuntarily, we learn from observation, that they receive a greater quantity of blood without the motion of the general circulation being accelerated on that account; and if their action predominates, the arteries which are directed there increase considerably. If, on the contrary, the action diminishes, or ceases entirely, the arteries become smaller, and permit only a small quantity to reach the organ. These phænomena are manifest in the muscles: the circulation becomes more rapid in them when they contract; if they are often contracted, the volume of their arteries increases; if they are paralysed, the arteries become very small, and the pulse is scarcely felt.

The circulation, then, may be influenced by the nervous system in three ways: 1st, By modifying the motions of the heart; 2dly, By modifying the capillaries of the organs, so as to accelerate the flowing of the blood in them; 3dly, By producing the same effects in the lungs, that is, by rendering the course of the blood more or less easy through this organ.

The acceleration of the motions of the heart becomes sensible to us by the manner in which the point of this organ strikes the walls of the chest. The difficulty of the capillary circulation is discovered by a feeling of numbness and a particular prickling; and when the pulmonary circulation is difficult, we are informed of it by an oppression or sense of suffocation, more or less strong.

Probably the distribution of the filaments of the great sympathetic on the sides of the arteries, has some important use; but this use is entirely unknown; we have received no light on the point by any experiment."—*Magendie's Elements of Physiology.*

CIRCULA'TOR. (From *circulo*, to compass about.) A wandering practiser in medicine. A quack; a mountebank.

CIRCULATO'RIUM. (From *circulo*, to move round.) A chemical digesting vessel in which the fluid performs a ciculatory motion.

CI'RCULUS. (Diminutive of *circus*, a circle.) A circle or ring.

1. In *Anatomy*, applied to round parts; as the *circulus osseus* of the temporal bone of the fœtus, or any part of the body which is round or annular, as *circulus oculi, iridis*, &c.

2. In *Botany*, it is applied to that part of a circle which is the most distant from the centre; and it is generally used to express the florets which are the furthest from the centre of a compound flower, as the white ones which surround the yellow ones of the common daisy.

3. A round chemical instrument, sometimes called abbreviatorium by the old chemists.

Circulus arteriosus iridis. The artery which runs round the iris and forms a circle, is so termed.

Circulus osseus. *Annulus osseus.* A

ring-like bone, placed before the cavity of the tympanum of the fœtus, but not found in the adult skeleton.

CIRCULUS QUADRUPLEX. A bandage.

CIRCUMCAULA'LIS. A name of the adnata of the eye. See *Oculus*.

CIRCUMCI'SION. (*Circumcisio*, *onis*. f.; from *circumcido*, to cut about.) The cutting off the prepuce from the glans penis; an ancient custom, still practised amongst the Jews, and rendered necessary by the heat of the climate in which it was first practised, to prevent collections and a vitiated state of the sebaceous secretion from the odoriferous glands of the part.

CIRCUMFLE'XUS. (*Circumflexus*, sc. *musculus*.) A muscle of the palate. *Tensor palati*, of Innes. *Circumflexus palati mollis*, of Albinus. *Spheno-salpingo-staphilinus, seu staphilinus externus*, of Winslow. *Musculus tubæ novæ*, of Valsalva. *Palato-salpingeus*, of Douglas. *Pterigo-staphylinus*, of Cowper. It arises from the spinous process of the sphenoid bone, behind the foramen ovale, which transmits the third branch of the fifth pair of nerves, and from the Eustachian tube, not far from its osseous part; it then runs down along the pterygoideus internus, passes over the hook of the internal plate of the pterygoid process by a round tendon, which soon spreads into a broad membrane. It is inserted into the velum pendulum palati, and the semilunar edge of the os palati, and extends as far as the suture which joins the two bones. Generally some of its posterior fibres join with the constrictor pharyngis superior, and palato-pharyngæus. Its use is to stretch the velum, to draw it downwards, and to the side towards the hook. It hath little effect upon the tube, being chiefly connected to its osseous part.

CIRCUMGYRA'TION. (*Circumgyratio, onis.* f.; from *circumgyro*, to turn round.) A turning round: applied formerly to the turning a limb, as the arm or thigh, round in its socket.

CIRCUMLIGATURA. (*a, æ.* f.; from *circum*, around, and *ligatura*, a ligature.) A contraction of the prepuce, behind the glans penis, like a ligature. See *Paraphymosis*.

CIRCUMLI'TIO. (From *circumlino*, to anoint all over.) A medicine used as a general unction or liniment to the part.

CIRCUMOSSA'LIS. (From *circum*, about, and *os*, a bone.) Surrounding a bone as the periosteum does; or surrounded by a bone.

CIRCUMSCISUS. (From *circumscindo*, to cut round about.) Circumcised. Applied to a membraneous capsule, separating into two parts by a complete circular fissure.

CI'RCUS. (*us, i.* m. Κιρκος; from *carka*, a Chaldean word, to surround.)

1. A circle or ring.
2. A circular bandage.

CIRNE'SIS. (From κιρναω, to mix.) An union of separate things.

CIRROSUS. Cirrose: having a cirrus or tendril. Applied to a leaf tipped with a tendril; as in *Gloriosa* and *Flagellaria*, two Indian plants.

CIR'RUS. (*us, i.* m.; from κερας, a horn, because it has the appearance of a horn.) *Cirrhus. Clavicula.* A clasper or tendril. One of the *fulcra* or props of plants. A long, cylindrical, slender, spiral body, issuing from various parts of plants.

From its origin, a cirrus is distinguished into,

1. *Foliar*, when a continuation of the midrib of a simple leaf; as in *Fumaria claviculata, Mimosa scandens*, and *Gloriosa superba*.
2. *Petiolar*, when terminating the common petiole of a compound leaf; as in *Pisum sativum*. This is sometimes distinguished by the number of leaflets which grow under it: hence *cirri diphylli—tetraphylli* and *polyphylli*.
3. *Peduncular*, when it proceeds from the peduncle; as in *Vitis vinifera*.
4. *Axillary*, when it arises from the stem or branches in the axillæ of the leaves; as in *Passiflora incarnata*.
5. *Subaxillary*, when it originates below the leaf.
6. *Lateral*, when at the side of it; as in *Bryonia*.

From the division of its apex, a *cirrus* is,

1. *Simple*, consisting of one undivided piece; as in *Momordica balsaminea, Passiflora quadrangularis*, and *Bryonia dioica*.
2. *Compound*, consisting of a stalk variously branched or divided.
3. *Bifid*, when it has two divisions; as in *Vitis vinifera, Lathyrus palustris, Ervum tetraspermum*, &c.
4. *Trifid*, when there are three; as in *Bignonia unguis*, and *Lathyrus hirsutus*.
5. *Multifid*, or *branched*, when the divisions are more numerous; as in *Lathyrus latifolius*, and *Cobea scandens*.

From its *convolution* into,

1. *Convolute*, when all the gyrations are regular in the same direction; as in *Hedera quinquefolia*.
2. *Revolute*, winding itself irregularly, sometimes on one side, sometimes on the other; as in *Passiflora incarnata*.

CI'RSIUM. (From κιρσος, a vein, or swelling of a vein, which this herb was supposed to heal.) See *Serratula arvensis*.

CIRSOCE'LE. (*e, es.* f. Κιρσοκηλη; from κιρσος, *varix*, or a dilatation of a vein, and κηλη, a tumour.) *Varicocele.* A morbid or varicose distension and enlargement of the spermatic veins: it is frequently mistaken for a descent of a small portion of omentum. The uneasiness which it occasions is a kind of pain in the back, generally relieved by suspension of the scrotum; and whether considered on account of the pain, or on account of the wasting of the testicle, which now and then follows, it may truly be called a disease. It has been resembled to a collection of earthworms. It is most frequently confined to that part of the spermatic process which is below the opening in the abdominal tendon; and the vessels generally become rather larger

as they approach the testes. There is one sure method of distinguishing between a cirsocele and omental hernia: place the patient in an horizontal posture, and empty the swelling by pressure upon the scrotum; then put the fingers firmly upon the upper part of the abdominal ring, and desire the patient to rise: if it is a hernia, the tumour cannot re-appear, as long as the pressure is continued at the ring; but if a cirsocele, the swelling returns with increased size, on account of the return of blood into the abdomen being prevented by the pressure.

CIRSOI'DES. (From κιρσος, a varix, and ειδος, likeness.) Resembling a varix: an epithet applied by Rufus Ephesius to the upper part of the brain.

CIRSOPHTHALMIA. (*a, æ.* f.; from κιρσος, *varix,* and οφθαλμος, the eye.) A varicose state of the vessels of the eye.

CI'RSOS. (Κιρσος, from κιρσοω, to dilate.) A preternatural dilatation of any part of a vein. See *Varix.*

CI'SSA. (From κισσα, a gluttonous bird, and also the appetite for improper things.) A depraved habit. See *Pica.*

CISSA'MPELOS. (*Cissampelos, i.* f.; from κισσος, ivy, and αμπελος, the vine.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Monodelphia.* The wild vine with leaves like ivy.

CISSAMPELOS PAREIRA. The systematic name of the *Pareira brava;* called also, *Pareyra, Ambutua, Butua,* and *Overo butua.* The root of this plant—*Cissampelos, foliis peltatis cordatis emarginatis,* of Linnæus—a native of South America and the West Indies, has no remarkable smell, but to the taste it manifests a notable sweetness of the liquorice kind, together with a considerable bitterness, and a slight roughness covered by the sweet matter. The facts adduced on the utility of the *radix pareiræ bravæ* in nephritic and calculous complaints, are principally by foreigners, and no remarkable instances of its efficacy are recorded by English practitioners.

CISSA'RUS. See *Cistus creticus.*

CISSI'NUM. (From κισσος, ivy.) The name of a plaster mentioned by Ægineta.

CI'STA. (*a, æ.* f.; from κειμαι, to lie.) A cyst.

CISTE'RNA. (*a, æ.* f.; from *cista,* a cyst.) 1. The fourth ventricle of the brain. 2. The lacteal vessels in the breasts of women.

CI'STHORUS. See *Cistus creticus.*

CISTIC. See *Cystic.*

CISTIC OXIDE. See *Calculus.*

CI'STUS. (*us, i.* m. Κισ7ος, the derivation of which is uncertain; perhaps from *kis,* Heb.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Monogynia.* The Cistus.

CISTUS CRETICUS. The systematic name of the plant from which the ladanum of the shops is obtained: called also, *Cistus ladanifera, Cisthorus, Cissarus,* and *Dorycinium.* *Cistus—arborescens extipulatus, foliis spatulato-ovatis petiolatis enerviis scabris, calycinis lanceolatis,* of Linnæus. The resinous juice called ladanum exudes upon the leaves of this plant in Candia, where the inhabitants collect it by lightly rubbing the leaves with leather, and afterwards scraping it off, and forming it into irregular masses for exportation. Three sorts of ladanum have been described by authors, but only two are to be met with in the shops. The best, which is very rare, is in dark-coloured masses, of the consistence of a soft plaster, and growing still softer on being handled; the other is in long rolls, coiled up, much harder than the preceding, and not so dark. The first has commonly a small, and the last a large, admixture of fine sand, without which they cannot be collected pure, independently of designed abuses: the dust blown on the plant by winds, from the loose sands among which it grows, being retained by the tenacious juice. The soft kind has an agreeable smell, and a lightly pungent bitterish taste: the hard is much weaker. Ladanum was formerly much employed internally as a pectoral and astringent in catarrhal affections, dysenteries, and several other diseases; at present, however, it is wholly confined to external use, and is an ingredient in the stomachic plaster, *emplastrum ladani.*

CISTUS HUMILIS. A name most probably of the *Lichen caninus* of Linnæus.

CISTUS LADANIFERA. See *Cistus creticus.*

CISTUS LEDON. See *Ledum palustre.*

CITE'SIUS (CITOIS), FRANCIS, of Poitiers, in France, born in 1572. He published a treatise on the Colica Pictonum, which was much esteemed, noticing its termination in paralysis of the extremities. He died in 1652, at the advanced age of 80.

CI'THARUS. (From κιθαρα, a harp.) The breast is sometimes so named from its shape.

CITRA'GO. (From *citrus,* a citron; so called from its citron-like smell.) Baum. See *Melissa.*

CI'TRATE. (*Citras, atis.* f.; from *citrus,* the lemon.) A salt formed by the union of the citric acid, or acid of lemons, with the salifiable bases.

CI'TREA. See *Citrus medica.*

CI'TREUM. (From *citrus.*) The citron-tree. See *Citrus medica.*

CI'TRIC. (*Citricus,* from *citrus,* the lemon.) Of or belonging to the lemon.

CITRIC ACID. *Acidum citricum.* On account of the mucilaginous matter with which lemon-juice is mixed, it is very soon altered by spontaneous decomposition. Various methods have been contrived to prevent this effect from taking place, in order that this wholesome and agreeable acid might be preserved for use in long voyages, or other domestic occasions. The juice may be kept in bottles under a thin stratum of oil, which indeed prevents, or greatly retards, its total decomposition; though the original fresh taste soon gives place to one

which is much less grateful. In the East Indies it is evaporated to the consistence of a thick extract. If this operation be carefully performed by a very gentle heat, it is found to be very effectual. When the juice is thus heated, the mucilage thickens, and separates in the form of flocks, part of which subside, and part rise to the surface: these must be taken out. The vapours which arise are not acid. If the evaporation be not carried so far as to deprive the liquid of its fluidity, it may be long preserved in well-closed bottles; in which, after some weeks' standing, a farther portion of mucilage is separated, without any perceptible change in the acid.

Of all the methods of preserving lemon-juice, that of concentrating it by frost appears to be the best, though in the warmer climates it cannot conveniently be practised. Lemon-juice, exposed to the air in a temperature between 50° and 60°, deposits in a few hours a white semi-transparent mucilaginous matter, which leaves the fluid, after decantation and filtration, much less alterable than before. This mucilage is not of a gummy nature, but resembles the gluten of wheat in its properties: it is not soluble in water when dried. More mucilage is separated from lemon-juice by standing in closed vessels. If this depurated lemon-juice be exposed to a degree of cold of about seven or eight degrees below the freezing point, the aqueous part will freeze, and the ice may be taken away as it forms; and if the process be continued until the ice begins to exhibit signs of acidity, the remaining acid will be found to be reduced to about one eighth of its original quantity, at the same time that its acidity will be eight times as intense, as is proved by its requiring eight times the quantity of alkali to saturate an equal portion of it. This concentrated acid may be kept for use, or, if preferred, it may be made into a dry lemonade, by adding six times its weight of fine loaf sugar in powder.

The above processes may be used when the acid of lemons is wanted for domestic purposes, because they leave it in possession of the oils, or other principles, on which its flavour peculiarly depends; but in chemical researches, and where the acid itself is required to be had in the utmost purity, a more elaborate process must be used. Boiling lemon-juice is to be saturated with powdered chalk, the weight of which is to be noted, and the powder must be stirred up from the bottom, or the vessel shaken from time to time. The neutral saline compound is scarcely soluble in water; it therefore falls to the bottom, while the mucilage remains suspended in the watery fluid, which must be decanted off; the remaining precipitate must then be washed with warm water, until it comes off clear. To the powder thus edulcorated, a quantity of sulphuric acid, equal to the chalk in weight, and diluted with ten parts of water, must be added, and the mixture boiled a few minutes. The sulphuric acid combines with the earth, and forms sulphate of lime, which remains behind when the cold liquor is filtered, while the disengaged acid of lemons remains dissolved in the fluid. This last must be evaporated to the consistence of a thin syrup, which yields the pure citric acid in little needle-like crystals. It is necessary that the sulphuric acid should be rather in excess, because the presence of a small quantity of lime will prevent the crystallisation. This excess is allowed for above.

Its taste is extremely sharp, so as to appear caustic. It is, of the vegetable acids, the one which most powerfully resists decomposition by fire. In a dry and warm air it effloresces; but it absorbs moisture when the air is damp, and at length loses its crystalline form. A hundred parts of this acid are soluble in seventy-five of water, at 60°. Though it is less alterable than most other solutions of vegetable acids, it will undergo decomposition when long kept.

The saline compounds are called *citrates*. Those used medicinally are,

1. *C. of potash*. See *Potassæ citras*.
2. *C. of soda*. See *Sodæ citras*.
3. *C. of ammonia*. See *Ammoniæ citras*.
4. *C. of magnesia*, which is frequently administered in the cure of diseases, by giving the subcarbonate of magnesia in one portion, and dilute lemon-juice in another. In this way it acts as a gentle purgative, and suits delicate stomachs.

All the citrates are decomposed by the powerful acids, which do not form a precipitate with them, as with the oxalates and tartrates. The oxalic and tartaric acids decompose them, and form crystallised or insoluble precipitates in their solutions. All afford traces of acetic acid, or a product of the same nature, on being exposed to distillation: this character exists particularly in the metallic citrates. Placed on burning coals, they melt, swell up, emit an empyreumatic smell of acetic acid, and leave a light coal. All of them, if dissolved in water, and left to stand for a time, undergo decomposition, deposit a flocculent mucus, which grows black and leaves their bases combined with carbonic acid, one of the products of the decomposition. Before they are completely decomposed, they appear to pass to the state of acetates.

The citric acid is found in many fruits united with the malic acid.

Citric acid being more costly than tartaric, may be occasionally *adulterated* with it. This fraud is discovered by adding slowly to the acid, dissolved in water, a solution of subcarbonate of potash, which will give a white pulverulent precipitate of tartar, if the citrate be contaminated with the tartaric acid. When one part of citric acid is dissolved in 19 of water, the solution may be used as a substitute for lemon-juice. If before solution the crystals be triturated with a little sugar and a few drops of the oil of lemons, the resemblance to the native juice will be complete. It is an antidote against sea-scurvy; but the

admixture of mucilage and other vegetable matter in the recent fruit of the lemon, has been supposed to render it preferable to the pure acid of the chemist.

Citrina'tio. Complete digestion.

CITRI'NULA. (*a, æ.* f.; a diminutive of *citrus.*) A small citron or lemon.

CITRON. See *Citrus medica.*

Citrul, Sicilian. See *Cucurbita citrullus.*

CITRU'LLUS. (*us, i.* f.) See *Cucurbita citrullus.*

CI'TRUS. (*us, i.* f. Κιτρος.) 1. The name of a genus of plants in the Linnæan system. Class, *Polyadelphia;* Order, *Icosandria.*

2. The name of the lemon. See *Citrus medica.*

Citrus aurantium. The systematic name of the orange tree and fruit; called also, *Aurantium, Aurantium Hispalense, Aurantium Chinense, Malus aurantia major, Malus aurantia, Aurantium vulgare, Malus aurantia vulgaris, Mala aurea, Chrysomelia, Nerantia, Martianum pomum,* and *Poma aurantia.* The China and Seville orange are both only varieties of the same species: *Citrus —petiolis alatis, foliis acuminatis,* of Linnæus. The latter is specified in our pharmacopœias; and the *flowers, leaves, yellow rind,* and *juice,* are made use of for different medical purposes.

The flowers, *flores naphæ,* are highly odoriferous, and are used as a perfume; they are bitter to the taste; they give their taste and smell both to water and to spirit, but most perfectly to rectified spirit of wine. The water which is distilled from these flowers is called *aqua florum naphæ.* In distillation, they yield a small quantity of essential oil, which is called *oleum* vel *essentia neroli:* they are brought from Italy and France. Orange flowers were, at one time, said to be an useful remedy in convulsive diseases; but experience has not confirmed the virtues attributed to them.

The *leaves* have a bitterish taste, and yield, by distillation, an essential oil; indeed, by rubbing them between the fingers and the thumb, they manifest considerable fragrance. They have been applied for the same purposes as the flowers, but without success.

The *yellow rind* of the fruit, freed from the white pithy part, has a grateful aromatic flavour, and a warm, bitterish taste. Infused in boiling water, it gives out nearly all its smell and taste: cold water extracts the bitter, but very little of the flavour. In distillation, a light, fragrant, essential oil rises, without the bitter. Its qualities are those of an aromatic and bitter. It has been employed to restore the tone of the stomach, and is a very common addition to combinations of bitters, used in dyspepsia. It has likewise been given in intermittents, in doses of a drachm, twice or thrice a day. It is also much celebrated as a powerful remedy, in menorrhagia, and immoderate uterine evacuations.

The *juice* of Seville oranges is a grateful acid, which, by allaying heat, quenching thirst, promoting various excretions, and diminishing the action of the sanguiferous system, proves extremely useful in both ardent and putrid fevers; though the China orange juice, as impregnated with a larger proportion of sugar, becomes more agreeable, and may be taken in larger quantities. The Seville orange juice is particularly serviceable as an antiscorbutic, and alone will prevent or cure scurvy in the most apparently desperate circumstances. In dyspepsia, from putrid bile in the stomach, both lemon and orange juice are highly useful.

Citrus medica. The systematic name of the lemon tree; called also, *Limon, Limonia mala, Malus medica, Malus limonia acida, Citrea malus,* and *Citrus.* The tree which affords the lemon is the *Citrus—petiolis linearibus,* of Linnæus: a native of the upper part of Asia, but cultivated in Spain, Portugal, and France. The juice, which is much more acid than that of the orange, possesses similar virtues. It is always preferred where a strong vegetable acid is required. As an antiscorbutic, lemon juice has been often taken on board ships destined for long voyages; but even when well depurated of its mucilaginous parts, it is found to spoil by long keeping. To preserve it in purity for a considerable length of time, it is necessary that it should be brought to a highly concentrated state, and for this purpose it has been recommended to expose the juice to a degree of cold sufficient to congeal the aqueous and mucilaginous parts. After a crust of ice is formed, the juice is poured into another vessel: and, by repeating this process several times, the remaining juice, it is said, has been concentrated to eight times its original strength, and kept without suffering any material change for several years. See *Citric acid.*

Whytt found the juice of lemon to allay hysterical palpitations of the heart, after various other medicines had been experienced ineffectual; and this juice, or that of oranges, taken to the quantity of four or six ounces in a day, has sometimes been found a remedy in the jaundice. The exterior rind of the lemon is a very grateful aromatic bitter, not so hot as orange-peel, and yielding in distillation a less quantity of oil, which is extremely light, almost colourless, and generally brought from the southern parts of Europe, under the name of Essence of Lemons. The lemon-peel, though less warm, is similar in its qualities to that of the orange, and is employed with the same intentions. The pharmacopœias direct a syrup of the juice *syrupus limonis,* and the peel enters into some vinous and aqueous bitter infusions; it is also ordered to be candied; and the essential oil is an ingredient in some formulæ.

The citron-tree is also considered as belonging to the same species, the *Citrus medica* of Linnæus. Its fruit is called *Cedromela,*

which is larger and less succulent than the lemon; but in all other respects the citron and lemon trees agree. The citron juice, when sweetened with sugar, is called by the Italians *Agro di cedro.*

The *Citrus mella rosa* of Lamarck, is another variety of the *Citrus medica* of Linnæus. It was produced, at first, casually, by an Italian's grafting a citron on a stock of a bergamot pear-tree; whence the fruit produced by this union participated both of the citron-tree and the pear-tree. The essence prepared from this fruit is called essence of bergamote, and essentia de cedra.

CI'TTA. (*a, æ.* f. Κισσα, and κιτ]α, a longing for improper food.) 1. A voracious appetite.

2. The longing of pregnant women.

Citto'sis. See *Chlorosis.*

CIVET-CAT. See *Zibethum.*

CIVE'TTA. (*a, æ.* f.; from *sebet,* Arabian.) *Zibethum.* Civet; an unctuous odoriferous drug used by perfumers, collected betwixt the anus and the organs of generation of a fierce carnivorous quadruped met with in China and the East and West Indies, called a civet-cat, the *Viverra Zibethum* of Linnæus, but bearing a greater resemblance to a fox or marten than a cat.

Several of these animals have been brought into Holland, and afford a considerable branch of commerce, particularly at Amsterdam. The civet is squeezed out in summer every other day, in winter twice a week: the quantity procured at once is from two scruples to a drachm or more. The juice thus collected is much purer and finer than that which the animal sheds against shrubs or stones in its native climates.

Good civet is of a clear yellowish or brownish colour, not fluid, nor hard, but about the consistence of butter or honey, and uniform throughout; of a very strong smell; quite offensive when undiluted; but agreeable when only a small portion of civet is mixed with a large one of other substances.

Civet unites with oils, but not with alkohol: its nature is therefore not resinous.

Cladonia islandica. See *Lichenislandicus.*

CLAMMY. *Viscosus.* Viscous: adhesive like birdlime; applied to leaves, the surface of which is covered with a sticky secretion; as those of the alder, fraxinella, and gum cistus.

CLAP. (So called from the old French word *clapises,* which were public shops, kept and inhabited by single prostitutes, and generally confined to a particular quarter of the town; as is even now the case in several of the great towns in Italy.) See *Urethritis venerea.*

CLA'RET. *Claretum.* A French wine, that may be given with great advantage, as a tonic and antiseptic, where red port wine disagrees with the patient; and in typhoid fevers of children and delicate females, it is far preferable as a common drink.

CLARE'TUM. (*um, i.* n.; from *clareo,* to be clear.) 1. The wine called *claret.* See *Claret.*

2. A wine impregnated with spices and sugar, called by some *Vinum Hippocraticum.*

3. A *Claretum purgatorium,* composed of a vinous infusion of glass of antimony with cinnamon-water and sugar, is mentioned by Schroeder.

CLARIFICA'TION. (*Clarificatio, onis.* f.; from *clarus,* clear, pure, and *facio,* to make.) The depuration of any thing, or process of freeing a fluid from heterogeneous matter, or feculencies.

CLARY. See *Salvia sclarea.*

CLA'SIS. (From κλαω, to break.) *Clasma.* A fracture.

CLASS. (*Classis;* from καλεω, *congrego,* a class being nothing more than a multitude assembled apart.) The name of a primary division of bodies in natural history. See *Classification.*

CLASSIFICATION. The arrangement of objects into classes or primary divisions, which are again subdivided into orders, and these into genera or families. These genera contain the several species, varieties, &c.

Natural history, which is a description of the natural products of the earth, water, air, beasts, birds, fish, insects, worms, plants, metals, minerals, and fossils, together with all extraordinary phænomena, as meteors, monsters, &c., is considered under the following divisions:—

1. *Geology,* or the history of the earth, water, &c.
2. *Zoology,* or the history of animals, &c.
3. *Phytology,* or the consideration of plants.
4. *Entomology,* or the history of insects, worms, &c.
5. *Ichthyology,* or the history of fish.
6. *Ornithology,* or the history of birds.
7. *Meteorology,* or the consideration of meteors, &c.

Natural philosophy, which considers the powers of nature, the properties of natural bodies, and their mutual actions on one another, embraces,

1. *Physiology,* or the doctrine of the knowledge of the phænomena of living bodies.
2. *Pathology,* or the doctrine of diseases.
3. *Chemistry,* or the knowledge of the constituents of all material bodies.

The system of natural bodies which is principally followed in the present day, is that of the great naturalist, Linnæus, who arranges them all in their respective divisions under classes, orders, genera, species, varieties, &c.

The primary division is into,

1. The animal kingdom.
2. The vegetable kingdom.
3. The mineral kingdom.

ANIMAL KINGDOM.

Classes.

1. Mammalia.	4. Pisces, or fishes.
2. Aves, or birds.	5. Insectæ, or insects.
3. Amphibia.	6. Vermes, or worms.

These six classes are divided into orders, which contain the genera, species, &c.

ORDERS.

The 1st class, Mammalia, contains:

1. Primates. 5. Pecora.
2. Bruta. 6. Belluæ.
3. Feræ. 7. Cetæ.
4. Griles.

2d class, Aves, or birds:

1. Accipitres. 4. Grallæ.
2. Picæ. 5. Gallinæ.
3. Anseres. 6. Passeres.

3d class, Amphibia, has,

1. Reptilia. 2. Serpentes.

4th class, Pisces, or fishes:

1. Apodes. 4. Abdominales.
2. Jugulares. 5. Branchiostegi.
3. Thoracici. 6. Chondropterigi.

5th class, Insectæ, or insects:

1. Coleoptera. 5. Hymenoptera.
2. Hemiptera. 6. Diptera.
3. Lepidoptera. 7. Aptera.
4. Neuroptera.

6th class, Vermes, or worms:

1. Intestina. 4. Zoophyta.
2. Molusca. 5. Infusoria.
3. Testacea.

The genera which these several orders contain, amount to upwards of five hundred, and the species to more than twenty thousand.

VEGETABLE KINGDOM.

CLASSES.

There are two arrangements of the Linnæan system; the one called the Natural, the other the Sexual.

Of the Natural Orders of Plants.

These are founded on principles of natural affinity, bringing together under one point of view such genera as have certain characters in common, independent of all artificial modes of classification.

There are three classes,

1. *Monocotyledones*, with one cotyledon.
2. *Dicotyledones*, with two cotyledons.
3. *Acotyledones*, having no cotyledon.

NATURAL ORDERS.

1. *Palmæ*, or palm trees.
2. *Piperitæ*, as arum and its allies.
3. *Calamariæ*, or grass-leaved, as carex.
4. *Gramina*, or true grasses.
5. *Tripetaloideæ*, as the juncus kind.
6. *Ensatæ*, or the sword-like plants.
7. *Orchideæ*, or the orchis tribe.
8. *Scitamineæ*, or the dainties, as amomum, &c.
9. *Spathaceæ*, as narcissus, &c.
10. *Coronariæ*, the liliaceous plants.
11. *Sarmentaceæ*, the trailing plants.
12. *Holeraceæ*, as chenopodium, &c.
13. *Succulentæ*, succulent plants.
14. *Gruinales*, as the geranium tribe.
15. *Inundatæ*, as some water plants.
16. *Calycifloræ*, as osyris, &c.
17. *Calycanthemæ*, as epilobium, &c.
18. *Bicornes*, as erica, &c.
19. *Hesperidæ*, the myrtle tribe.
20. *Rotaceæ*, as in anagallis, &c.
21. *Preciæ*, as the primula, &c.
22. *Caryophyllei*, as the pink, &c.
23. *Trihilatæ*, as the maple, &c.
24. *Corydales*, as fumaria, &c.
25. *Putamineæ*, as capparis. &c.
26. *Multisiliquæ*, as helleborus, &c.
27. *Rhœadeæ*, as the poppy tribe.
28. *Luridæ*, as the nightshades.
29. *Campanaceæ*, as campanula, &c.
30. *Contortæ*, as the asclepias.
31. *Vepecrulæ*, as the daphne plants.
32. *Papilionaceæ*, as the pea tribe.
33. *Lomentaceæ*, as the acacia.
34. *Cucurbitaceæ*, or the gourd family.
35. *Senticosæ*, or the rose tribe.
36. *Pomaceæ*, or the apples, &c.
37. *Columniferæ*, as the mallow, &c.
38. *Tricoccæ*, as the euphorbia, &c.
39. *Siliquosæ*, as the cruciform plants.
40. *Personatæ*, as the antirrhinum, &c.
41. *Asperifoliæ*, as borago, &c.
42. *Verticillatæ*, or whorl-like plants.
43. *Dumosæ*, as rhamnus.
44. *Sepiariæ*, as the jasmine tribe.
45. *Umbellatæ*, the umbelliferous plants.
46. *Hederaceæ*, as the ivy and vine.
47. *Stellatæ*, as galium, &c.
48. *Aggregatæ*, as scabiosa.
49. *Compositæ*, or compound flowers.
50. *Amentaceæ*, as the willow, oak, &c.
51. *Coniferæ*, as the firs, &c.
52. *Coadunatæ*, as magnolia, &c.
53. *Scabridæ*, as nettle, &c.
54. *Miscellaneæ*, miscellaneous.
55. *Filices*, ferns.
56. *Musci*, mosses.
57. *Algæ*, sea-weeds, &c.
58. *Fungi*, the fungous tribe.

Of the Sexual System of Plants.

This artificial and beautiful system is entirely founded on the parts of fructification, and it is called sexual because the stamens are considered as the male, and the pistils as the female parts, subservient to the propagation of the plants.

There are twenty-four classes:

1. *Monandria*; containing all hermaphrodite plants with one stamen.
2. *Diandria*; hermaphrodite, with two.
3. *Triandria*; ——— three.
4. *Tetrandria*; ——— four.
5. *Pentandria*; ——— five.
6. *Hexandria*; ——— six.
7. *Heptandria*; ——— seven.
8. *Octandria*; ——— eight.
9. *Enneandria*; ——— nine.
10. *Decandria*; ——— ten.
11. *Dodecandria*; ——— eleven.
12. *Icosandria*; ——— twenty.
13. *Polyandria*; ——— many.
14. *Didynamia*; ——— four: two of which are longer than the other two.
15. *Tetradynamia*; hermaphrodite, with four long and two short stamina.
16. *Monadelphia*; hermaphrodite, with all the stamina united below into one cylinder.
17. *Diadelphia*; hermaphrodite, with all the stamina united below into two cylinders.

18. *Polyadelphia;* hermaphrodite, with three or more bundles of stamina.
19. *Syngenesia;* flowers compound, and the anthers united into a tube.
20. *Gynandria;* hermaphrodite, the stamina growing upon the pistil.
21. *Monœcia;* the male and female organs in separate flowers, but on the same plant.
22. *Diœcia;* barren or male flowers on one plant, and fertile or female on another.
23. *Polygamia;* having hermaphrodite flowers, and also male and female, or both, on the same plant.
24. *Cryptogamia;* the parts of the fructification obscure.

ORDERS.

The first class, Monandria, contains two orders:

1. *Monogynia;* having one pistil.
2. *Digynia;* ... two.

2d class, Diandria, has three orders:

1. *Monogynia;* with one pistil.
2. *Digynia;* ... two.
3. *Trigynia;* ... three.

3d class, Triandria, has three orders:

1. *Monogynia.* 3. *Trigynia.*
2. *Digynia.*

4th class, Tetrandria, has three orders:

1. *Monogynia.* 3. *Tetragynia,* with four pistils.
2. *Digynia;*

5th class, Pentandria, has six orders:

1. *Monogynia.* 5. *Pentagynia,* with five pistils.
2. *Digynia.*
3. *Trigynia.* 6. *Polygynia,* with many pistils.
4. *Tetragynia.*

6th class, Hexandria, has five orders:

1. *Monogynia.* 4. *Tetragynia.*
2. *Digynia.* 5. *Pentagynia.*
3. *Trigynia.*

7th class, Heptandria, has four orders:

1. *Monogynia.* 4. *Heptagynia,* with seven pistils.
2. *Digynia.*
3. *Tetragynia.*

8th class, Octandria, has four orders:

1. *Monogynia.* 3. *Trigynia.*
2. *Digynia.* 4. *Tetragynia.*

9th class, Enneandria, has three orders:

1. *Monogynia.* 3. *Hexagynia,* with six pistils.
2. *Digynia.*

10th class, Decandria, has five orders:

1. *Monogynia.* 4. *Pentagynia.*
2. *Digynia.* 5. *Decagynia,* with ten pistils.
3. *Trigynia.*

11th class, Dodecandria, has five orders:

1. *Monogynia.* 4. *Pentagynia.*
2. *Digynia.* 5. *Dodecagynia,* with twelve pistils.
3. *Trigynia.*

12th class, Icosandria, has five orders:

1. *Monogynia.* 4. *Pentagynia.*
2. *Digynia.* 5. *Polygynia.*
3. *Trigynia.*

13th class, Polyandria, has seven orders:

1. *Monogynia.* 5. *Pentagynia.*
2. *Digynia.* 6. *Hexagynia.*
3. *Trigynia.* 7. *Polygynia.*
4. *Tetragynia.*

14th class, Didynamia, has two orders:

1. *Gymnospermia,* the seeds naked.
2. *Angiospermia,* the seeds enclosed.

15th class, Tetradynamia, has two orders:

1. *Siliculosa,* with round pods.
2. *Siliquosa,* with long pods.

16th class, Monadelphia, has five orders:

1. *Pentandria,* with five
2. *Decandria,* ... ten
3. *Enneandria,* ... eleven
4. *Dodecandria,* ... twelve
5. *Polyandria,* ... several

stamens.

17th class, Diadelphia, has two orders:

1. *Pentandria.* 2. *Hexandria.*

18th class, Polyadelphia, has three orders:

1. *Pentandria.* 3. *Polyandria.*
2. *Icosandria.*

19th class, Syngenesia, has six orders:

1. *Polygamia æqualis:* the florets furnished with perfect stamens.
2. *Polygamia superflua;* the florets of the disk with stamens and pistil; those of the radius with pistil only.
3. *Polygamia frustanea:* the florets of the disk with stamens and pistil; those of the radius with merely an abortive pistil.
4. *Polygamia necessaria:* the florets of the disk with stamens only, and those of the radius with pistils only.
5. *Polygamia segregata;* several flowers, either simple or compound, but with united anthers, and with a proper calyx, included in one common calyx.
6. *Monogamia.*

20th class, Gynandria, has eight orders:

1. *Diandria.* 5. *Hexandria.*
2. *Triandria.* 6. *Decandria.*
3. *Tetrandria.* 7. *Dodecandria.*
4. *Pentandria.* 8. *Polyandria.*

21st class, Monœcia, has eleven orders:

1. *Monandria.* 7. *Heptandria.*
2. *Diandria.* 8. *Polyandria.*
3. *Triandria.* 9. *Monadelphia.*
4. *Tetrandria.* 10. *Syngenesia.*
5. *Pentandria.* 11. *Gynandria.*
6. *Hexandria.*

22d class, Diœcia, has fourteen orders:

1. *Monandria.* 8. *Enneandria.*
2. *Diandria.* 9. *Decandria.*
3. *Triandria.* 10. *Dodecandria.*
4. *Tetrandria.* 11. *Polyandria.*
5. *Pentandria.* 12. *Monadelphia.*
6. *Hexandria.* 13. *Syngenesia.*
7. *Octandria.* 14. *Gynandria.*

23d class, Polygamia, has three orders:

1. *Monœcia.* 3. *Triœcia.*
2. *Diœcia.*

24th class, Cryptogamia, has four orders:

1. *Filices,* ferns. 3. *Algæ,* sea-weeds.
2. *Musci,* mosses. 4. *Fungi,* funguses.

Appendix. *Palmæ,* palms.

For a more particular account consult the several terms.

In the year 1789, a system of botany was published by Jussieu, which has very many followers.

JUSSIEU'S *Arrangement of Plants.*

In this the Classes amount to 15, and the Orders to 100.

			Class
Cotyledons wanting			1
Cotyledon one		Stamens hypogynous	2
		—— perigynous	3
		—— epigynous	4
Cotyledons two	Apetalous	Stamens epigynous	5
		—— perigynous	6
		—— hypogynous	7
	Monopetalous	Corolla hypogynous	8
		—— perigynous	9
		—— epigynous, anthers combined	10
		—— epigynous, anthers separate	11
	Polypetalous	Stamens epigynous	12
		—— hypogynous	13
		—— perigynous	14
	Stamens separate from the petals, insertion various		15

The orders, mostly named from some leading genus, stand thus:—

Class 1.

1. Fungi.
2. Algæ.
3. Hepatica.
4. Musci.
5. Filices.
6. Naïades.

Class 2.

7. Aroïdeæ.
8. Typhæ.
9. Cyperoïdæ.
10. Gramineæ.

Class 3.

11. Palmæ.
12. Asparagi.
13. Junci.
14. Lilia.
15. Bromeliæ.
16. Asphodeli.
17. Narcissi.
18. Irides.

Class 4.

19. Musæ.
20. Cannæ.
21. Orchideæ.
22. Hydrocharides.

Class 5.

23. Aristolochiæ.

Class 6.

24. Eleagni.
25. Thymeleæ.
26. Proteæ.
27. Lauri.
28. Polygoneæ.
29. Atriplices.

Class 7.

30. Amaranthi.
31. Plantagines.
32. Nyctagines.
33. Plumbagines.

Class 8.

34. Lysimachiæ.
35. Pediculares.
36. Acanthi.
37. Jasmineæ.
38. Vitices.
39. Labiatæ.
40. Scrophulariæ.
41. Solaneæ.
42. Boragineæ.
43. Convolvuli.
44. Polemonia.
45. Bignoniæ.
46. Gentianeæ.
47. Apocineæ.
48. Sapotæ.

Class 9.

49. Guaiacanæ.
50. Rhododendra.
51. Ericæ.
52. Campanulaceæ.

Class 10.

53. Cichoraceæ.
54. Cinarocephalæ.
55. Corymbiferæ.

Class 11.

56. Dipsaceæ.
57. Rubiaceæ.
58. Caprifolia.

Class 12.

59. Araliæ.
60. Umbelliferæ.

Class 13.

61. Ranunculaceæ.
62. Papavaraceæ.
63. Cruciferæ.
64. Capparides.
65. Sapindi.
66. Acera.
67. Malphigiæ.
68. Hyperica.
69. Guttiferæ.
70. Aurantia.
71. Meliæ.
72. Vites.
73. Gerania.
74. Malvaceæ.
75. Magnoliæ.
76. Anonæ.
77. Menisperma.
78. Berberides.
79. Filiaceæ.
80. Cisti.
81. Rutaceæ.
82. Caryophyllæ.

Class 14.

83. Sempervivæ.
84. Saxifragæ.
85. Cacti.
86. Portulaceæ.
87. Ficoideæ.
88. Onagræ.
89. Myrti.
90. Melastomæ.
91. Salicariæ.
92. Rosaceæ.
93. Leguminosæ.
94. Terebintaceæ.
95. Rhamni.

Class 15.

96. Euphorbiæ.
97. Cucurbitaceæ.
98. Urticæ.
99. Amentaceæ.
100. Coniferæ.

MINERAL KINGDOM.

There are several arrangements of minerals. Those of Werner and Jameson had been principally followed until the work of Professor Mohs, of Freyberg, appeared, which has superseded the others. He has arranged minerals into three classes:—

CLASS I.

If solid: sapid. No bituminous odour. It has four orders.

Order 1. *Gas:* expansible; not acid. 2. Water: liquid. 3. *Acid:* acid. 4. *Salt:* not acid.

CLASS II.

Insipid. It has thirteen orders.

Order 1. *Haloide:* not metallic. 2. *Baryte:* not metallic. 3. *Kerate:* not metallic. 4. *Malachite:* not metallic. 5. *Mica.* 6. *Spar:* not metallic. 7. *Gem:* not metallic. 8. *Ore.* 9. *Metal.* 10. *Pyrites:* metallic. 11. *Glance:* metallic. 12. *Blende.* 13. *Sulphur:* not metallic.

CLASS III.

If fluid: bituminous odour. If solid: insipid.

Order 1. *Resin:* fluid, solid. 2. *Coal:* solid.

The GENERA of the several orders are as follow: —

CLASS I. Order 1.—*Gas.*

1. Hydrogene. 2. Atmospheric air.

Order 2.—*Water.*

1. Atmospheric water.

Order 3.—*Acid.*

1. Carbonic. 2. Muriatic. 3. Sulphuric. 4. Boracic. 5. Arsenic.

Order 4.—*Salt.*

1. Natron salt. 2. Glauber salt. 3. Nitre salt. 4. Rock salt. 5. Ammoniac salt. 6. Vitriol salt. 7. Epsom salt. 8. Alum salt. 9. Boracic salt. 10. Barythine salt.

Class II. Order 1.—*Haloide.*

1. Gypsum haloide. 2. Cryone haloide. 3. Alum haloide. 4. Fluor haloide. 5. Calc haloide.

Order 2.—*Baryte.*

1. Parachrose baryte. 2. Zinc baryte. 3. Scheelium baryte. 4. Hal baryte. 5. Lead baryte.

Order 3.—*Kerate.*

1. Pearl kerate.

Order 4.—*Malachite.*

1. Staphyline malachite. 2. Lirocone malachite. 3. Olive malachite. 4. Azure malachite. 5. Emerald malachite. 6. Habroneme malachite.

Order 5.—*Mica.*

1. Euchlore mica. 2. Antimony mica. 3. Cobalt mica. 4. Iron mica. 5. Graphite mica. 6. Talc mica. 7. Pearl mica.

Order 6.—*Spar.*

1. Schiller spar. 2. Disthene spar. 3. Triphane spar. 4. Dystome spar. 5. Kouphone spar. 6. Petaline spar. 7. Felspar. 8. Augite spar. 9. Azure spar.

Order 7.—*Gem.*

1. Andalusite. 2. Corundum. 3. Diamond. 4. Topaz. 5. Emerald. 6. Quartz. 7. Axinite. 8. Chrysolite. 9. Boracite. 10. Tourmaline. 11. Garnet. 12. Zircon. 13. Gadolinite.

Order 8.—*Ore.*

1. Titanium ore. 2. Zinc ore. 3. Copper ore. 4. Tin ore. 5. Scheelium ore. 6. Tantalum ore. 7. Uranium ore. 8. Cerium ore. 9. Chrome ore. 10. Iron ore. 11. Manganese ore.

Order 9.—*Metal.*

1. Arsenic. 2. Tellurium. 3. Antimony. 4. Bismuth. 5. Mercury. 6. Silver. 7. Gold. 8. Platinum. 9. Iron. 10. Copper.

Order 10.—*Pyrites.*

1. Nickel pyrites. 2. Arsenic pyrites. 3. Cobalt pyrites. 4. Iron pyrites. 5. Copper pyrites.

Order 11.—*Glance.*

1. Copper glance. 2. Silver glance. 3. Lead glance. 4. Tellurium glance. 5. Molybdena glance. 6. Bismuth glance. 7. Antimony glance. 8. Melane glance.

Order 12.—*Blende.*

1. Glance blende. 2. Garnet blende. 3. Purple blende. 4. Ruby blende.

Order 13.—*Sulphur.*

1. Sulphur.

Class III. Order 1.—*Resin.*

Melichrone resin.

Order 2.—*Coal.*

Mineral coal.

For an account of the species of the several genera, the original work may be consulted.

CLASPER. See *Cirrus.*

CLAUDICATION. Lameness.

CLAU'STRUM. (*um, i.* n.; from *claudo*, to shut.) *Cleithrum gutturis.* Any aperture which has a power of contracting itself, or closing its orifice by any means; as the passage of the throat.

Claustrum virginitatis. The hymen.

CLAUSU'RA. (*a, æ.* f.; from *claudo*, to shut.) An imperforation of any canal or cavity in the body. Thus *clausura uteri* is a preternatural imperforation of the uterus; *clausura tubarum Fallopiarum*, a morbid imperforation of the Fallopian tubes, mentioned by Ruysch as one cause of infecundity.

CLAUSUS. Closed.

Clava rugosa. See *Acorus calamus.*

CLAVARIA. (*a, æ.* f.; from *clava*, a club.) The name of a genus of plants. Class, *Cryptogamia;* Order, *Fungi.* Club-shaped fungus.

Clavaria cinerea. Grey goat's beard. This and the *clavaria coralloides* are sometimes eaten as food. Their flesh is cottony, and their odour very slight.

Clavaria coralloides. Goat's-beard mushroom. See *Clavaria cinerea.*

Clavaria corolloides. The systematic name of the *Fungus corolloides* of old writers; called also *crotelus.* It was once used as a strengthener and astringent.

CLAVA'TIO. (From *clava*, a club.) A sort of articulation without motion, where the parts are, as it were, driven in with a hammer, like the teeth in the sockets. See *Gomphosis.*

CLAVA'TUS. Clubbed; club-shaped: applied to parts of plants; as the stigma of the *Genipi.*

CLAVELLATUS. (From *clavus*, a wedge. The name *cineres clavellati* originated from the little wedges or billets, into which the wood was cut to burn for potash.) See *Potassa impura.*

CLA'VICLE. *Clavicula.* I. In *Anatomy*, the collar-bone. The clavicle is placed at the root of the neck, and at the upper part of the breast. It extends across, from the tip of the shoulder to the upper part of the sternum; it is a round bone, a little flattened towards the end, which joins the scapula; it is curved like an Italic *ʃ*, having one curve turned out towards the breast: it is useful as an arch, supporting the shoulders, preventing them from falling forwards upon the breast, and making the hands strong antagonists to each other; which, without this steadying, they could not have been.

1. The thoracic end, that next the sternum, or what may be called the inner head of the clavicle, is round and flat, or button-like; and it is received into a suitable hollow on the upper piece of the sternum. It is not only like other joints surrounded by a capsule or purse; it is further provided with a small moveable cartilage, which, like a friction wheel in machinery, saves the parts and

facilitates the motions, and moves continually as the clavicle moves.

2. But the outward end of the clavicle is flattened, as it approaches the scapula, and the edge of that flatness is turned to the edge of the flattened acromion, so that they touch but in one single point. This outer end of the clavicle, and the corresponding point of the acromion, are flattened and covered with a crust of cartilage; but the motion here is very slight and quite insensible: they are tied firmly by strong ligaments; and we may consider this as almost a fixed point, for there is little motion of the scapula upon the clavicle: but there is much motion of the clavicle upon the breast, for the clavicle serves as a shaft, or axis, firmly tied to the scapula, upon which the scapula moves and turns, being connected with the trunk only by this single point, viz. the articulation of the clavicle with the breast-bone.

II. A tendril. See *Cirrus.*

CLAVI'CULA. (*a, æ.* f, diminutive of *clavis;* so called from its resemblance to a little key.) See *Clavicle,* and *Cirrus.*

CLAVI'CULUS. The clavicle.

CLA'VIS. (*is, is.* f.; from *claudo,* to shut.) The clavicle.

CLA'VUS. (*us, i.* m.; a nail.) 1. A corn, so called from its resemblance to the head of a nail. It is a roundish, horny, cutaneous extuberance, with a central nucleus, sensible at its base; found chiefly on the toes from the pressure of tight shoes.

2. A painful and often an intermitting affection of the head, and mostly a severe pulsating pain in the forehead, which may be covered by one's thumb, giving a sensation like as if a nail were driven into the part. When connected with hysterics, it is called *Clavus hystericus.* See *Catarrh.*

3. An artificial palate.

4. A diseased uterus.

Clavus hystericus. See *Clavus.*

Clavus oculorum. A staphyloma, or tumour on the eyelids.

CLAY. *Argilla.* Argillaceous earth. Of this mineral there are many species. They are all sufficiently soft to be scratched by iron; they have a dull or even earthy fracture; they exhale, when breathed on, a peculiar smell called argillaceous. The clays form with water a plastic paste, possessing considerable tenacity, which hardens with heat, so as to strike fire with steel. The affinity of the clays for moisture is manifested by their sticking to the tongue, and by the intense heat necessary to make them perfectly dry. The odour ascribed to clays breathed upon, is due to the oxide of iron mixed with them. Absolutely pure clays emit no smell.

Clay, pure. See *Alumina.*

Clay-slate. Argillaceous slate. A mineral which is extensively distributed, forming a part of both primitive and transition mountains of slate, is found in many countries.

CLAW. See *Unguis.*

CLEAVAGE. This term is applied to the mechanical division of crystals: by showing the direction in which their *laminæ* can separate, enables us to determine the mutual inclination of these *laminæ.* Werner called it *durchgang,* but he attended only to the number of directions in which this mechanical division of the plates, or cleavage, could be effected. In the interior of many minerals, the direction of the cleavage may be frequently seen, without using any mechanical violence.

CLEAVERS. See *Galium aparine.*

CLEGHORN, George, was born near Edinburgh in 1716; and after studying in that city, went at the age of twenty to Minorca, as a regimental surgeon. He published a *Treatise on the Diseases of Minorca,* which displays great observation and ability. He died in 1789.

Clei'dion. *Clidion.* A pastil, described by Galen and Paulus Ægineta; and it is the name also of an epithem described by Aëtius.

Cleido'ma. (From κλειδοω, to close.) A pastil, or troch. Also the clavicle.

CLEIDOMASTOIDE'US. (From κλεις, the clavicle, and μαςοειδης, the mastoid process.) See *Sterno-cleido-mastoideus.*

CLEISA'GRA. (*a, æ.* f.; from κλεις, the clavicle, and αγρα, a prey.) The gout in the articulation of the clavicles.

Clei'thron. (From κλειδω, to shut.) See *Claustrum.*

CLE'MATIS. (*tis, idis.* f.; from κλημα, a tendril: so named from its climbing up trees, or any thing it can fasten upon with its tendrils.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Polygynia.*

Clematis recta. The name of the upright virgin's bower: called also, *Flammula Jovis. Clematis—foliis pinnatis, foliolis ovato lanceolatis integerrimis, caule erecto, floribus pentapetalis tetrapetalisque,* of Linnæus. More praises have been bestowed upon the virtue which the leaves of this plant are said to possess, when exhibited internally, as antivenereal, by foreign physicians, than its trials in this country can justify. The powdered leaves are sometimes applied externally to ulcers, as an escharotic.

Clematis vitalba. The systematic name of the traveller's joy: called also, *Vitalba, Atragene, Viorna.* The *Clematis arthragene* of Theophrastus. This plant is common in our hedges, and is the *Clematis—foliis pinnatis, foliolis cordatis scandentibus,* of Linnæus. Its leaves, when fresh, produce a warmth on the tongue, and if the chewing is continued, blisters arise. The same effect follows their being rubbed on the skin. The plant has been administered internally to cure lues venerea, scrofula, and rheumatism. In France, the young sprouts are eaten, when boiled, as hoptops are in this country.

Clemati'tis. The same as clematis.

CLEO'NIS COLLYRIUM. The name of a collyrium described by Celsus.

CLEONIS GLUTEN. An astringent formula of myrrh, frankincense, and white of egg mixed together.

CLE'PSYDRA. (From κλεπτω, to conceal, and υδωρ, water.) The name of an instrument to measure time by the dropping of water through a hole, from one vessel to another; also a chemical vessel, perforated in the same manner; and an instrument mentioned by Paracelsus, contrived to convey suffumigations to the uterus in hysterical cases.

CLI'BANUS. (Quasi καλιβανος; from καλυπτω, to conceal.) A portable furnace, or still, in which the materials to be wrought on are shut up.

CLIMA'CTER. (From κλιμαζω, to proceed gradually.) The progression of the life of man. It is usually divided into periods of seven years.

CLIMACTERIC. (*Climactericus;* from κλιμαξ, a gradation.) The ordinary duration of life seems to have undergone little or no change from the Mosaic age, in which, as in the present day, it varied from threescore and ten to fourscore years. In passing through this term, however, we meet with particular epochs at which the body is peculiarly affected, and suffers a considerable alteration. These epochs the Greek physiologists contemplated as five; and, from the word climax, which signifies a gradation, they denominated them climacterics. They begin with the seventh year, which forms the first climacteric; and are afterwards regulated by a multiplication of the figures three, seven, and nine, into each other; as, the twenty-first year being the result of three times seven; the forty-ninth, produced by seven times seven; the sixty-third, or nine times seven; and the eighty-first, or nine times nine. A more perfect scale might, perhaps, have been laid down; but the general principle is well founded, and it is not worth while to correct it. The two last were called grand climacterics, or climacterics emphatically so denominated, as being those in which the life of man was supposed to have consummated itself, and beyond which nothing is to be accomplished but a preparation for the grave.

The change which frequently strikes our attention as taking place about the fourth, or in the interval between the fourth and fifth, is of two distinct and opposite kinds; and it is necessary to notice each.

We sometimes find the system, at the period before us, exhibiting all of a sudden a very extraordinary renovation of powers. Persons who have been deaf for twenty years, abruptly recover their hearing, so as in some cases to hear very acutely: others as abruptly recover their sight, and throw away their spectacles, which had been in habitual employment for as long a period; others return to the process of dentition, and reproduce a smaller or larger number of teeth to supply vacuities progressively produced in earlier life; and examples are given of entire sets of teeth cut at this period. That the hair should evince a similar regeneration, of which instances are also adduced, is, perhaps, less surprising; since this has been known to grow again, and even to change its colour, after death.

On the other hand, instead of a renovation of powers at the period before us, we sometimes perceive as sudden and extraordinary a decline. We behold a man apparently in good health, without any perceptible cause, abruptly sinking into a general decay. His strength, his spirits, his appetite, his sleep fail equally; his flesh falls away; and his constitution appears to be breaking up. In many instances this is, perhaps, the real fact; and no human wisdom or vigilance can save him from the tomb. But in many instances, also, it is an actual disease, in which medical aid and kindly attention may be of essential service; and upon an application of which we behold the powers of life, as in other diseases, rally; the general strength return; the flesh grow fuller and firmer, the complexion brighten; the muscles become once more broad and elastic; and the whole occasionally succeeded by some of those extraordinary renovations of lost powers, or even lost organs.

The subject is obscure; and it is as difficult, perhaps, to account for either of these extremes — for the sudden and unexpected decline, as for the sudden and singular restoration. That the decline, however, is a real malady, and not a natural or constitutional decay, is perfectly obvious from the recovery. And hence, in reference to the period in which it occurs, and by which, no doubt, it is influenced, it is emphatically denominated the *Climacteric disease.*

The patient falls away in flesh and strength before he complains of any loss of appetite, or has any dyspeptic symptoms; which only appear to take place afterwards by sympathy. And that the mesentery and lacteals are not paralysed and obliterated, as in the atrophy of old age, is incontrovertible from the renovation of power and reproduction of bulk that form an occasional termination of the disease.

In watching carefully the symptoms of this malady, when totally unconnected with any concomitant source of irritation, either mental or bodily, we shall often perceive that it creeps on so gradually and insensibly, that the patient himself is hardly aware of its commencement. "He perceives," to adopt the language of Sir Henry Halford, "that he is tired sooner than usual, and that he is thinner than he was; but yet he has nothing material to complain of. In process of time his appetite becomes seriously impaired; his nights are sleepless, or, if he get sleep, he is not refreshed by it. His face becomes visibly extenuated, or perhaps acquires a bloated

look. His tongue is white, and he suspects that he has fever. If he ask advice, his pulse is found quicker than it should be, and he acknowledges that he has felt pains in his head and chest, and that his legs are disposed to swell; yet there is no deficiency in the quantity of his urine, nor any other sensible failure in the action of the abdominal viscera, except that the bowels are more sluggish than they used to be."

Sometimes he feels pains shooting over different parts of the body, conceived to be rheumatic, but without the proper character of rheumatism; and sometimes the headach is accompanied with vertigo. Towards the close of the disease, when it terminates fatally, the stomach seems to lose all its powers; the frame becomes more and more emaciated; the cellular membrane in the lower limbs is laden with fluid; there is an insurmountable restlessness by day, and a total want of sleep at night; the mind grows torpid and indifferent to what formerly interested it; and the patient sinks at last; seeming rather to cease to live, than to die of a mortal distemper.

In the progress of this disease, medicine will generally be found to accomplish but little. The constitutional debility must be met by tonics, cordials, and a generous diet; and a scrupulous attention should be paid to such contingencies of body or mind as may form an exciting cause, or aggravate the morbid diathesis if already in a state of activity. Congestions must be removed where they exist, and every organ have room for the little play that the rigidity of advanced life allows to it: and where aperients are necessary, they should consist principally of the warm and bitter roots or resins, as rhubarb, guaiacum, and spike aloes. In many instances the Bath water, and in a few that of Cheltenham, will be also found of collateral use, and especially where there is reason to hope that a beneficial impression has been made on the disease, and that the system is about to recover it.

CLIMATE. (*Clima*, *atis*. n.) The prevailing constitution of the atmosphere, relative to heat, wind, and moisture, peculiar to any region. This depends chiefly on the latitude of the place, its elevation above the level of the sea, and its insular or continental position. Springs which issue from a considerable depth, and caves about 50 feet under the surface, preserve a uniform temperature through all the vicissitudes of the season. This is the mean temperature of that country.

It appears very probable, that the climates of European countries were more severe in ancient times than they are at present. Cæsar says, that the vine could not be cultivated in Gaul, on account of its winter-cold. The rein-deer, now found only in the zone of Lapland, was then an inhabitant of the Pyrenees. The Tiber was frequently frozen over, and the ground about Rome covered with snow for several weeks together, which almost never happens in our times. The Rhine and the Danube, in the reign of Augustus, were generally frozen over for several months of winter. The barbarians who overran the Roman empire, a few centuries afterwards, transported their armies and waggons across the ice of these rivers. The improvement that is continually taking place in the climate of America, proves that the power of man extends to phænomena, which, from the magnitude and variety of their causes, seemed entirely beyond his controul. At Guiana, in South America, within five degrees of the line, the inhabitants living amid immense forests, a century ago, were obliged to alleviate the severity of the cold by evening fires. Even the duration of the rainy season has been shortened by the clearing of the country, and the warmth is so increased, that a fire now would be deemed an annoyance. It thunders continually in the woods, rarely in the cultivated parts.

Drainage of the ground, and removal of forests, however, cannot be reckoned among the sources of the increased warmth of the Italian winters. Chemical writers have omitted to notice an astronomical cause of the progressive amelioration of the climates of the northern hemisphere. In consequence of the apogee portion of the terrestrial orbit being contained between our vernal and autumnal equinox, our summer half of the year, or the interval which elapses between the sun's crossing the equator in spring, and in autumn, is about *seven* days longer than our winter half-year. Hence, also, one reason for the relative coldness of the southern hemisphere.

CLI'MAX. (*ax*, *atis*. f.; a gradation from κλιμαζω, to proceed.) 1. A name of some antidotes, which, in regular proportion, increased or diminished the ingredients of which it was composed; e. g. ℞. *Chamædryos* ℥iij. *Centaurii* ℥ij. *Hyperici* ℥j.

2. See *Climacteric*.

Climbing. See *Scandens*.

Climbing birthwort. See *Aristolochia*.

CLI'NICAL. (*Clinicus*; from κλινη, a bed.) Any thing concerning a bed: thus clinical lectures, notes, a clinical physician, &c.; which mean lectures given at the bedside, observations taken from patients when in bed, a physician who visits his patients in their bed, &c.

CLINKSTONE. A stone of an imperfectly slaty nature, which rings like metal, when struck with a hammer.

CLI'NOID. (*Clinoides*, and *Clinoideus*; from κλινη, a bed, and ειδος, resemblance.) Resembling a bed. The four processes surrounding the sella turcica of the sphenoid bone are so called, of which two are anterior, and two posterior.

CLINOMASTOIDE'US. A corruption of cleidomastoideus. See *Sterno-cleido-mastoideus*.

CLINOMETER. An instrument for measuring the dip of mineral strata.

Cli'ssus. See *Clyssus.*

Clito'ridis musculus. See *Erector clitoridis.*

CLI'TORIS. (*is, idis.* f.; from κλειω, to enclose, or hide: because it is hid by the labia pudendorum.) *Columella.* A small glandiform body, like a penis in miniature, and, like it, covered with a prepuce, or foreskin. It is situated above the nymphæ, and before the opening of the urinary passage of women. Anatomy has discovered, that the clitoris is composed, like the penis, of a cavernous substance, and of a glans, which has no perforation, but is, like that of the penis, exquisitely sensible. The clitoris is the principal seat of pleasure: during coition it is distended with blood, and after the venereal orgasm it becomes flaccid and falls. Instances have occurred, where the clitoris was so enlarged as to enable the female to have venereal commerce with other women; and, in Paris, this fact was made a public exhibition of to the faculty. Women thus formed, appear to partake, in their general form, less of the female character, and are termed hermaphrodites. The clitoris in children is larger, in proportion, than in full-grown women: it often projects beyond the external labia at birth.

CLITORI'SMUS. (From κλειτοpις, the clitoris.) An enlargement of the clitoris.

CLONE'SIS. See *Clonic.*

CLO'NIC. (*Clonicus.* Κλόνος, and κλόνησις, import agitation, commotion.) An agitation or irregular movement: applied to convulsive movements of parts. See *Spasmus.*

Clono'des. (Κλονωδες, vibrating; from κλονεω, to agitate.) A vibrating or unequal pulse.

CLOVE. See *Eugenia caryophyllata.*

Clove bark. See *Myrtus caryophyllata.*

Clove gilliflower. See *Dianthus.*

Clove pink. See *Dianthus caryophyllus.*

Cloven. See *Fissus.*

CLOWES, William, an eminent English surgeon of the 16th century. After serving in the navy, he was made surgeon to Christ's and St. Bartholomew's Hospitals. He published on *the Lues Venerea,* in 1585; but his most celebrated publication appeared three years after, on the method of treating wounds of various kinds, the result of extensive experience, sanctioned by references to the most approved writers. He appears to have possessed an enlarged understanding, and was very severe on all quacks and impostors; and he may justly be reckoned among the restorers and improvers of surgery in modern times.

CLUB. A term applied, in *Pathology,* to distortions of the foot, &c., as club-foot; and to plants which have some part that resembles a club, as club-moss, &c.

CLUBSHAPED. See *Clavatus.*

CLUNE'SIA. (*a, æ.* f.; from *clunes,* the buttocks.) An inflammation of the buttocks.

CLU'PEA. (*a, æ.* f.) The name of a genus of fishes, in the Linnæan system.

Clupea alosa. The shad or chad, the flesh of which is, by some, commended as a restorative.

Clupea encrasicolus. The anchovy, a little fish, found in great abundance about the island of Gorgona, near Leghorn. It is prepared for sale, by salting and pickling. It is supposed the ancient Greeks and Romans prepared a kind of garum for the table from this fish. Its principal use is as a sauce for seasoning.

Clupea harengus. Our common herring, which is of great importance to the inhabitants of Europe. Raw herrings, when merely broiled or boiled, are a rich or strong food, and not calculated to agree with delicate stomachs. Salted, either wet or dry, though a great delicacy, they are still difficult of digestion, unless the person be strong and accustomed to salted foods. The Dutch prepare the herring by salting or pickling in a way still unknown to us, that renders them a delicious delicacy when taken in small quantity. In this way, also, they are not calculated to agree with weak stomachs.

Clupea pilchardus. The pilchard. This is smaller than our herring. It is found on the coast of Cornwall, and in the Mediterranean Sea, and is an article of food there, as our harengus is here.

Clupea sinensis. This very much resembles our herring. It is found on the China coast, and eaten in the same way.

Clupea sprattus. The sprat. This little fish is supposed by some to be the fry of the herring. It comes to our shores in vast abundance in the winter, and is a great delicacy to the poorer classes, who broil them, and eat plentifully of them. They are too strong for weak stomachs. Sprats are pickled in the northern parts of Europe, and exported as a delicacy.

Clupea tuberculata. This also is found in the Indian Seas, and is an excellent fish, of the herring kind, for the table.

CLU'SIA. (*a, æ.* f.; so called, in memory of Charles Clusius, an eminent botanist.) The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Monœcia.* Balsam-tree.

CLUSTER. See *Racemus,* and *Thyrsus.*

CLU'TIA. (*a, æ.* f.; named after Cluyt, and sometimes spelt *cluytia.*) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Gynandria.*

Clutia eluteria. The tree which is by some supposed to afford the cascarilla bark.

Cluy'tia. See *Clutia.*

CLY'DON. Κλυδων. A fluctuation and flatulency in the stomach.

CLYPEA'LIS. (From *clypeus,* a shield.) Formed like a shield.

CLY'SMUS. (*us, i.* m.; from κλυζω, to wash.) *Clysma.* A glyster.

Cly'ssus. *Clissus.* A medicine made by

the re-union of different principles, as oil, salt, and spirit, by long digestion. Obsolete.

Clyssus antimonii. *Clyssus mineralis.* A weak acid of sulphur.

CLY'STER. (*er, eris.* m.; from κλυζω, to cleanse.) See *Enema.*

Cne'mia. (From κνημη, the tibia.) Any part connected with the tibia.

Cnemodactylæ'us. (From κνημη, the tibia, and δακτυλος, a finger, or toe.) See *Extensor longus digitorum pedis.*

CNE'SIS. (From κναω, to scratch.) *Cnismos.* A painful itching.

Cnicilæ'on. (From κνικος, cnicus, and ελαιον, oil.) Oil made of the seeds of cnicus. Its virtues are the same with those of the ricinus, but in an inferior degree.

CNI'CUS. (*us, i.* f.; from κναω, to scratch.) The plant used by Hippocrates by this name, is supposed to be the carthamus; but modern botanists exclude it from the species of this plant.

Cnicus cernuus. The nodding cnicus, the tender stalks of which are, when boiled and peeled, eaten by the Siberians as a food.

Cnicus lanatus. *Chamælim verum.* The distaff thistle. Formerly used as a depurator, but now forgotten.

Cnicus oleraceus. Round leaved meadow thistle. The leaves of this plant are boiled in the northern parts of Europe, and eaten as we do cabbage.

Cnicus sylvestris. See *Centaurea.*

Cnidii, cocci. See *Daphne mezereum.*

Cnidii, grana. See *Daphne mezereum.*

CNIDO'SIS. (From κνιδη, the nettle.)

1. An itching sensation, such as is perceived from the nettle.

2. A dry ophthalmy.

Cnipo'tes. An itching.

Cni'smos. See *Cnesis.*

Cny'ma. (From κναω, to scrape, or grate.) In Hippocrates it signifies a rasure, puncture, or vellication: also the same as cnesis.

COACERVATE. To heap up together. Applied to the menstrual, bilious, and other fluids, when retained a long time.

COADUNA'TUS. (From *coadunare,* to join or gather together.) Joined together. In *Botany,* applied to an order of plants, in Linnæus's Fragments of a Natural Method.

COA'GULABLE. *Coagulabilis.* Possessing the property of coagulation.

Coagulable lymph. See *Albumen.*

COAGULA'NT. (*Coagulans;* from *coagulo,* to incrassate, or curdle.) Having the power of coagulating, as the blood, milk, &c.

COAGULA'TION. (*Coagulatio;* from *con,* and *ago,* to drive together.) The separation of the coagulable particles, contained in any fluid, from the more thin and not coagulable: thus, when milk curdles, the coagulable particles form the curd; and when acids are thrown into any fluid containing coagulable particles, they form what is called a *coagulum.*

COA'GULUM. (*um, i.* n.; *à cogendo.*) A term applied frequently to blood and other fluids, when they assume a jelly-like consistency.

Coagulum aluminis. This is made by beating the white of eggs with a little alum, until it forms a coagulum. It is recommended as an efficacious application to relaxations of the conjunctive membrane of the eye.

COAL. A combustible mineral, of which there are many species.

Coal-fish. See *Gadus carbonarius.*

COALESCENT. (From *coalesco,* to grow together.) Coalescence: the growing together of two or more bodies, or of two parts which were before separate.

Coalte'rnæ febres. (From *con,* and *alternus,* alternate.) Fevers mentioned by Bellini, which he describes as two fevers affecting the same patient, and the paroxysm of one approaching as that of the other subsides.

COARCTA'TION. (*Coarctatio;* from *coarcto,* to straiten.) 1. The contraction, or diminution of any thing.

2. Formerly applied to the pulse: it meant a lessening in number.

COARCTATUS. Crowded: applied in botany to a panicle which is dense, compact, or crowded; as in *Phleum paniculatum,* the inflorescence of which looks, at first sight, like a cylindrical spike; but when bent to either side, separates into branched lobes, constituting a real panicle.

Coarticula'tio. (From *con,* and *articulatio,* an articulation.) That sort of articulation which has manifest motion.

COATED. See *Tunicatus.*

COBALT. (*um, i.* n.) A brittle, somewhat soft, but difficultly fusible metal, of a reddish grey colour, of little lustre.

Oxygene combines with cobalt in two proportions, forming the dark blue protoxide, and the black deutoxide.

COBALUS. The demon of mines, which obstructed and destroyed the miners.

COBHAM. The name of a town in Surrey, in the neighbourhood of which is weak saline purging water.

Co'bra de capello. (From *cobra,* the head, or covering, Spanish.) See *Crotalus horridus.*

COBWEB. The well-known web and production of the spider. The term is often used in reference to appearance. See *Arachnoid.*

Cobwebbed. See *Arachnoid.*

Cobweb-like. See *Arachnoid.*

COCAO. The name of the *Cocos nucifera,* and also of its fruit. See *Theobroma cocos.*

Cocao, butter of. See *Butter of cocao.*

Cocao-nut. See *Cocos nucifera.*

Cocca cnidia. See *Daphne mezereum.*

Cocca'rium. (From κοκκον, a berry.) A very small pill.

COCCINE'LLA. (*a, æ.* f.; diminutive of *coccus,* a berry: from its resemblance to a berry.) See *Coccus cacti.*

COCCINEUS. A high crimson, or bright scarlet. Applied generally, in natural history, to designate colour.

Cocco-balsamum. The fruit of the *Amyris gileadensis.*

Coccogni'dia. See *Daphne mezereum.*

COCCOLITE. A mineral of a green colour, of various shades, found with granular limestone, garnet, and magnetic ironstone, in Norway, Sweden, and Spain.

CO'CCOS. See *Coccum,* and *Coccus.*

CO'CCULUS. (*us, i.* m.; diminutive of κοκκος, a berry.) 1. A little berry.

2. The name given by De Candolle, in his *Systema Naturæ,* to a new genus of plants.

Cocculus Indi aromaticus. Jamaica pepper. See *Myrtus pimenta.*

Cocculus indicus. See *Menispermum cocculus.*

Cocculus palmatus. The plant which affords the calumba root of the pharmacopœias. See *Calumba.*

CO'CCUM. (*um, i.* n.) A species of capsule, but separated from it by Gærtner, who defines it to be a dry seed-vessel, more or less aggregate, not solitary, the sides of which are elastic, projecting the seeds with great force, as in the *Euphorbia.*

Coccum baphicum. A name for kermes.

CO'CCUS. (Κοκκος. *us, i.* m.) 1. In *Botany,* a cell or capsule: when two are joined together, it is termed *dicoccous;* and where there are three, *tricoccous,* &c. See *Capsula.*

2. In *Entomology,* the name of a tribe of insects.

Coccus cacti. The systematic name of the cochineal animal, or insect; which has also been called, *Coccinella, Coccinilla, Ficus Indiæ grana, Scarabæolus hemisphæricus, Cochinelifera cochinilla, Coccus Americanus, Cochinella,* and *Coccus Indicus tinctorius.* Cochineal. That which is used is the female insect found on, and collected in South America from, the *Cactus opuntia,* or Indian fig-tree. It possesses stimulating qualities, and is ordered by the College in the *tinctura cardamomi composita,* and *tinctura cinchonæ composita;* but, most probably, merely on account of the beautiful red colour which it imparts to them. The red pigment called carmine is prepared from cochineal.

COCCYGE'US. (*Coccygeus;* from κοκκυξ: because it is inserted into the coccyx.) A muscle of the os coccygis, situated within the pelvis. It arises, tendinous and fleshy, from the spinous process of the ischium, and covers the inside of the sacro-ischiatic ligament; from this narrow beginning it gradually increases to form a thin fleshy belly, interspersed with tendinous fibres. It is inserted into the extremity of the os sacrum, and nearly the whole length of the os coccygis, laterally. Its use is to support and move the os coccygis forwards, and to tie it more firmly to the sacrum.

CO'CCYGIS OS. (*Coccyx, ygis* or *ygis,* f.; from κοκκυξ, the cuckoo, the bill of which bird it is said to represent.) *Cauda. Ossis sacri acumen.* This bone is a small appendage to the point of the sacrum, terminating this inverted column with an acute point, and found in very different conditions in the several stages of life. In the child, it is merely cartilage, and we can find no point of bone: during youth, it is ossifying into distinct bones, which continue moveable upon each other till manhood: then the separate bones gradually unite with each other, so as to form one conical bone, with bulgings and marks of the pieces of which it was originally composed; but still the last bone continues to move upon the joint of the sacrum, till, in advanced years, it is at last firmly united; later in women than in men, with whom it is often fixed at twenty or twenty-five. It is not, like the os sacrum, flat, but of a roundish form, convex without, and concave inwards; forming, with the sacrum, the lowest part of the pelvis behind. It has no holes, like the sacrum; has no communication with the spinal canal, and transmits no nerves; but points forwards to support the lower part of the rectum: thus it contracts the lower opening of the pelvis, so as to support effectually the rectum, bladder, and womb; and yet continues so moveable in women, as to recede in time of labour, allowing the head of the child to pass.

CO'CCYX. (Κοκκυξ, the cuckoo.) See *Coccygis os.* Also the part in which the os coccygis is placed.

CO'CHENILIN. *Carminium.* The name of the colouring principle of cochineal. See *Coccus cacti.*

Co'chia. (From κοχαω, to turn or make round.) An ancient name of some officinal pills. The pill of cochia of the shops, in the present day, is the compound colocynth pill.

Co'chineal. See *Coccus cacti.*

CO'CHLEA. (From κοχαζω, to turn round.) A cavity of the internal ear, resembling the shell of a snail, in which are the *modiolus,* or *nucleus,* extending from its basis to the *apex,* the *scala tympani, scala vestibuli,* and *spiral lamina.* See *Ear.*

Cochlea terrestris. See *Limax.*

COCHLEA'RE. (*Cochleare, is.* n.; from *cochlea,* a cockle, the shell of which its bowl represents.) A spoon. *Cochleare amplum* or *magnum,* is a table-spoon, calculated to hold half a fluid ounce; *cochleare medium,* is a dessert or pap spoon, supposed to hold two tea-spoonfuls; and *cochleare minimum,* a tea-spoon, which holds about one fluid drachm.

COCHLEA'RIA. (*a, æ.* f.; from *cochleare,* a spoon: so called from its resemblance.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliculosa.*

Cochlearia armoracia. The systematic name of the horse-radish; called also, *Raphanus rusticanus, Armoracia, Raphanus marinus,* and *Raphanus sylvestris.*

Cochlearia—foliis radicalibus lanceolatis crenatis caulinis incisis, of Linnæus. The root of this plant has long been received into the materia medica, and is also well known at our tables. "It affects the organs both of taste and smell with a quick penetrating pungency; nevertheless it contains in certain vessels a sweet juice, which sometimes exudes in little drops upon the surface. Its pungent matter is of a very volatile kind, being totally dissipated in drying, and carried off in evaporation, or distillation by water; as the pungency exhales, the sweet matter of the root becomes more sensible, though this also is, in a great measure, dissipated or destroyed. It impregnates both water and spirit, by infusion, or by distillation, very richly with its active matters. In distillation with water, it yields a small quantity of essential oil, exceedingly penetrating and pungent."

Dr. Cullen has mentioned every thing necessary to be known respecting the medicinal virtues of horse-radish; we shall, therefore, transcribe all that the ingenious professor has written on this subject:—"The root of this plant only is employed; and it affords one of the most acrid substances of this order (*Siliculosa*), and therefore proves a powerful stimulant, whether externally or internally employed. Externally, it readily inflames the skin, and proves a rubefacient that may be employed with advantage in palsy and rheumatism; and if its application be long continued, it produces blisters. Taken internally, it may be so managed as to relieve hoarseness, by acting on the fauces. Received into the stomach, it stimulates this, and promotes digestion; and therefore is properly employed as a condiment with our animal food. If it be infused in water, and a portion of this infusion be taken with a large draught of warm water, it readily proves emetic, and may either be employed by itself to excite vomiting, or to assist the operation of other emetics. Infused in water, and taken into the stomach, it proves stimulant to the nervous system, and is thereby useful in palsy, and, if employed in large quantity, it proves heating to the whole body; and thereby it proves often useful in chronic rheumatism, whether arising from scurvy or other causes. Bergius has given us a particular method of exhibiting this root, which is, by cutting it down, without bruising, into small pieces; and these, if swallowed without chewing, may be taken down in large quantities, to that of a table-spoonful. And the author alleges, that, in this way, taken in the morning for a month together, this root has been extremely useful in arthritic cases; which, however, I suppose to have been of the rheumatic kind. It would seem, in this manner employed, analogous to the use of unbruised mustard-seed; it gives out in the stomach its subtile volatile parts, that stimulate considerably, without inflaming. The matter of horse-radish, like the same matter of the other siliquose plants, carried into the blood-vessels, passes readily into the kidneys, and proves a powerful diuretic, and is therefore useful in dropsy; and we need not say, that, in this manner, by promoting both urine and perspiration, it has been long known as one of the most powerful antiscorbutics."

Cochlearia hortensis. See *Cochlearia officinalis*.

Cochlearia officinalis. The systematic name of the lemon scurvy-grass. *Cochlearia hortensis; Cochlearia—foliis radicalibus cordato subrotundis; caulinis oblongis subsinuatis*, of Linnæus. This indigenous plant is cultivated in gardens for its medicinal qualities. Its expressed juice has been long considered as the most effectual of the scorbutic plants.

COCHLEATUS. Spiral, like the winding of a shell. Applied, in *Botany*, to leaves, leguminous seeds, &c.; as *legumen cochleatum*, seen in *Medicago polymorpha*, and the seeds of the *Salsola*.

Cocho'ne. (From κοχαω, to turn round.) Galen explains this to be the juncture of the ischium, near the seat or breech; whence, says he, all the adjacent parts about the seat are called by the same name. Hesychius says, that *cochone* is the part of the spine which is adjacent to the os sacrum.

COCK. The male of the domestic fowl. See *Phasianus gallus*.

COCKBURN, William, was born in the 17th century. He published a "Treatise on Sea Diseases," which was often reprinted, and translated into French and German. He referred the scurvy principally to the diet of seamen, and considered fresh provisions as the chief remedy for it. He wrote also on Alvine Fluxes, on Gonorrhœa (which he contends may exist independent of syphilis), and on the Human Œconomy.

COCKLE. See *Cardium edule*.

COCOA. See *Theobroma cocoa*.

CO'COS. (*os, i.* f.; so called from the Portuguese *coco*, or *coquen*, the three holes at the end of the cocoa-nut shell, giving it the resemblance of a monkey's head.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Hexandria*.

Cocos butyracea. The systematic name of the plant which affords the palm oil; *Cocos—inermis, frondibus pennatis; foliolis simplicibus*, of Linnæus. The *oleum palmæ* is produced chiefly by bruising and dissolving the kernels of the fruit in water, without the aid of heat, by which the oil is separated, and rises to the surface, and, on being washed two or three times, is rendered fit for use. When brought into this country, it is of the consistence of an ointment, and of an orange-yellow colour, with little taste, and of a strong, though not disagreeable, smell. Its use is confined to external applications in pains, tumours, and sprains; but it appears to possess very little, if any, advantage over other bland oils.

Cocos nucifera. The systematic name of the plant, the fruit of which is the cocoa-nut. Within the nut is found a kernel, as pleasant as an almond, and also a large quantity of liquor resembling milk, which the Indians greedily drink before the fruit is ripe, it being then pleasant; but when the nut is matured, the liquor becomes sour. Some full-grown nuts will contain a pint or more of this milk, the frequent drinking of which seems to have no bad effects upon the Indians; yet Europeans should be cautious of making too free with it at first, for when Lionel Wafer was at a small island in the South Sea, where the tree grew in plenty, some of his men were so delighted with it, that at parting they were resolved to drink their fill, which they did; but their appetites had like to have cost them their lives, for, though they were not drunk, yet they were so chilled and benumbed that they could not stand, and were obliged to be carried aboard by those who had more prudence than themselves, and it was many days before they recovered. The shells of these nuts being hard, and capable of receiving a polish, they are often cut transversely, when, being mounted on stands, and having their edges silvered, or gilt, or otherwise ornamented, they serve the purpose of drinking-cups. The leaves of the tree are used for thatching, for brooms, baskets, and other utensils; and of the reticular web, growing at their base, the Indian women make cauls and aprons.

CO'CTION. (*Coctio, onis.* f.; from *coquo,* to boil.) Concoction. 1. The digestion of the food in the stomach. See *Digestion.*

2. A boiling or decoction. See *Decoction.*

3. It was formerly used in a medical sense, signifying that alteration, whatever it be, or however occasioned, which is made in the crude matter of a distemper, whereby it is either fitted for a discharge, or rendered harmless to the body. This is often brought about by nature; that is, by the vis vitæ, or the disposition or natural tendency of the matter itself: or else by proper remedies, which may so alter its bulk, figure, cohesion, or give it a particular determination, so as to prevent any farther ill effects, or drive it quite out of the body. And that time of a disease wherein this action is performing, is called its state of coction. It is now fallen into disuse.

Cocu'stu. The name for courbaril.

COD. See *Gadus morhua.*

Coda'ga pala. See *Nerium antidysentericum.*

Codegella. A name given by the Italians to the carbuncle. See *Anthrax.*

CODIAC. (*Codiacus,* from κωδια, the poppy-head.) Of or belonging to the head of the poppy.

Codoce'le. (From κωδια, a bulb, and κηλη, a tumour.) A bubo.

CŒCA'LIS. (From *cœcum,* the blind gut, through which it runs.) Cœcal: of or belonging to the cœcum. The name of a vein, a branch from the concave side of the vena mesaraica.

Cœ'la. (From κοιλος, hollow.) Applied to depression, or hollow parts on the surface of the body, as the hollow pits above, and sometimes below the eyes: the hollow parts at the bottom of the feet.

CŒ'LIA. (From κοιλος, hollow.) A cavity in any part of the body; as the belly, the womb, &c.

CŒ'LIAC. (*Celiacus,* belonging to the belly; from κοιλια, *alvus, venter,* the belly.) Appertaining to the belly.

Cœliac artery. *Arteria cœliaca.* The first branch given off from the aorta in the cavity of the abdomen. It sends branches to the diaphragm, stomach, liver, pylorus, duodenum, omentum, and spleen.

Cœliac passion. (*Passio cœliaca,* from κοιλια, the belly.) There are very great differences among physicians concerning the nature of this disease. Sauvages says it is a chronic flux, in which the aliment is discharged half digested. Dr. Cullen considers it as a species of diarrhœa, and mentions it in his third and fourth species, under the terms mucosa, chylosa, lactea; making the purulenta only symptomatic. See *Diarrhœa.* It is attended with great pains in the stomach, resembling the pricking of pins; rumbling and flatus in the intestines; white stools, because deprived of bile; while the patient becomes weak and lean.

CŒLIACUS. See *Cœliac.*

Cœliaca chylosa. A name of the cœliac passion.

Cœliaca lactea. A name of the cœliac passion.

Cœlo'ma. (From κοιλος, hollow.) An ulcer in the tunica cornea of the eye.

Cœlosto'mia. See *Coilostomia.*

CŒNOLO'GY. (*Cœnologia, æ.* f.; from κοινος, common, and λογος, discourse.) A consultation, or common consideration of a disease, by two or more physicians.

CŒNO'TES. (From κοινος, common.) The physicians of the methodic sect asserted that all diseases arose from relaxation, stricture, or a mixture of both. These were called *cœnotes,* viz. what diseases have in common.

CŒRU'LEUS. Sky blue; like the flowers of the *Veronica chamædrys, Anchusa sempervirens,* and *Borago officinalis.* In common use, to designate the colour of flowers, plumage, of the skin, of stones, &c.; hence *labia cœrulea, lapis cœruleus,* &c.

Cœruleus lapis. The sulphate of copper. See *Cupri sulphas.*

CŒ'TE. (From κειμαι, to lie down.) A bed, or couch, for a sick person.

CO'FFEA. (*a, æ.* f.; from *kofuah,* a mixing together, Hebrew: so called from the pleasant potation which is made from its berry: others assert that the true name is *Caffe,* from *Caffa,* a province in South America, where the tree grows spontaneously in great abundance.) The name of a genus of

plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* The coffee-tree.

COFFEA ARABICA. The plant which affords coffee; called also *Jasminum Arabicum*, and *Choava. Coffea Arabica—floribus quinquefidis, dispermis*, of Linnæus.

The coffee, properly so called, is the seed of this tree, which is cultivated in Arabia, Persia, the East Indies, the Isle of Bourbon, and several parts of America. Good Turkey coffee is by far the most salutary of all liquors drunk at meal-time. It possesses nervine and astringent qualities, and may be drunk with advantage at all times, except when there is bile in the stomach. It is said to be a good antidote against an overdose of opium, and to relieve obstinate spasmodic asthmas. For the latter purpose, the coffee ought to be of the best Mocco, newly burnt, and made very strong, immediately after grinding it. Sir John Pringle commonly ordered one ounce for a dose; which is to be repeated fresh, after the interval of a quarter or half an hour; and which he directed to be taken without milk or sugar.

Besides the peculiar bitter principle which is described under the name *Caffein*, coffee contains several other vegetable products. According to Cadet, 64 parts of raw coffee consist of 8 gum, 1 resin, 1 extractive and bitter principle, 3·5 gallic acid, 0·14 albumen, 43·5 fibrous insoluble matter, and 6·86 loss. Hermann found in 1920 grains of

	Levant Coffee.	Mart. Coffee.
Resin,	74	68
Extractive,	320	310
Gum,	130	144
Fibrous matter,	1335	1386
Loss,	61	12
	1920	1920

The nature of the volatile fragrant principle developed in coffee by roasting, has not been ascertained. The Dutch, in Surinam, improve the flavour of their coffee by suspending bags of it, for two years, in a dry atmosphere. They never use new coffee.

If coffee be drunk warm within an hour after dinner, it is of singular use to those who have headach, from weakness in the stomach, contracted by sedentary habits, close attention, or accidental drunkenness. It is of service when the digestion is weak; and persons afflicted with the sick headach are much benefited by its use, in some instances, though this effect is by no means uniform. Coffee is often imitated by roasting rye with a few almonds.

COGAN, WILLIAM, was born in Somersetshire, about the middle of the 16th century. He studied at Oxford; after which he became master of the school at Manchester, where he also practised in his profession till his death in 1607. He published a curious book, abounding in classical quotations, entitled "The Haven of Health," in which he strongly recommends temperance and exercise. There is added an account of the sweating sickness; and of a remarkable disorder, which prevailed at Oxford, in July and August 1575, before he left it, by which he states, that in thirty-seven days "there died 510 persons, all men and no women."

COHE'SION. (*Cohæsio, onis.;* from *con*, and *hæreo*, to stick together.) That power by which the particles of bodies are held together. See *Attraction.*

COHOBA'TIO. (A term invented by Paracelsus.) The ancient chemists use this term to signify the distillation of a fluid poured afresh upon a substance of the same kind as that upon which it was before distilled, and repeating this operation several times to make it more efficacious.

CO'HOL. (*Cohol*, Hebrew.) Castellus says this word is used in Avicenna, to express dry collyria for the eyes, in fine powder.

COI'LIMA. (From κοιλια, the bowels.) A sudden swelling of the belly from wind.

COILOSTO'MIA. (From κοιλος, hollow, and ϛομα, the mouth.) A defect of speaking, from the palate, or through the nose, the voice being so obscured as to sound as if it proceeded from a cavern.

COINDICA'NS. (From *con*, and *indico*, to indicate.) A sign, or symptom, is called coindicant, when, besides the usual incidental appearances, there occur others, as age, habit, season, &c.

COI'RA. A name for catechu.

COITER, VOLCHER, was born at Groningen in 1534, and studied in Italy. He made considerable improvements in anatomy and surgery.

CO'ITUS. (*us, ûs.* m.; from *coeo*, to go together.) 1. The conjunction of the male and female in the act of procreation.

2. *Coitus humoris*, means a conflux of fluids, or gathering of humours.

COKE. Charred coal.

COLATO'RIA LACTEA. Astruc says, they were formerly called glands, and are situated in the third and internal tunic of the uterus, and, that they are vesiculo-vascular bodies.

COLATO'RIUM. (*um, i.* n.; from *colo*, to strain.) A strainer of any kind.

COLATU'RA. (*a, æ.* f.; from *colo*, to strain.) A filtered or strained liquor.

COLBATCH, JOHN, was born in the latter part of the 17th century, and practised in London. He published several works: the first was *A New Light of Chirurgery*, condemning the use of tents, and the injection of acrid substances into wounds; then a treatise, in which most diseases are ascribed to alkalescency, and acids strongly recommended; this, in a subsequent publication, he applied particularly to the gout; lastly, he highly extolled the misletoe as a remedy for epilepsy and other nervous diseases.

COLCHESTER. The name of a seaport on the coast of Essex, near which is a

mineral water, *aqua Colcestrensis*, which is of the bitter purging kind, similar to that of Epsom, but not so strong.

CO'LCHICUM. (*um, i.* n.; from *Colchis*, a city of Armenia, where this plant is supposed to have been common.) 1. The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Trigynia*. Meadow-saffron.

2. The pharmacopœial name of the meadow-saffron. See *Colchicum autumnale*.

Colchicum autumnale. The systematic name of the common meadow-saffron. *Colchicum—foliis planis lanceolatis erectis*, of Linnæus. A native of England. The sensible qualities of the fresh root vary, according to the place of growth and season of the year. In autumn it is almost inert, but in the beginning of summer highly acrid: hence some have found it to be an active poison, whilst others have eaten it in considerable quantity without experiencing any effect. When it is possessed of acrimony, this is of the same nature with that of garlic and some other plants, and is entirely destroyed by drying. The German physicians have celebrated its virtues as a diuretic, in hydrothorax and other dropsies.

It is to the enterprising spirit of Dr. Stoerck, that we are indebted chiefly for the knowledge of this virtue of colchicum, whose experiments were made principally on his own person. The fresh roots, which is the part he preferred, are highly acrid and stimulating: a single grain wrapped in a crumb of bread and taken into the stomach, excites a burning heat and pain both in the stomach and bowels, strangury, tenesmus, thirst, and total loss of appetite. The acrimony is best corrected by vinegar. The tincture and wine are now found to be a controllable formulæ, and the best. Baron Stoerck began with a drachm of the latter twice a day, and gradually increased its dose. In France it is a favourite remedy in the cure of gout; for it is supposed to be the active ingredient of a celebrated quack medicine prepared by M. Husson, and by him called *Eau médicinale*. In this country it has been very extensively used, both that as prepared in France, and a tincture and wine as ordered by the College of Physicians, in the cure of rheumatism as well as gout. The exact components of M. Husson's preparation are not known: the effects of it do not differ from those of the vinum and tinctura colchici. After taking about sixty drops of the former, or a similar quantity of the vinum colchici, the pulse becomes slower, and at length sinks, in about twelve hours, from ten to twenty beats in a minute below its natural number, at which time the gouty inflammation mostly subsides. The action of both medicines is accompanied with great languor, and a deadly nausea or sickness, which terminates in vomiting, or a discharge from the bowels, or both; or the patient breaks out into a profuse perspiration. If the dose be in a degree in excess, the symptoms are, syncope, cold sweats, extreme prostration of strength, violent vomiting and purging, a wiry and almost imperceptible pulse, or a state of utter and very alarming insensibility. In some constitutions, these effects have followed from the use of even a common dose. Smaller doses of these preparations, combined with saline diaphoretics, are extremely useful in subduing the symptoms of inflammatory rheumatic fever. It is possible that the colchicum may act by a specific power on the peculiar inflammation of gout and rheumatism. Admitting that colchicum operates in this way on these diseases, in their active and inflammatory forms, it does not, nevertheless, seem to possess any control over the gouty and rheumatic diathesis, since the fit of the former, nor the disposition to some form of rheumatism, has never been so removed as not to return again. The expressed juice is used, in Alsace, to destroy vermin in the heads of children. The officinal preparations of colchicum are, syrupus colchici autumnalis, Edin. Pharm. The oxymel colchici of the former London pharmacopœia is now omitted, and the acetum colchici ordered in its room; as the honey may easily be added extemporaneously, if it be thought requisite. There is also a tinctura and a vinum colchici, in the last pharmacopœias. The active ingredient of this plant has lately been ascertained to be an alkali, possessing peculiar properties. See *Veratria*.

Colchicum illyricum. The plant supposed to afford the root called hermodactyl. See *Hermodactylus*.

Colchicum zeylanicum. See *Zedoaria*.

COLCOTHAR. *Chalcitis; Colcothar vitrioli*. The brown-red oxide of iron, which remains after the distillation of the acid from sulphate of iron.

Colcothar vitrioli. See *Colcothar*.

COLD. 1. See *Frigus*.

2. A popular name for a catarrh. See *Catarrh*.

Cold Affusion. See *Affusion*.

COLE, William, studied at Oxford, and took his degree there in 1666. He distinguished himself by several publications on physiology and medicine: the principal are on animal secretion, on apoplexy, on the cause of fever, on insensible perspiration, &c. He published also a case of epilepsy, cured, in his opinion, by the misletoe.

Co'les. (From καυλος, a stalk.) *Colis*. The penis.

COLEWORT. See *Brassica*.

COLIC. See *Colica*.

Colic of Poitou. See *Colica*.

Colic, lead. See *Colica*.

CO'LICA. (*a, æ*. f.; from κωλον, colon, the name of one of the intestines.) The colic or belly-ach. The appellation of colic is commonly given to all pains in the abdomen, almost indiscriminately; but, from the different causes and circumstances of this disorder, it is differently denominated, and nosologists and medical writers have very

much multiplied the species, and formed them into several genera. When its principal symptoms are sharp and spasmodic pains, it is called *spasmodic colic;* and when with the pain there is constipation, and much fæcal matter is purged off, *stercoraceous colic;* when from indigestible food, *accidental colic.* When the pain is accompanied with a vomiting of bile, or with obstinate costiveness, it is called a *bilious colic:* if flatus causes the pain, that is, if attended with temporary distension, relieved by the discharge of wind, it takes the name of *flatulent* or *windy colic;* when accompanied with heat and inflammation, it takes the name of *inflammatory colic*, or *enteritis.* When this disease arises to a violent height, and is attended with obstinate costiveness, and an evacuation of fæces by the mouth, it is called *passio iliaca*, or iliac passion.

1. *Of the spasmodic colic.*

This species is attended by pain about the navel, with a retraction of the parietes of the belly. The pain goes and returns, and moves about as in other kinds of colic, but there are more perfect periods of ease. When the belly is soft, the intestines are often felt in lumps, which move about under the hand, or wholly vanish for a time. These are its essential characters, and establish the purely spasmodic affection when there is no flatulency, nor acrid substances in the bowels, nor any of the distinctive symptoms of the other species.

This species occurs in highly nervous and hysterical constitutions, and is relieved by stimulating fomentations, warm glysters, and carminatives, especially the compound spirit of sulphuric æther with camphire. If these do not remove the spasms, opium is an almost infallible remedy.

2. *Of the stercoraceous colic.*

The griping pains are severe, and the bowels are constipated, and there is often nausea and vomiting. When this happens, as it sometimes does to infants very soon after birth, before the *meconium* has passed away from the intestines, the disease is called *colica meconialis.* Both the colica stercorea, or fæcosa, as it has been termed, and the meconialis, are the result of a superabundant action of the absorbents, or of a deficiency in the peristaltic power of the intestinal tube: in consequence of which, from the length of time the confined materials occupy in completing their descent, the meconium, in infants, becomes so viscid as not to be urged downward, and remains in the intestines till it grows acrid from acidity or putrescency; and the fæces of the latter, deprived of moisture, harden into one solid mass, possessing the figure of the intestine; or formed in the sacculi of the colon, or separating into smaller pieces, appear, when discharged, in the shape of balls or buttons, like sheeps' dung, often as hard as sun-burnt clay, and have been called scybala. Great quantities of such indurated fæces are eliminated in some cases. There is a variety or form of stercoraceous colic, in which the quantity of fæcal matter that is discharged is enormous: apparently far beyond the quantity that is taken into the stomach. These evacuations are, in weight, very light, and are probably formed into the vast masses that are seen eliminated, by an intestinal fermentation peculiar to the disease.

This species of colic requires the drastic purges of submuriate of mercury, colocynth, aloes, camboge, senna, and jalap; and these often in conjunction with purgative salts, as sulphate of soda and magnesia.

3. *Of the bilious colic.*

The pain is seldom continued, or so severe as in the purely spasmodic species: it is more transient, and is accompanied by constipation, nausea, and vomiting; and great relief is obtained by pressure on the belly. That which passes from the stomach is bilious; and when the bowels are opened, the fæcal discharge is very bilious, and the fæces often very dark coloured and offensive.

The remedies for this kind of colic are, submuriate of mercury, with colocynth, aloetic and saline purges in active doses, and the use of fomentations.

4. *Of the flatulent colic.*

The colic pains are here accompanied by costiveness and collections of gas, which distend the bowels irregularly and cause a rumbling noise. It is often produced by crude and flatulent fruits, by depressing passions of the mind, and long fasting. Those who are subject to it, as many women are as they advance in life, have it easily produced by flatulent vegetables and slops, as spinach, and all the oleraceous tribe; weak tea, gruels, and the like. It is often accompanied by great costiveness from the spasmodic actions, which extend irregularly, and in a greater or less degree, through the whole of the intestinal canal, and considerably adds to the torture, and produces tumefaction and tenderness of the belly.

In attending to the means of cure, we may here proceed with some degree of boldness, since, notwithstanding the degree of pain, it is not often that inflammation is to be apprehended, at least in the commencement; and hence the warmest carminatives, and even brandy, may be had recourse to: for whatever will carry off the flatulency will carry off the pain and costiveness. A full dose of pure tincture of rhubarb is here an excellent medicine; and if the bowels do not operate, the extractum colocynthidis compositum, with essential oil of cloves, cinnamon, cassia, peppermint, or carraway, are best calculated to answer the intention. Fomentations, warm bath, and warm embrocations will assist, and also a carminative glyster of fennel, rue, and cumin: thus,—

℞. Confectionis rutæ, ʒj.; aquæ carui, f. ℥x. Solve pro enemate tepide injiciendo.

℞. Seminum fœniculi contusorum, ʒj.
Seminum carui contusorum, ʒij.
Aquæ ferventis, Oj.
Macera per horam deni cola, et adde

Spiritûs carui, f. ℥j. Fiat enema, tepide utatur.

5. *Of the accidental colic.*

This is produced by indigestible foods and poisons. It is characterised by pains about the navel, costiveness, perhaps vomiting, which cease when the bowels are unloaded of their indigested contents, which are mostly salted meats, pork, salmon, and high gravies.

6. *Of the colica pictonum.*

This is called from the place where it is endemial, the Poictou, the Surinam, the Devonshire colic; from its victims, the plumbers' and the painters' colic; from its symptoms, the dry belly-ach. It has been attributed to the poison of lead, and this is undoubtedly the cause when it occurs to glaziers, painters, and those employed in lead-works; but, though this is one, it is by no means the only cause. In Devonshire, it certainly more often arises from the early cider, made of harsh, unripe fruit, and in the West Indies from new rum. The characteristics of this disease are, obstinate costiveness, with a vomiting of an acrid or porraceous bile, pains about the region of the navel, shooting from thence to each side with excessive violence, strong convulsive spasms in the intestines, and a tendency to a paralysis of the extremities. It is occasioned by a long continued costiveness; by an accumulation of acrid bile; by cold applied either to the extremities, or to the belly itself; by a free use of unripe fruits, and by great irregularity in the mode of living. From its occurring frequently in Devonshire, and other cider countries, it has been supposed to arise from an impregnation of lead received into the stomach; but this seems to be a mistake, as it is a very prevalent disease in the West Indies likewise, where no cider is made, and where there is only a very small quantity of lead in the mills employed to extract the juice from the sugar-canes. One or other of the causes just enumerated, may justly be said always to give rise to this species of colic.

The disease comes on gradually, with a pain at the pit of the stomach, extending downwards to the intestines, accompanied with eructations, slight sickness at the stomach, thirst, anxiety, obstinate costiveness, and a quick contracted pulse. After a short time, the pains increase considerably in violence; the whole region of the belly is highly painful to the touch; the muscles of the abdomen are contracted into hard irregular knots or lumps; the intestines themselves exhibit symptoms of violent spasm, insomuch that a glyster can hardly be injected, from the powerful contraction of the sphincter ani; and there is constant restlessness, with a frequent vomiting of an acrid or porraceous matter, but more particularly after taking either food or medicine.

Upon a farther increase of the symptoms, or their not being quickly alleviated, the spasms become more frequent, as well as violent; the costiveness proves invincible, and an inflammation of the intestines ensues, which soon destroys the patient by gangrene. In an advanced stage of the disease, it is no uncommon occurrence for dysuria to take place, in a very high degree.

The dry belly-ach is always attended with some degree of danger; but which is ever in proportion to the violence of the symptoms, and the duration of the disease. Even when it does not prove fatal, it is too apt to terminate in palsy, and to leave behind it contractions of the hands and feet, with an inability in their muscles to perform their office; and in this miserable state of existence the patient lingers out many wretched years.

The medical treatment of this species is nearly the same with that of spasmodic colic; but the narcotics should always be combined with castor oil, purgatives, fomentations, and soothing clysters. After the free evacuation of the bowels, there is nothing better than oleaginous aperients, in combination with small doses of opium, if the pain has not vanished and assumes a spasmodic character.

Peritoneal inflammation is more apt to accompany this than the other species; and when this is apprehended, from the continued pain in the abdomen and general tenderness, the lancet and baths must be resorted to.

A very common effect of colic from lead, whether taken into the stomach by painters, plumbers, or lead manufacturers, in the way of their business, from improper attention to cleanliness, or taken by others in cider, white wines, or other ways, is a subparalytic state of the fingers and hands. This gives way after a very long period only, and constant perseverance to the application of mercury, and oxygenated and stimulating applications.

Colic is frequently a symptomatic affection, occurring in most organic diseases of the abdominal viscera, especially strictures, and when abscesses, or cysts, expel their contents into the bowels, and when gall-stones and worms are nodulating or passing.

The colic is distinguished from inflammation of the intestines by the pain being *wringing*, and not of a burning kind; by the *spasmodic contraction* of the abdominal muscles; by the *absence* or *trifling* degree of fever; by the *state* of the pulse; and by the *diminution* of pain upon pressure, which increases it in enteritis: but inflammation not unfrequently is superadded to colic, and this is known by the pain remaining equable, and fixed and settled, the vomitings being severe, the belly bound, and the pulse quick and feverish.

The colic should be distinguished from a fit of the gravel; stones passing through the ureters; rheumatic pains in the muscles of the belly; a beginning dysentery; the blind piles; and from a stone passing through the gall-duct. Gravel in the kidneys produces often colic pains, not easily distinguishable; but when stones pass through the ureters, the testicle on that side is often retracted, the leg is benumbed, a pain shoots down the inside of the thigh; symptoms occasioned by the stone passing through the ureter over the spermatic chord, or the sacro-sciatic nerve.

Rheumatic pains in the muscles of the belly, rarely affect so accurately the umbilical region, but dart in various directions to the chest, or to the pelvis, and are attended with soreness, not confined to the abdomen. A beginning dysentery differs little from colic. The pain from the blind piles is confined to the rectum: and that from a stone in the gall-duct, is felt in the pit of the stomach, occasionally shooting through the body to the back.

The great liability of this complaint to return, renders it necessary for some time after carefully to regulate the diet, to attend to the state of the bowels, as well as of the liver, to avoid the several causes, especially cold, maintaining the functions of the skin by suitable clothing, exercise, &c.

Colica sinistra. The lower mesenteric artery and vein.

Colica superior. The upper mesenteric artery and vein.

CO'LICE. The colic.

COLIFO'RMIS. (From *cola*, a strainer, and *forma*, a likeness; so called from its having many perforations, like a strainer.) Strainer-like, or resembling a strainer. The ethmoid bone was called *os colaforme*.

Coli'phium. (From κωλον, a limb, and ιφι, strongly.) A kind of bread given to wrestlers. It was made of flour and bran together, and was thought to make men athletic.

Co'lis. See *Coles*.

COLLA. (*a, æ.* f. Κολλα, *colla*, glue.) Glue or jelly.

Colla piscium. See *Ichthiocolla*.

COLLA'PSUS. (From *collabor*, to shrink down.) A wasting or shrinking of the body, or of a part, or of strength of the body.

Collate'nna. A specific vulnerary.

COLLATERAL. (*Collateralis:* so called from the order of their fibres.) See *Erector penis*.

Colle'ticus. (From κολλα, glue.) Conglutinating.

Colli'ciæ. (From *colligo*, to collect.) The union of the ducts, which convey the humours of the eyes from the puncta lachrymalia to the cavity of the nose. Obsolete.

COLLI'CULUM. (*um, i.* n.; diminutive of *collis*, a hill.) A small eminence.

COLLIGA'MEN. (*en, inis.* n.; from *colligo*, to tie together.) A ligament.

COLLINS, Samuel, was born in the early part of the 17th century. He published a history of the Court of Russia, and, in 1685, *A System of Anatomy*, treating of the body of man, animals, and plants, with numerous plates.

COLLIQUAME'NTUM. (*um, i.* n.; from *colliqueo*, to melt.) A term first made use of by Harvey, in his application of it to the first rudiments of an embryo, in generation.

COLLI'QUATIVE. (*Colliquativus*, from *colliqueo*, to melt.) Any excessive evacuation is so called which melts down, as it were, the strength of the body: hence colliquative perspiration, colliquative diarrhœa, &c.

COLLI'SIO. (*o, onis.* f.; from *collido*, to beat together.) A contusion.

Co'llix. (From κολον, food.) A troch, or lozenge.

COLLOBO'MA. (*a, æ.* f.; from κολλαω, to glue together.) *Colobroma.* 1. The growing together of the eyelids.

2. The want of any member of the body.

COLLO'DES. (From κολλα, glue.) Glutinous.

CO'LLUM. (*um, i.* n.; from κωλον, a member, as being one of the chief: or diminutive of *columna*, as being the pillar and support of the head.) The neck. See *Neck*.

COLLUTION. (*Collutio, onis.* f.) The washing of the mouth, or any other part.

COLLUTO'RIUM. (*um, i.* n.; from *colluo*, to wash.) A gargarism or wash for the mouth.

COLLU'VIES. (*es, ei.* f.; from *colluo*, to cleanse.) Filth; excrement. The discharge from an old ulcer.

CO'LLYRA. (*a, æ.* f. Κολλυρα. A little round cake: so called from its likeness to a cake.) *Collyris.* A bump, or knob, which rises after a blow.

COLLY'RIUM. (*um, ii.* n.; from κωλυω, to check, and ῥους, a defluxion: because it stops the defluxion.) Every medicine was formerly so called which was applied to check any discharge. The term is now only given to fluid applications for the eyes, or eye-waters.

Coloboma. See *Colloboma*.

Colobo'mata. In Celsus, this word is expressed by *curta*. Both the words signify a deficiency in some part of the body, particularly the ears, lips, or alæ of the nostrils.

COLOCA'SIA. (From κολον, food, and καζω, to adorn: so called from its use as a food, and the custom of wearing its flowers in wreaths.) See *Nymphæa nelumbo*.

COLOCY'NTHIS. (*is, idis.* f.; from κωλον, the colon, and κινεω, to move: because of its great purging powers.) See *Cucumis colocynthis*.

COLO'MBO. See *Calumba*.

CO'LON. (*on, i.* n. Κωλον, quasi κοιλον; from κοιλος, hollow: so called from its capacity, or from its generally being found empty, and full of wind, in dissection.) The greater portion of the large intestine is so called. It proceeds towards the liver, by the name of the *ascending portion of the colon;* and having reached the liver, forms a *transverse arch* across to the other side. The colon then descends, forming what is termed its *sigmoid flexure*, into the pelvis, where the gut is called rectum. See *Intestine*.

COLOPHO'NIA. (*a, æ.* f. Κολοφωνια, the city from whence it was first brought.) Colophony. 1. The black resin which remains in the retort, after distilling the common resin with a strong fire.

2. Paracelsus seems to mean by it what is now prescribed by the name of *terebinthina cocta*.

3. The ancients, and particularly Galen,

seemed to understand by it a soft kind of mastich, from *Chio*, probably the same as our *Chio* turpentine.

COLOPHONITE. A mineral of a blackish or yellowish brown, or orange-red colour, and a resino-adamantine lustre, found in magnetic iron-stone in Norway and in Ceylon.

COLOQUINTIDA. See *Cucumis colocynthis.*

COLORATUS. Coloured: applied to leaves, calyces, seeds, &c. to express any colour besides green, as in *Arum bicolor;* or to any part thereof when of another colour than green, as in *Amaranthus tricolor;* and to a *perianthium* when not of a green colour, as that of the *Gomphrena globosa;* and the seeds of *Chærophyllum aureum.*

COLO'STRUM. (*um, i.* n.; from κολον, food, or κολλωμαι, to agglutinate: so called, either because it is the first food of the young, or from its being at that time peculiarly glutinous.) 1. The first milk in the breasts after delivery.

2. An emulsion made by the solution of turpentine with the yolk of an egg.

COLOT, Germain, a French surgeon of the 15th century, appears to have been the first of the profession who practised lithotomy, that operation having been previously in the hands of itinerant practitioners. Several of his descendants in succession enjoyed great reputation as lithotomists. Francis, the last of them, left a treatise, published in 1727, describing the method of operating with the greater apparatus, the invention whereof he ascribes to John de Romanis, an Italian physician, about two centuries before.

COLOTOI'DES. (From κωλωτης, a lizard, and ειδος, likeness.) Lizard-like, or variegated like the skin of a lizard. Hippocrates applied it to the excrements.

COLOUR. (*Color* vel *colos, oris.* m.) A correct nomenclature of colours: such a one as shall express all the compound tints and shades of colours has been long wanted. Some naturalists have proposed to ground one on the colours of minerals, which change less than other substances do; and others have formed one from the colours of the most common and familiar plants.

The primary colours are red, blue, and yellow: green, purple, brown, &c. are compound colours, because, according to the old opinion, they are compounded of the three primitive rays. The following is the best nomenclature of colours, according to modern naturalists:—

1. *Æruginosus.* Æruginous: a bluish green, like verdigris, or the leaves of some pine trees.
2. *Albidus.* A stone colour.
3. *Albus.* White.
4. *Atrovirens.* Dark green.
5. *Ater.* Deepest black.
6. *Atropurpureus.* Very dark reddish purple; as in the *Scabiosa atropurpurea.*
7. *Atrorubens.* Dark red; as in the *Amaranthus hypochondriacus.*
8. *Aurantiacus.* Orange colour; as the flowers of the marigold and nasturtium.
9. *Aureus.* Golden yellow; as that of the dandelion and sunflower.
10. *Azureus.* Azure blue; like ultramarine. This colour is brighter than *cæruleus.* The pure light blue flowers of the *Cynoglossum omphalodes* are a good example.
11. *Badius.* Nearly the same as liver colour, but browner.
12. *Brunneus.* A deep dark brown.
13. *Cæsius.* A dull light blue grey.
14. *Castaneus.* Chestnut; a sort of orange brown.
15. *Carneus.* A flesh colour; as the pale blossom of the *Hysperis matronalis.*
16. *Cinereus.* Ash colour.
17. *Cinnabarinus.* Like red lead, or cinnabar, and the gay light red of the *Papaver orientalis.*
18. *Coccineus.* High crimson, or bright scarlet; as the flower of the *Salvia coccinea.*
19. *Cæruleus.* Sky blue; like the flower of borage, and the *Veronica chamædrys.*
20. *Croceus.* Deep-yellow.
21. *Cyaneus.* Deep blue, like Prussian blue; as the flower of the *Gentiana acaulis.*
22. *Flavovirens.* Yellowish green.
23. *Flavus.* Yellow; as in the early daffodil.
24. *Flavescens.* Yellowish, or pale whitish yellow.
25. *Ferrugineus.* Yellowish brown; as the rust of iron.
26. *Fuscus.* Greyish brown.
27. *Glaucus.* Sea-green, bordering on grey.
28. *Griseus.* Lively grey, and when hoary, *canus.*
29. *Hepaticus.* Liver coloured.
30. *Hyalinus.* Transparent, and like glass.
31. *Lacteus.* Milk white.
32. *Liliacinus.* Lilac; as in the *Syringa vulgaris.*
33. *Lividus.* Dark greyish violet.
34. *Luteus.* A deep yellow; as the outside of the petals of saffron, and the flower of the *Cystus helianthemum.*
35. *Miniatus.* Dull red.
36. *Niger.* Black.
37. *Ochraceus.* Yellow, striped with brown; like yellow ochra, or the feathers on the upper parts of the *Strix flammula,* or white owl.
38. *Olivaceus.* Olive colour.
39. *Phœniceus.* Crimson; as the flower of the *Pæony.*
40. *Puniceus.* Fine bright red or carmine; as in *Lobelia fulgens.*
41. *Purpureus.* Purple.
42. *Prasinus.* Grass green; like the colour of the fresh meadows, before there is any mixture of yellow or other colours.
43. *Ruber.* Red.
44. *Rufus.* Carrot colour, or brownish-red orange.
45. *Roseus.* Rose colour, or red pink: *pallide roseus,* pale pink.
46. *Sanguineus.* Blood colour.

47. *Smaragdus.* Pure green.

48. *Sulphureus.* Bright but pale yellow, without the slightest orange tinge.

49. *Violaceus.* Violet, or deep bluish purple; as in *Viola odorata.*

50. *Vitellinus.* Yellow, verging to orange; as in pale marigold.

Coloured leaf. See *Leaf.*

COLPOCE'LE. (*e, es.* f.; from κολπος, the vagina, and κηλη, a tumour.) A hernia, or tumour, situated in the vagina. See *Hernia vaginalis.*

COLPOPTO'SIS. (*is, is.* f.; from κολπος, the vagina, and πιπτω, to fall down.) A bearing down or falling down of the vagina. See *Hernia vaginalis.*

COLT'S-FOOT. See *Tussilago.*

CO'LUBER. (*er, ri.* m.; *quod colit umbram,* because it delighteth in the shade.) A genus of animals in the Linnæan arrangement, of which there are many species.

Coluber berus. The viper which possesses the power of forming a poisonous fluid in little bags near its teeth. The flesh is perfectly innocent, and often taken by the common people against the king's evil, and a variety of disorders of the skin. It is very inefficacious.

Colubrina virginiana. See *Aristolochia serpentaria.*

Colubrinum lignum. This species of snake-wood, so called from the snake-like contortions of its roots, is brought from America. It is solid, ponderous, acrid, extremely bitter, and inodorous; its bark is of a ferruginous colour, covered with cineritious spots.

COLUBRI'NUS. (From *coluber,* a snake.) Colubrine, or snake-like.

COLU'MBA. 1. A former name of a plant. See *Calumba.*

2. The name of a genus of birds, the dove, the flesh of which is eaten indifferently with the common pigeon. Some plants are named from their supposed resemblance to the foot of this bird.

COLUMBIC. (*Columbicus,* from *columbium,* the name of its base.) Of or belonging to columbium.

Columbic acid. *Acidum columbicum.* An acid obtained from a mineral brought from Columbia, in America. It has not yet been used in medicine.

COLUMBINE. See *Aquilegia.*

COLU'MBIUM. (*um, i.* n.; so called because it is found in a mineral peculiar, it was thought, to Columbia, in America.) The name of the metal obtained from a mineral brought from America.

Columbo'be. See *Calumba.*

COLUME'LLA. (*a, æ.* f.; diminutive of *columna,* a column.) 1. A column or little pillar.

2. The central column, or filament, which unites the partitions of the capsule of plants. The seeds are usually attached to it. See also *Uvula,* and *Clitoris.*

Columella'ris. (From *columella,* a little column.) The name given by Varro and Pliny to the dens caninus.

COLU'MNA. (*a, æ. f.*) A column, or pillar. Many parts of the body, which in their shape or office resemble columns, are so named; as columnæ carneæ of the heart.

Columna carnea. See *Heart.*

Columna nasi. The lowest and fleshy part of the nose, which forms a part of the septum.

Columna oris. The uvula.

Columniferæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of plants, the stamina and pistil of which have the appearance of a pillar in the centre of the flower.

COLUMNIFERUS. Columniferous: pillar bearing; applied to a plant, the pistil of which has the appearance of a pillar in the centre of the flower.

COLUMNI'LLA. The column or upright pillar in the centre of some capsules to which the seeds are fixed. See *Columnula.*

COLUMNULA. (*a, æ.* f.) A little column. The name given by botanists to the filament which passes through the middle of the capsule of frondose mosses, to which the seeds are connected; also called *Sphrongidium.*

Colu'rium. (Παρα το κολλαν τον ρουν: because it prevents a defluxion.) A tent to thrust into a sore, to prevent a defluxion of humours.

CO'MA. (*a, atis.* n.; from κω, or κεω, to lie down.)

I. In *Pathology,* a propensity to sleep. This word was formerly applied to any total suppression of the powers of sense; but now it means a lethargic drowsiness.

II. In *Botany,* 1. A comb or fasciculus of leaves on the top of a stem or stipe. It is said to be,

a. *Foliose,* when formed of leaves; as in *Bromelia ananas.*

b. *Frondose,* when proceeding from the frond at the apex of the stipe; as in *Palms.*

c. *Bracteal,* formed of floral leaves; as in *Lavendula stæchas.*

2. Gærtner applies this term to the feathery crown of seeds furnished with a capsule.

Coma somnolentum. Is when the patient continues in a profound sleep; and, when awakened, immediately relapses, without being able to keep open his eyes. See *Lethargus.*

Coma vigil. A disease where the patients are continually inclined to sleep, but cannot. See *Lethargus.*

Co'mata. (The plural of *coma.*) An order of the class *Neuroses* of Cullen's Nosology, embracing diseases that are characterised by a diminution of the powers of voluntary motion, with sleep, or the senses impaired.

COMATOSE. *Comatosus.* Having a strong propensity to sleep.

COMBINATION. *Combinatio.* The intimate union of the particles of different substances by chemical attraction, so as to form a compound possessed of new and peculiar properties.

COMB-LIKE. See *Pectinatus.*

COMBUSTIBLE. Having the property of burning. See *Combustion.*

COMBUSTION. (*Combustio*; from *comburo*, to burn.) 1. A burn, or scald. See *Burn.*

2. Combustion; burning. Among the various operations of chemistry, none acts a more conspicuous part than combustion; and in proportion to its utility in the science, the necessity of thoroughly investigating its nature and mode of action becomes more obvious to the philosophical chemist.

Lavoisier's Theory is founded upon the absorption of oxygene by a combustible body.

Taking this for granted, it follows that combustion is only the play of affinity between oxygene, the matter of heat, and a combustible body.

When an *incombustible* body (a brick for instance) is heated, it undergoes no change, except an augmentation of bulk and temperature; and when left to itself, it soon regains its former state. But when a *combustible* body is heated to a certain degree, in the open air, it becomes on a sudden intensely hot, and at last emits a copious stream of caloric and light to the surrounding bodies. During this emission, the burning body gradually wastes away. It either disappears entirely, or its physical properties become totally altered. The principal change it suffers, is that of being no longer capable of combustion. If either of these phænomena, namely, the emission of heat and light, and the waste of substance, be wanting, we do not say that a body is undergoing combustion, or that it is burning. It follows, therefore, that every theory of combustion ought to explain the following facts: —

1. Why a burning body is consumed, and its individuality destroyed.

2. Why, during the progress of this alteration, heat and light are emitted.

For the elucidation of these objects, Lavoisier's theory has laid down the following laws: —

1. Combustion cannot take place without the presence of oxygene, and is more rapid in proportion to the quantity of this agent in contact with the inflamed body.

2. In every act of combustion, the oxygene present is consumed.

3. The weight of the products of every body after combustion, corresponds with the weight of the body before combustion, *plus* that of the oxygene consumed.

4. The oxygene absorbed by the combustible body may be recovered from the compound formed, and the weight regained will be equal to the weight which disappeared during the combustion.

5. In every instance of combustion, light and heat, or fire, are liberated.

6. In a limited quantity of air, only a certain quantity of the combustible body can be burnt.

7. The air, wherein a body has been burnt, is rendered unfit for continuing combustion, or supporting animal life.

Though every case of combustion requires that light and heat should be evolved, yet this process proceeds very differently in different circumstances: hence the terms *ignition*, or glowing heat; *inflammation*, or accension; and *detonation*, or explosion.

Ignition takes place when the combustible body is not in an aëriform state.

Charcoal, pyrophorus, &c. furnish instances of this kind.

It seems as if the phænomenon of glowing was peculiar to those bodies which require a considerable quantity of caloric to become converted into the gaseous state.

The disengagement of caloric and light is rendered more evident to the senses in the act of

Inflammation, or accension. Here the combustible substances are more easily converted into an elastic or aëriform state. Flame, therefore, consists of the inflammable matter in the act of combustion in the gaseous state. When all circumstances are favourable to the complete combustion of the products, the flame is perfect; if this is not the case, part of the combustible body, capable of being converted into the gaseous state, passes through the luminous flame unburnt, and exhibits the appearance of smoke. Soot, therefore, always indicates an imperfect combustion. Hence a common lamp smokes, an Argand's lamp yields no smoke.

This degree of combustion is very accurately exemplified in the

Flame of candles. —When a candle is first lighted, which must be done by the application of actual flame, a degree of heat is given to the wick, sufficient to destroy the affinity of its constituent parts; part of the tallow is instantly melted, volatilised, and burnt. As this is destroyed by combustion, another portion melts, rises, and supplies its place, and undergoes a like change. In this way combustion is maintained. The tallow is liquefied as it comes into the vicinity of the flame, and is, by the capillary attraction of the wick, drawn up to supply the place of what is burnt; the unmelted tallow, by this means, forms a kind of cup.

The congeries of capillary tubes which form the wick is black, because the charcoal of the cotton becomes predominant, the circumambient air is defended by the flame from oxidising it; it therefore remains, for a considerable time, in its natural state; but when the wick, by the continual consumption of tallow, becomes too long to support itself in a perpendicular position, its upper extremity projects nearly out of the cone of the flame, and there forms a support for an accumulation of soot, which is produced by the imperfect combustion. A candle, in this situation, affords scarcely one tenth of the light it can otherwise give, and tallow candles, on this account, require continual snuffing.

But if the candle be made of wax, the

wick does not long occupy its place in the middle of the flame; its thinness makes it bend on one side, when its length is too great for its vertical position; its extremity comes then into contact with the air, and is completely burnt, or decomposed, except so much of it as is defended by the continual afflux of the melted wax. This small wick, therefore, performs the office of snuffing itself. The difficult fusibility of wax enables us to use a thinner wick for it than can be used for tallow, which is more fusible. But wax being a substance which contains much more oxygene than tallow, or oil, the light it affords is not so luminous.

Detonation is an instantaneous combustion, accompanied with a loud report; it takes place in general when the compounds resulting from the union of two or more bodies, occupy much more or less space than the substances did before their union; a great impulse is therefore given to the surrounding air, or else a vacuum is formed, and the air rushing in from all sides to fill it up is the cause of the report.

A mixture of oxygene and hydrogene gases detonates very loud. Gunpowder, fulminating gold, silver, and mercury; oxygenated muriate of potash; and various other explosive compounds, are capable of producing very loud detonations.

With respect to the disengagement of light and caloric.

By the older chemists, it was universally supposed that the light and heat emitted during combustion, proceeded from the inflammable body; and this opinion would indeed appear unquestionable, while the composition of the atmosphere was imperfectly known. The burning body appeared luminous, and felt hot, and no other agent was supposed to be concerned; the conclusion that the light and heat were evolved from the burning substance, was, therefore, unavoidable. But when the nature of the atmosphere was ascertained, and when it became evident that part of the air was absorbed during combustion, the former conclusion fell to the ground: for when two bodies exert a mutual action on each other, it becomes *à priori* equally probable that the products may be derived from either of them; consequently, the light and heat evolved might proceed either from the one or the other. Whether they proceed from the atmosphere, or from the combustible body, they must be separated at the part where the combination takes place; that is, upon the surface of the burning body itself; and consequently it appeared luminous and heated, while the air, being invisible, escaped observation.

When the laws of heat became known, at least when it was ascertained that bodies contain at the same temperature, and in equal quantities, either of mass or bulk, unequal quantities of heat, the conclusion became probable, that the caloric evolved in combustion proceeded rather from the oxygene gas of the atmosphere, than from the combustible body; since the former contains a much larger quantity than the latter. The caloric evolved was therefore supposed to be derived from the *condensation* of the oxygene gas in the new combination into which it entered.

Though *approaching* to the truth, this explanation is not strictly true. It is not merely from the oxygene gas being *condensed* that the caloric is evolved, because, in many cases of combustion, the product still exists in the gaseous state; and in others, the quantity of caloric evolved bears no proportion to the degree of condensation. Philosophers ascribed this to a change of capacity; for, in different bodies, the difference in the proportion of the capacities before and after combustion is by no means uniform; and hence the difference in the quantities of caloric extricated in various cases of combustion.

This being premised, it remains to explain the origin of the light emitted during combustion; for although we take it for granted that the caloric is evolved from the oxygene gas, we cannot infer that the light has the same origin.

It is very probable that light is a constituent part of inflammable bodies; for it is frequently evolved in combinations when the oxygene is merely *transferred* from one inflammable substance to another. In those cases it must proceed from the inflammable body. The accension of oils by the affusion of acids, the combustion of metals in the same way, furnish instances of the kind.

It seems, therefore, probable that the light is derived from the inflammable substance; and that the oxygene, combining with the bases of these substances, disengages the light.

It may be concluded, then, that light enters into the composition of all combustible bodies; but as we are unable to separate the light, so as to obtain these bodies pure, we treat of them as simple bodies.

According to this theory, the combustion of phosphorus in oxygene gas, is, therefore, the effect of a double affinity. The basis of the oxygene gas unites with the phosphorus, to form phosphoric acid; and the light disengaged from the phosphorus, together with the heat of the oxygene gas, produces the vivid flame.

The quantity of light emitted by different bodies is supposed to depend on the quantity contained in them, and on the proportion in which it is united to caloric.

Such is the theory of combustion of Lavoisier, modified by Gren, Leonardi, and Richter.

Thomson's Theory. Though the preceding theory of combustion is simple and beautiful, it appears, from what we are now going to state, to be by no means completely satisfactory.

It has misled chemists, by confining the term combustion to the act of oxygenation, and considering that all bodies, during their

combustion, combine with oxygene, without at the same time recollecting that this latter effect may take place without any of the phænomena usually attendant on combustion; and that, though certainly all combustion pre-supposes the combination of oxygene with a base, yet this combination may be, and repeatedly is, effected where no combustion can possibly take place. Nothing can be more evident than the difference which, in numberless instances, prevails between the act of oxygenation in bodies and that of combustion, inasmuch as neither the phænomena attending on, nor the results arising from them, are the same. That a distinction, therefore, should be made between these processes is obvious; and it is on this account that Dr. Thomson has offered a theory, which considers this subject in a new point of view, and which bids fair to enable us to estimate the phænomena of combustion much better than has hitherto been done.

According to Dr. Thomson's theory, all the bodies concerned in combustion are either, 1. *Combustibles.* — 2. *Supporters of combustion.* — 3. *Incombustibles.*

I. Combustible bodies are those substances which are said, in common language, to *burn.* During the combustion, they appear to emit light and heat, and, at the same time, gradually waste away. When this change has reached its *maximum,* the process of combustion is at an end.

The class of combustibles is very numerous; but all the bodies belonging to it may be subdivided into three sets: namely,—

1. Simple combustibles. 2. Compound combustibles. 3. Combustible oxides, &c.

Simple Combustibles.

1. Sulphur.	4. Hydrogene gas.
2. Phosphorus.	5. All the metals.
3. Diamond, or Carbon.	6. Boron.

Compound Combustibles.

The *compound combustibles* consist of compounds, formed by the simple combustibles uniting together, and are of course much more numerous than the simple combustibles. They may be arranged under the five following heads: —

1. Sulphurets.	3. Carburets.
2. Phosphurets.	4. Alloys.

5. Sulphuretted, phosphuretted, and carburetted hydrogene.

The *combustible oxides* are either simple, having a single base, or compound, having more than one base. All the simple combustible oxides are, by combustion, converted into acids.

The compound combustible oxides are by far the most numerous.

II. The supporters of combustion are bodies which are not of themselves, strictly speaking, capable of undergoing combustion, but which are absolutely necessary for the process; for no combustible body can burn unless some one or other of them be present. Whenever they are excluded, combustion ceases. All the supporters of combustion known at present are oxygene, chlorine, iodine, and the compounds which these form with each other, and with azote.

There are, indeed, certain substances besides these, which possess nearly the same properties; these shall be afterwards enumerated under the title of *partial supporters.*

III. The incombustible bodies are neither capable of undergoing combustion themselves, nor of supporting the combustion of those bodies that are: they are, therefore, not immediately connected with combustion; though most of them appear to be the results of that process. Azote, the alkalies, earths, &c. come under this division.

Some of the alkalies and earths possess certain properties in common with combustibles, and are capable of exhibiting phænomena somewhat analogous to combustion; which will be described afterwards, under the title of *semi-combustion.*

In every case of combustion there must, therefore, be present a *combustible* body, and a *supporter* of combustion. During combustion, the combustible always unites with the supporter. *It is this combination which occasions the apparent waste and alteration of the combustible.* The new compound thus formed is a *product of combustion.* Every product of combustion is either, 1. *an acid,* or, 2. *an oxide,* &c. It is true, indeed, that other bodies sometimes make their appearance during combustion, but these will be found, upon examination, not to be products, nor to have undergone combustion.

Thus one of the two characteristic marks which distinguish combustion, namely, the apparent *waste and alteration of the combustible body,* has been fully explained. For the explanation of it we are indebted to Lavoisier, as stated before.

But though the combination of the combustible with oxygene, or other supporter, be a constant part of combustion, yet the facility with which combustibles burn is not proportional to their apparent affinity for oxygene.

Phosphorus, for instance, burns more readily than charcoal; yet charcoal is capable of abstracting oxygene from phosphorus, and of course has a greater affinity for it. Some of the combustible oxides take fire more readily than some of the simple combustibles; alkohol, æther, and oils are exceedingly combustible, whereas all the metals require very high temperatures when the supporter is air.

This greater combustibility of combustible oxides is probably owing to the weaker affinity by which their particles are united. Hence they are more easily separated than homogeneous particles, and of course combine more readily with oxygene; those simple combustibles which melt easily, or which are in the state of elastic fluids, are also very combustible, because the cohesion between their particles is easily overcome.

It is owing to the same inferiority in the cohesion of heterogeneous particles, that some

of the compound supporters occasion combustion in circumstances when the combustibles would not be acted on by simple supporters.

Thus phosphorus burns in air at the common temperature; but it does not burn in oxygene gas, unless its temperature be raised. Thus, also, oils burn rapidly when mixed with nitric acid. Nitrous gas and nitrous oxide constitute exceptions to this rule.

None of the *products* of combustion are combustible, according to the definition of combustion here given. This want of combustibility is not owing to their being saturated with oxygene; for several of them are capable of combining with an *additional dose* of it. But, during this combination, no caloric or light is ever emitted; and the compound formed differs essentially from a *product* of combustion; for by this additional dose of oxygene, the *product* is converted into a *supporter*. *Hence we see that combustion ought not to be confounded with the combination of a body with oxygene,* as was done formerly.

Combustion, indeed, cannot take place without the combination of oxygene or other supporter; but oxygene may combine with bodies in different proportions without the phænomena of combustion; and the *product obtained* by combustion is capable of becoming converted into a *supporter* of *combustion:* for instance, if lead be melted, and kept so for some time, it becomes covered with a grey pellicle, or *oxide of lead,* a product consisting of oxygene and lead; but if this oxide is suffered to be heated longer, it absorbs an additional quantity of oxygene, and becomes converted into a yellow powder, called *yellow oxide of lead.* If this yellow oxide be again exposed to heat, it absorbs still more oxygene, and becomes converted into *red oxide of lead.* When the *supporters* thus formed by the combination of oxygene with *products,* are made to support combustion, they do not lose all their oxygene, but only the additional dose which constituted them supporters. Of course they are again reduced to their original state of products of combustion. Hence it follows, that they owe their properties as supporters, not to the *whole* of the oxygene which they contain, but to the *additional dose* which constituted them supporters. We may, therefore, call them *partial supporters,* indicating by the term that part only of their oxygene is capable of supporting combustion, and not the whole.

All the partial supporters with which we are acquainted, contain a metallic basis; for metallic oxides are the only products at present known, capable of combining with an additional dose of oxygene. It is a circumstance highly deserving attention, that when metals are capable of combining with several doses of oxygene, the product, or oxide formed by combustion, is seldom or never that which contains a *maximum* of oxygene.

Thus it is evident that several of the products of combustion are capable of combining with oxygene. *The incombustibility of products, therefore, is not owing to their want of affinity for oxygene,* but to some other cause.

No product of combustion is capable of *supporting* combustion. This is not occasioned by any want of affinity to combustible bodies; for several of them are capable of combining with an additional dose of their basis. But by this combination, they *lose* their properties as products, and are converted into *combustibles.* The process, therefore, differs essentially from combustion. Thus phosphoric acid, a product of combustion, is capable of combining with an additional dose of phosphorus, and forming *phosphorous* acid, a combustible body. When this last acid is heated in contact with a supporter, it undergoes combustion; but it is only the additional dose of the combustible which burns, and the whole is converted into phosphoric acid. Hence we see that it is not the whole basis of these compounds which is combustible, but merely the additional dose. The compounds, therefore, formed by the union of a product and combustible, may be termed *partial combustibles;* indicating, by the name, that a part only of the base is capable of undergoing combustion. Since the products of combustion are capable of combining with oxygene, but never exhibit the phænomena of combustion, except when they are in the state of partial combustibles, combustible bodies must contain a substance which they lose in burning, and to which they owe their combustibility; for after they have lost it, they unite to oxygene *without* exhibiting the phænomena of combustion.

Though the products of combustion are not capable of supporting combustion, they not unfrequently part with their oxygene, just as supporters do, give it out to combustibles, and convert them into products; but, during this process, no heat nor light is ever evolved. Water, for instance, gives out its oxygene to iron, and converts it into the *black oxide,* a product. Thus we see that the oxygene of products is capable of converting combustibles into products, just as the oxygene of supporters; but during the combination of the last only, are heat and light emitted. The oxygene of supporters then contains something which the oxygene of products wants.

Whenever the whole of the oxygene is abstracted from products, the combustibility of their base is restored as completely as before combustion; but no substance is capable of abstracting the whole of the oxygene, except a *combustible,* or a *partial combustible.* Water, for instance, is a product of combustion, whose base is hydrogene. To restore the combustibility of the hydrogene, we have only to mix water with iron or zinc filings, and an acid: the metal is oxidised, and the hydrogene gas is evolved as combustible as ever. But no substance, except a combustible, is capable of separating hydrogene gas

from water, by combining with its oxygene. Thus we see that combustibles are capable of restoring the combustibility of the bases of products; but they themselves lose their combustibility by the process, and are converted into products. Combustibility, therefore, may be thrown at pleasure from one body to another.

From these facts it is obvious, that the products of combustion may be formed without combustion; but in these cases a new combustible is always evolved. The process is merely an interchange of combustibility; for the combustible is converted into a product only by means of a product. Both the oxygene and the base of the product, having undergone combustion, have lost something which is essential to combustion. The process is merely a double decomposition. The product yields its oxygene to the combustible, while at the same time the combustible gives out something to the base of the product; the combustibility of that base then is restored by the loss of its oxygene, and by the restoration of something which it receives from the other combustible thus converted into a product.

There is, indeed, another method of forming the products of combustion without actual combustion in certain cases; but the phænomena are much more complicated. This method is to expose them to the action of some of the supporters dissolved in water; especially nitric acid. Thus most of the metallic oxides may be formed without combustion by the action of that acid on the metals. But, in that case, a new supporter is always evolved, namely, nitrous gas; ammonia, a new combustible, is also usually formed; and, not unfrequently, the *product* is converted into a *partial supporter*.

No *supporter* can be produced by combustion, or by any equivalent process. As several of the supporters consist of oxygene combined with a base, it follows as a consequence, that oxygene may combine with a base without losing that ingredient which occasions combustion. The act of combination of oxygene with a base, therefore, is by no means the same with combustion. If we take a view of the different supporters, we shall find that all of them which can be obtained artificially are procured either from other supporters, or by the agency of electricity.

I. *Oxygene gas* may be procured from nitric acid, and from several of the partial supporters, as the black oxide of manganese, the red oxides of lead and of mercury. The action of heat is always necessary; but the process is very different from combustion.

II. *Air*, as far as is known at present, cannot be formed artificially. The gas, indeed, which comes over during part of the usual distillation of nitrate of potash and sulphuric acid, to obtain nitric acid, resembles air very closely. But it is obtained from a supporter.

III. *Nitrous oxide* has hitherto been only procured from nitrous gas and nitric acid (in nitrate of ammonia), both of which are supporters.

IV. *Nitrous gas* can only be procured by the decomposition of nitric acid, a supporter.

V. *Chlorine gas* can be formed by the action of muriatic acid on the black oxide of manganese, the red oxides of lead, iron, or mercury; all of which are partial supporters.

VI. *Nitric acid* is formed spontaneously upon the surface of the earth, by processes with which we are but imperfectly acquainted, but which certainly have no resemblance to combustion. Its oxygene is probably furnished by the *air*, which is a supporter; at least, it has been observed, that nitrogene and oxygene, at high temperatures, are capable of forming nitric acid.

This formation of nitric acid by means of electricity, has been considered as a combustion, but for what reason it is not easy to say: the substance acted upon is not a combustible with a supporter, but a supporter alone. Electricity is so far from being equivalent to combustion, that it sometimes acts in a manner diametrically opposite; *unburning*, if we may use the expression, a substance which has already undergone combustion, and converting a *product* into a *combustible* and a *supporter*. Thus it decomposes water, and converts it into oxygene and hydrogene gas; therefore it must be capable of supplying the substances which the oxygene and combustible lose when they combine by combustion, and form a product.

Several of the supporters and partial supporters are capable of combining with combustibles without undergoing decomposition, or exhibiting the phænomena of combustion. In this manner, the yellow oxide of gold combines with ammonia; the red oxide of mercury with oxalic acid; and oxymuriatic acid with ammonia. Thus also nitrate of potash may be combined, or, at least, intimately mixed with several combustible bodies, as in gunpowder, fulminating powder, &c. In all these compounds, the oxygene of the supporter and the combustible retain the ingredients which render them susceptible of combustion: hence the compound is still combustible. And in consequence of the intimate combination of the component parts, the least alteration is apt to destroy the equilibrium which subsists between them; the consequence is combustion, and the formation of a new compound. Hence these compounds burn with amazing facility, not only when heated, but when triturated, or struck smartly with a hammer. They have, therefore, received the name of *detonating* or *fulminating* bodies. Thus we have fulminating gold, fulminating mercury, fulminating powder, &c.

Such are the properties of the combustibles, the supporters, and the products; and such

the phænomena which they exhibit when made to act upon each other.

If we compare together the *supporters* and the *products*, we shall find that they resemble each other in many respects. Both of them contain oxygene, or other supporter, as an essential constituent part: both are capable of converting combustibles into products; and several of both combine with combustibles and with additional doses of oxygene. But they differ from each other in their effects on combustibles. The former only produce combustion; whereas the products convert combustibles into products without combustion. Now, as the ultimate change produced upon combustibles by both these sets of bodies is the same, and as the substance which combines with the combustibles is in both cases the same, oxygene, for instance, we must conclude that this oxygene in the supporters contains something which the oxygene of the products wants, something which separates during the passage of the oxygene from the product to the combustible, and occasions the combustion, or emission of fire, which accompanies this passage. The oxygene of supporters then contains some ingredient which the oxygene of products wants. Many circumstances concur to render it probable that this ingredient is *caloric*.

The *combustibles* and the *products* also resemble each other. Both of them contain the same or a similar base; both frequently combine with combustibles, and likewise with oxygene; but they differ essentially in the phænomena which accompany their combination with oxygene. In the one case, *fire is emitted*; in the other, not. If we recollect that no substance but a combustible is capable of restoring combustibility to the base of a product, and that at its doing so it always loses its own combustibility; and, if we recollect farther, that the base of a product does not exhibit the phænomena of combustion, even when it combines with oxygene, we cannot avoid concluding, that all combustibles contain an ingredient which they lose when converted into products, and that this loss contributes to the fire which make its appearance during the conversion. Many circumstances contribute to render it probable that this ingredient is *light*.

If we suppose that the oxygene of supporters contains caloric as an essential ingredient, and that light is a component part of all combustibles, the phænomena of combustion above enumerated, numerous and intricate as they are, admit of an easy and obvious explanation. The component parts of the oxygene of supporters are two; namely, 1. a base, 2. caloric. The component parts of combustibles are likewise two; namely, 1. a base, 2. light. During combustion, the base of the oxygene combines with the base of the combustible, and forms the product; while, at the same time, the caloric of the oxygene combines with the light of the combustible, and the compound flies off in the form of fire. Thus combustion is a double decomposition; the oxygene and combustible divide themselves each into two portions, which combine in pairs; the one compound is the *product*, and the other the *fire*, which escapes.

Hence the reason that the oxygene of products is unfit for combustion. It wants its caloric. Hence the reason that combustion does not take place when oxygene combines with products, or with the base or supporters. These bodies contain no light. The caloric of the oxygene of course is not separated, and no fire appears. And this oxygene, still retaining its caloric, is capable of producing combustion whenever a body is presented which contains light, and whose base has an affinity for oxygene. Hence also the reason why a combustible alone can restore combustibility to the base of a product. In all such cases, a double decomposition takes place. The oxygene of the product combines with the base of the combustible, while the light of the combustible combines with the base of the product.

But the application of this theory to all the different phænomena described above, is so obvious, that it is needless to give any more examples. Let us rather enquire, with the author, into the evidences which can be brought forward in its support.

As caloric and light are always emitted during combustion, it follows that they must have previously existed in the combustible, the supporter, or in both.

That the oxygene of the supporters contains either one or both of these substances, follows incontrovertibly from a fact already mentioned, namely, that the oxygene of products will not support combustion, while that of supporters will. Hence the oxygene of supporters must contain something which the oxygene of the products wants, and this something must be caloric, or light, or both.

That the oxygene of some of the supporters at least contains caloric, as an ingredient, has been proved, in a satisfactory manner, by the experiments of Crawford, Lavoisier, and La Place. Thus the temperature of hot-blooded animals is maintained by the decomposition of *air*. Now if the oxygene of one supporter contains caloric, the same ingredient must exist in the oxygene of every supporter, because all of them are obviously in the same state. Hence we conclude that the oxygene of every supporter contains caloric as an essential ingredient.

The light emitted during combustion must either proceed from the combustible or the supporter. That it proceeds from the combustible must appear pretty obvious, if we recollect that the colour of the light emitted during combustion varies, and that this variation usually depends, not upon the supporter, but upon the combustible. Thus charcoal burns with a red flame, sulphur with a blue or violet, zinc with a greenish white, &c.

The formation of combustibles in plants,

obviously requires the presence and agency of light. The leaves of plants emit oxygene gas, when exposed to the sun's rays, but never in the shade, or in the dark.

Besides vegetation, we are acquainted with two other methods of *unburning* products, or of converting them into products and combustibles, by exposing them, in certain circumstances, to the agency of *fire*, or of *electricity*. The oxides of gold, mercury, &c. when heated to redness, are decomposed, oxygene gas is emitted, and the pure metal remains behind. In this case the necessary caloric and light must be furnished by the fire; a circumstance which explains why such reductions always require a red heat. When carbonic acid is made to pass repeatedly over red-hot charcoal, it combines with a portion of charcoal, and is converted into gaseous oxide of carbon. If this gas be a combustible oxide, the base of the carbonic acid and its oxygene must have been supplied with light and caloric from the fire; but if it be a *partial combustible*, it is merely a compound of carbonic acid and charcoal: which of the two it is, remains still to be ascertained.

Electricity decomposes water, and converts it into oxygene gas and hydrogene gas; it must, therefore, supply the heat and the light which these bodies lost when converted into a product.

These facts, together with the exact correspondence of the theory given above with the phænomena of combustion, render it so probable, that Dr. Thomson has ventured to propose it as an additional step towards a full explanation of the theory of combustion. Every additional experiment has served to confirm it more and more. It even throws light upon the curious experiments of the accension of metals with sulphur, which succeed *in vacuo*, under mercury, in nitrogene gas, &c.

Dr. Thomson has noticed, that the same emission of caloric and light, or of *fire*, takes place when melted sulphur is made to combine with potash, or with lime, in a crucible or glass tube, and likewise when melted phosphorus is made to combine with lime heated to redness. He supposes that, in all probability, barytes and strontia exhibit the same phænomenon when combined with melted sulphur or phosphorus; and perhaps some of the metals when combined with phosphorus.

The phænomena Dr. Thomson explains thus:—The sulphur and phosphorus are in the melted state, and therefore contain caloric as an ingredient; the alkalies, earths, and metals which produce the phænomenon in question, contain light as an essential ingredient. The sulphur, or phosphorus, combines with the base of the metal, earth, or alkali; while, at the same time, the *caloric*, to which the sulphur or phosphorus owed its fluidity, combines with the *light* of the metal, earth, or alkali; and the compound flies off under the form of *fire*.

Thus the process is exactly the same with combustion, excepting as far as regards the product. The melted sulphur, or phosphorus, acts the part of the *supporter*, while the metal, earth, or alkali, occupies the place of the *combustible*. The first furnishes caloric, the second light, while the base of each combines together. Hence we see that the base of sulphurets and phosphurets resembles the base of products in being destitute of light; the formation of these bodies exhibiting the separation of fire like *combustion*, but the product differing from a product of combustion in being destitute of oxygene, Dr. Thomson distinguishes the process by the title of *semi-combustion*; indicating by the term, that it possesses one half of the characteristic marks of combustion, but is destitute of the other half.

The only part of this theory which requires proof is, that light is a component part of the earths and alkalies. But as potash and lime are the only bodies of that nature, which we are certain to be capable of exhibiting the phænomena of semi-combustion, the proofs must of necessity be confined to them. That *lime* contains light as a component part, has been long known. Meyer and Pelletier observed long ago, that when water is poured upon lime, not only heat but light is emitted. Light is emitted also abundantly, when sulphuric acid is poured upon magnesia, or upon lime, potash, or soda, freed from the water of crystallisation. In all these cases, a *semi-combustion* takes place. The water and the acid being solidified, give out *caloric*, while the lime or potash gives out *light*.

That lime, during its burning, combines with light, and that light is a component part of lime, is demonstrated by the following experiment, for which we are indebted to Scheele:—

Fluor spar (fluate of lime) has the property of phosphorescing strongly when heated, but the experiment does not succeed twice with the same specimen. After it has been once heated sufficiently, no subsequent heat will cause it to phosphoresce. Now phosphorescence is merely the emission of light; light of course is a component part of fluor spar, and heat has the property of separating it. But the phosphorescing quality of the spar may be again recovered to it, or, which is the same thing, the light which the spar had lost may be restored by the following process:—

Decompose the fluate of lime by sulphuric acid, and preserve the fluoric acid separate. Boil the sulphate of lime thus formed, with a sufficient quantity of carbonate of soda; a double decomposition takes place; sulphate of soda remains in solution, and carbonate of lime precipitates. Ignite this precipitate in a crucible, till it is reduced to lime, and combine it with the fluoric acid to which it was formerly united. The fluor spar, thus regenerated, phosphoresces as at first. Hence the lime, during its ignition, must have combined with light.

That potash contains light, may be proved in the same manner as the existence of that body in lime. Now as potash is deprived of its carbonic acid by lime, the Doctor supposes that the process must be a double decomposition; namely, that the base of the lime combines with carbonic acid, while its light combines with the potash.

These remarks on semi-combustion might easily be much enlarged upon; for it is obvious, that whenever a liquid combines with a solid containing light, and the product is a solid body, something analogous to semi-combustion must take place.

COMEDO. (*o, onis.* m.; a glutton.)

1. A glutton.

2. The comedones of old writers are a sort of worm which eats into the skin and devours the flesh.

CO'MFREY. See *Symphytum.*

COMI'SDI. The gum-arabic.

COMI'STE. (This name, now not used, arose from the frequency of persons being seized with this disorder, while in the assemblies called Comitia.) Epilepsy.

COMITI'SSA. (*a, æ.* f.; a countess.) Some preparations are distinguished by this name; as *Pulvis Comitissæ de Cantia*, the Countess of Kent's powder, and the cinchona was called *Pulvis Comitissæ.*

COMMAGE'NUM. (From *Commagene*, a place in Syria, whence it was brought.) Syrian ointment, mentioned by Galen.

COMMANDUCA'TIO. (From *commanduco*, to eat.) The act of mastication, or chewing.

COMMA'NSUM. (From *commando*, to eat.) A masticatory. A medicine put into the mouth and chewed, to promote a discharge of phlegm or saliva.

COMMENDATO'RIUS. (From *commendo*, to recommend.) An epithet of the traumatic balsam, *tinctura Benzoes composita*, from its singular virtues and usefulness.

CO'MMI. Gum. When alone it signifies gum-arabic. The κομμι λευκον, mentioned by Hippocrates in his De Morb. Mulieb., is gum-arabic.

COMMINUTE. (*Comminutus*, from *comminuo*, to break down.) Broken into pieces: applied to fractures.

COMMISSU'RA. (*a, æ.* f.; from *committo*, to join together.) A suture, juncture, or joint. A term applied, in *Anatomy*, to the corners of the lips, where they meet together; and also to certain parts of the brain, which go across and join one hemisphere to the other.

COMMISSURA ANTERIOR CEREBRI. The white nerve-like substance which crosses the anterior part of the third ventricle of the brain, immediately above the infundibulum, and between the anterior crura of the fornix; uniting one hemisphere of the brain with the other.

COMMISSURA MAGNA CEREBRI. The *corpus callosum* of the brain is so termed by some writers.

COMMISSURA POSTERIOR CEREBRI. A white nerve-like substance, which passes from one hemisphere of the brain across to the other, immediately over the opening of the aqueduct of Sylvius, in the posterior part of the third ventricle of the brain, and above the *corpora quadrigemina.*

COMMORANT. (*Commorans*, from *commoror*, to be in a place for a time.) That which remains a time in a place: applied to some of the fluids, which, though they are moving or circulating, remain a time in their places; as the oil of the adipose membrane, and the male semen.

COMMU'NICANT. (From *communico*, to make partake.) A term applied by Bellini, to fevers of two kinds afflicting the same person, wherein as one goes off the other immediately succeeds.

COMPACTUS. Compact; firm: in general use, and applied to the texture of animal and vegetable substances.

COMPA'GES. (*es, is.* f.; from *compingo*, to put together.) A suture or joint. A commissure.

COMPA'RATIVE. *Comparativus.* That which illustrates by comparison. The anatomy or dissection of animals and vegetables is called comparative, with a view to distinguish it from, and compare the result with, human anatomy. See *Anatomy.*

COMPEBA. See *Piper cubeba.*

COMPLETE. See *Perfect.*

COMPLETION. A term used by the ancient writers in various acceptations; but latterly it signifies only the same as *Plethora.*

COMPLE'XUS. (From *complector*, to comprise.) *Complexus seu biventer cervicis* of Albinus. A muscle situated on the back part of the neck, that draws the head backwards, and to one side: and when both act, they draw the head directly backward. It arises from the transverse processes of the seven superior vertebræ of the back, and four inferior of the neck, by as many distinct tendinous origins; in its ascent, it receives a fleshy slip from the spinous process of the first vertebra of the back: from these different origins it runs upwards, and is every where intermixed with tendinous fibres. It is inserted, tendinous and fleshy, into the inferior edge of the protuberance in the middle of the os occipitis, and into a part of the curved line that runs forwards from that protuberance. It draws the head backwards.

COMPLEXUS MINOR. See *Trachelo-mastoideus.*

COMPOSITUS. Compound. The result or effect of a composition of different things; or that which arises from them. It stands opposed to simple. In *Botany*, applied to leaves and flowers. See *Flos*, and *Folium.*

COMPOUND. See *Compositus.*

Compound affinity. See *Attraction.*

COMPRESS. (*Compressus, i.* m.; from *comprimo*, to press together.) Soft linen, lint, or other substances, folded together into

a sort of pad, for the purpose of being placed over parts which require a regular pressure.

COMPRE'SSION. (*Compressio, onis.* f.; from *comprimo*, to press together.) A diseased state of the body, or of a part, the effect of something pressing upon it. The term is generally applied to the brain. Compression of the brain should be distinguished from concussion and inflammation. When the brain is compressed, either by bone, extravasated blood, or any other fluid, there is a general insensibility, the eyes are half open, the pupils dilated and motionless, even when a candle is brought near the eye, the retina is insensible, the limbs relaxed, the breathings stertorous, the pulse slow, and, according to Abernethy, less subject to intermission than in cases of concussion. Nor is the patient ever sick when the pressure on the brain and the general insensibility are considerable; for the very action of vomiting betrays an irritability in the stomach and œsophagus.

COMPRE'SSOR. (From *comprimo*, to press together.) A name applied to those muscles which press together the parts on which they act.

Compressor naris. *Rinæus vel nasalis*, of Douglas. *Transversalis vel myrtiformis*, of Winslow. *Dilatores alarum nasi*, of Cowper. A muscle of the nose, that compresses the alæ towards the septum nasi, particularly when we want to smell acutely. It also corrugates the nose, and assists in expressing certain passions. It arises, by a narrow beginning, from the root of the ala nasi externally, and spreads into a number of thin, separate fibres, which run up along the cartilage in an oblique manner towards the back of the nose, where it joins with its fellow, and is inserted into the narrow extremity of the os nasi, and nasal process of the superior maxillary bone.

COMPRESSUS. Compressed; flattened laterally: applied to leaves. See *Leaf*.

COMPTONITE. A new mineral, first brought into this country by Lord Compton, and found in drusy cavities, in ejected masses, on Mount Vesuvius.

Compu'nctio. (From *compungo*, to prick.) A puncture.

CONA'RIUM. (*um, ii.* n.; from κωνος: so named from its conical shape.) A cone. See *Pineal gland*.

Concau'sa. (From *con*, with, and *causa*, a cause.) A cause which co-operates with another in the production of a disease.

CONCAVUS. Hollow; depressed in the middle. Applied to leaves, petals, &c. depressed in their centre, owing, as it were, to a tightness in some part of the circumference; as in *Cyanus nelumbo*, and the petals of the *Galanthus nivalis*.

CONCEIT. See *Pathemata animi*.

CONCENTRA'TION. (*Concentratio, onis.* f.; from *con*, and *centrum*, a centre.) The volatilising of part of the water of fluids, in order to improve their strength. The matter to be concentrated, therefore, must be of superior fixity to water. This operation is performed on some acids, particularly the sulphuric and phosphoric. It is also employed in solutions of alkalies and neutral salts.

CONCENTRIC. *Concentricus*. A concentric bulb, is one of the laminated kind, well illustrated in the common onion, *Allium cepa*.

CONCEPTACULUM. An old name for what is now called, in botany, receptaculum.

CONCE'PTION. (*Conceptio, onis.* f.; from *concipio*, to conceive.) The impregnation of the ovulum in the female ovarium, by the subtile prolific aura of the semen virile. In order to have a fruitful coition, it is necessary that the semen be propelled into the uterus, or vagina, so that its fecundating vapour shall be conveyed through the Fallopian tube to the ovarium; it is also necessary that there be a certain state of the ovarium of the female in order to impregnate it; which is, that the ovum shall be mature, and embraced by the fimbriæ of the Fallopian tube, to convey that vivifying principle to the ovum. See *Generation*.

CO'NCHA. (*a, æ.* f. Κογχη, a liquid measure among the Athenians.) A shell. Applied, 1. In *Anatomy*, from their resemblance to several parts of the body; as the hollow of the ear, the spongy bones of the nose, &c.

2. In *Natural History*, the name of a genus of plants.

Concha auriculæ. See *Auricula*.

Concha auris. The outer ear. See *Auricula*.

Concha margaritifera. See *Margarita*.

Conchæ narium. The turbinated portion of the ethmoid bone, and the inferior spongy bones of the nose, which are covered by the Schneiderian membrane, are so termed.

CONCHOIDES. (From κογχη, a shell, and ειδος, resemblance.) Conchoid: shell-like.

CO'NCHUS. (*us, i.* m.; from κογχη, a shell: so named, from their likeness to a shell.) 1. The cranium.

2. The cavity of the eye.

Conci'dens. (From *concido*, to decay.) 1. A decrease of bulk in the whole or any part of the body.

2. A diminution of a tumour.

Concoagula'tio. (From *con*, and *coagulo*, to coagulate together.) The coagulation or crystallisation of different salts, first dissolved together in the same fluid.

CONCO'CTION. (*Concoctio, onis.* f.; from *concoquo*, to digest.) 1. Concoction; digestion. This term was formerly very generally used to express that operation of nature upon morbid matter which renders it fit to be separated from the healthy fluid.

2. The alteration which the food undergoes in the primæ viæ.

Concrema'tio. (From *con*, and *cremo*, to burn together.) Calcination.

CONCRE'TION. (*Concretio*; from *concresco*, to grow together.) 1. The growing

together of parts which, in a natural state, are separate; as the fingers and toes.

2. The condensation of any fluid or other substance into a more solid consistence: hence bilious and urinary concretions.

Concretion, biliary. See *Gall-stone.*

Concretion, intestinal. See *Enterolithus.*

CONCU'RSUS. (From *concurro,* to meet together.) The collection of symptoms which constitute and distinguish the particular disease.

CONCU'SSION. (From *concutio,* to shake together.) *Concussio cerebri.* Concussion of the brain. Various alarming symptoms, followed sometimes by the most fatal consequences, are found to attend great violence offered to the head; and upon the strictest examination, both of the living and the dead, neither fissure, fracture, nor extravasation of any kind can be discovered. The same symptoms, and the same events are met with, when the head has received no injury at all *ab externo,* but has only been violently shaken; nay, when only the body, or general frame, has seemed to have sustained the violence. The symptoms attending a concussion, are generally in proportion to the degree of violence which the brain itself has sustained; and which, indeed, is cognisable only by the symptoms. If the concussion be very great, all sense and power of motion are immediately abolished, and death follows soon; but between this degree and that slight confusion (or stunning, as it is called,) which attends most violences done to the head, there are many shades. The following is Abernethy's description of the symptoms of concussion, which he is of opinion may be divided into three stages:—

The first is that state of insensibility and derangement of the bodily powers which immediately succeeds the accident. While it lasts, the patient scarcely feels any injury that may be inflicted on him. His breathing is difficult, but in general without stertor; his pulse intermitting, and his extremities cold. But such a state cannot last long; it goes off gradually, and is succeeded by another, which is considered as the *second* stage of concussion. In this, the pulse and respiration become better; and though not regularly performed, are sufficient to maintain life, and to diffuse warmth over the extreme parts of the body. The feeling of the patient is now so far restored, that he is sensible of his skin being pinched; but he lies stupid and inattentive to slight external impressions. As the effects of concussion diminish, he becomes capable of replying to questions put to him in a loud tone of voice, especially when they refer to his chief suffering at the time, as pain in the head, &c.; otherwise he answers incoherently, and as if his attention was occupied by something else. As long as the stupor remains, the inflammation of the brain seems to be moderate; but as the former abates, the latter seldom fails to increase; and this constitutes the *third* stage, which is the most important of the series of effects proceeding from a concussion.

These several stages vary considerably in their degree and duration; but more or less of each will be found to take place in every instance where the brain has been violently shaken. Whether they bear any certain proportion to each other or not, is not known; indeed this will depend upon such a variety of circumstances in the constitution, the injury, and the after-treatment, that it must be difficult to determine.

To distinguish between an extravasation and a concussion by the symptoms only, Mr. Pott says, is frequently a very difficult matter; sometimes an impossible one. The similarity of the effects, in some cases, and the very small space of time which may intervene between the going off of the one and accession of the other, render this a very nice exercise of the judgment. The first stunning or deprivation of sense, whether total or partial, may be from either, and no man can tell from which; but when these first symptoms have been removed, or have spontaneously disappeared, if such patient is again oppressed with drowsiness, or stupidity, or total or partial loss of sense, it then becomes probable that the first complaints were from concussion, and that the latter are from extravasation; and the greater the distance of time between the two, the greater is the probability not only that an extravasation is the cause, but that the extravasation is of the limpid kind, made gradatim, and within the brain.

Whoever seriously reflects on the nature of these two causes of evil within the cranium, and considers them as liable to frequent combination in the same subject, and at the same time considers that, in many instances, no degree of information can be obtained from the only person capable of giving it (the patient), will immediately be sensible how very difficult a part a practitioner has to act in many of these cases, and how very unjust it must be to call that ignorance which is only a just diffidence arising from the obscurity of the subject, and the impossibility of attaining materials to form a clear judgment.

Mr. Abernethy observes, that in cases of simple concussion, the insensibility is not so great as where compression exists, the pupils are more contracted, the muscles less relaxed, little or no stertor attends, but the pulse is very intermitting, and in slight cases there is often considerable sickness.

Very different modes of treating these accidents have been practised, and no doubt the same means should not be pursued indiscriminately. Much must depend on the state of the patient when he received the injury, the degree of this, the time which has elapsed since, and other circumstances. Abernethy considers, that in the first stage little should be done; that the stimulants often employed may be even injurious; but more especially so in the second stage, increasing the tendency to inflammation; and where this has come on,

that the antiphlogistic plan must be actively pursued. However, a moderate abstraction of blood, general or topical, will be commonly proper at first, where the habit will allow it, as congestion may be suspected, and to obviate inflammation, especially where the person was intoxicated at the time of the accident; and the effect of this measure may influence the subsequent treatment. If the pulse rose after it, and the patient became more sensible, we should be led to pursue the evacuating plan, taking perhaps more blood, exhibiting active cathartics, as the bowels will be found very torpid, applying cold lotions to the head, &c. These means, however, will be especially called for, when marks of inflammation appear. Sometimes brisk emetics have been very beneficial, as sulphate of zinc, &c.: they are particularly recommended, where the person was under the influence of anger, or the stomach full, when the accident happened; but they are liable to objection, where there are marks of congestion, or increased action in the vessels of the head. If bleeding should lower the pulse, and render the patient worse, evacuations must not be pursued; it may be better generally to wait the gradual return of sensibility, unless the torpor be alarming, like a state of syncope: in which case, or if it continue very long, stimulants appear justified, as ammonia, or others of transient operation, with a blister to the head, to restore some degree of sensibility. If in the sequel marks of irritation appear, as spasms or convulsions, opium joined with antimony, or in the form of Dover's powder, will probably be useful, the necessary evacuations being premised, and the warm bath. In all cases the head should be kept quiet; as the patient is convalescent, tonics and the shower-bath may be employed with advantage; and it will be particularly necessary to avoid great bodily exertion, stimulating liquors, &c. Should paralytic symptoms remain, stimulants general or local may be required. Where alarming symptoms follow an injury to the head, extravasation may be suspected: and the operation of trepanning, skilfully performed, will do no harm to the patient, but may materially relieve, even by the loss of blood attending.

CONDENSA'TION. (*Condensatio;* from *condenso,* to make thick.) A thickening of any fluid.

CONDIME'NTUM. (*um, i.* n.; from *condio,* to preserve, or season.) A condiment, preserve, or sweetmeat.

CONDU'CTIO. (From *conduco,* to draw along.) In Cœlius Aurelianus, it is a spasm, or convulsion, drawing the muscles out of their proper positions.

CONDU'CTOR. (*or, oris.* m.; from *conduco,* to lead, or guide.) A surgical instrument, the use of which is to direct the knife in certain operations. It is more commonly called a director.

CONDUPLICATUS. Folded, or doubled together. Applied to leaves when the margins are clapped flatly together; as in *Roscœa purpurea,* and the bases of sword-shaped leaves. See *Leaf.*

CO'NDYLE. (*Condylus;* from κονδυ, an ancient cup, shaped like a joint.) A round eminence of a bone in any of the joints.

CONDYLO'MA. (*a, atis.* n.; from κονδυλος, a tubercle, or knot.) A soft, wart-like excrescence, that appears about the anus and pudendum of both sexes. There are several species of condylomata, which have received names from their appearances; as *ficus, crystæ, thymus,* from their resemblance to a fig, &c.

CONE. See *Strobilus.*

CONESHAPED. See *Conicus.*

CONEI'ON. (From κωναν, to turn round; thus named, because it produces a vertigo in those who take it inwardly.) In Hippocrates it imports hemlock. See *Conium.*

CONE'SSI CORTEX. See *Nerium.*

CONFE'CTION. (*Confectio, onis.* f.; from *conficio,* to make up.) A confection. In general it means any thing made up with sugar. The term, in the last London Pharmacopœia, includes those articles which were formerly called electuaries and conserves, between which there do not appear to be sufficient grounds to make a distinction.

CONFECTIO AMYGDALARUM. Confection of almonds. Take of sweet almonds, an ounce; Acacia gum powdered, a drachm; refined sugar, half an ounce. The almonds having been previously macerated in water, and their external coat removed, beat the whole together, until they are thoroughly incorporated. It has been objected to the almond mixture, which is an article of very general use, that it requires considerable time for its extemporaneous preparation, and that it spoils and cannot be kept when it is made. This will be obviated by the present form, which does keep for a sufficient length of time, and rubs down into the mixture immediately.

CONFECTIO AROMATICA. This preparation was formerly called *Confectio cardiaca. Confectio Raleighana.* Take of cinnamon bark, nutmegs, of each two ounces; cloves, an ounce; cardamom seeds, half an ounce; saffron dried, two ounces; prepared shells, sixteen ounces; refined sugar powdered, two pounds; water, a pint. Reduce the dry substances, mixed together, to very fine powder; then add the water gradually, and mix the whole, until it is incorporated. This preparation is now much simplified by the London college. It is an excellent medicine, possessing stimulant, antispasmodic, and astringent virtues; and is exhibited with these views to children and adults, in a vast variety of diseases, mixed with other medicines. It may be given in doses of 10 grs. to a drachm.

CONFECTIO AURANTIORUM. *Conserva corticis exterioris aurantii hispalensis. Conserva flavedinis corticum aurantiorum.* Take of fresh external rind of oranges, separated by rasping, a pound; refined sugar, three pounds.

Bruise the rind with a wooden pestle, in a stone mortar; then, after adding the sugar, bruise it again, until the whole is thoroughly incorporated. This is well calculated to form the basis of a tonic and stomachic confection, and may be given alone in doses of from two to five drachms, twice or three times a day.

Confectio cardiaca. See *Confectio aromatica.*

Confectio cassiæ. *Electuarium cassiæ. Electuarium e cassiâ.* Confection of cassia. Take of fresh cassia pulp, half a pound; manna, two ounces; tamarind pulp, an ounce; syrup of roses, half a pint. Bruise the manna; melt it in the syrup by a water-bath; then mix in the pulps, and evaporate down to a proper consistence. This is a very elegant, pleasant, and mild aperient for the feeble, and for children. Dose from two drachms to an ounce.

Confectio damocratis. See *Mithridatium.*

Confectio opii. *Confectio opiata. Philonium Londinense. Philonium Romanum.* Confection of opium. Take of hard opium powdered, six drachms; long pepper, an ounce; ginger root, two ounces; caraway-seeds, three ounces; syrup, a pint. Rub together the opium and the syrup previously heated; then add the remaining articles reduced to powder, and mix. To the credit of modern pharmacy, this is the only one that remains of all those complicated and confused preparations called mithridate, theriaca, &c.; it more nearly approximates, in its composition, to the philonium than any other, and may be considered as an effectual substitute for them in practice. This very warm and stimulating confection is admirably calculated to relieve diarrhœa, or spasms of the stomach and bowels, and is frequently ordered in doses of from 10 grs. to half a drachm. About 36 grains contain one of opium.

Confectio piperis nigri. Confection of black pepper. Take of black pepper, elecampane, of each a pound; fennel seeds, three pounds; honey, refined sugar, of each two pounds. Rub the dry ingredients together, so as to reduce them to a very fine powder; then, having added the honey, rub them again so that the whole may incorporate. This confection is given internally against a relaxed condition of the extremity of the rectum, producing partial prolapse, and against that piley state which results from weakness. A similar compound has been long celebrated and sold under the name of Ward's paste.

Confectio rosæ caninæ. *Conserva cynosbati. Conserva fructus cynosbati.* Conserve of hips. Confection of dog-rose. Take of dog-rose pulp, a pound; refined sugar powdered, twenty ounces. Expose the pulp in a water-bath to a gentle heat; then add the sugar gradually, and rub them together until they are thoroughly incorporated. This preparation is cooling and astringent; it is seldom given alone, but mostly joined to some other medicine, in the form of linctus, or electuary.

Confectio rosæ gallicæ. *Conserva rosæ. Conserva rosarum rubrarum.* Conserve of red rose. Take of the petals of the red rose, before it is expanded, and without the claws, a pound; refined sugar, three pounds. Bruise the petals in a stone mortar; then, having added the sugar, beat them again together, until they are thoroughly incorporated. This is an excellent sub-astringent composition. Rubbed down with water, it forms an excellent drink, with some lemon juice, in hæmorrhagic complaints; it may also be given with vitriolated zinc, in the form of an electuary.

Confectio rutæ. *Electuarium e baccis lauri.* Confection of rue. Take of rue leaves dried, caraway seeds, bay berries, of each an ounce and a half; sagapenum, half an ounce; black pepper, two drachms; clarified honey, sixteen ounces. Rub the dry articles together, into a very fine powder; then add the honey, and mix the whole. Its use is confined to clysters.

Confectio scammoneæ. *Electuarium scammonii. Electuarium e scammonio. Electuarium caryocostinum.* Confection of scammony. Take of scammony gum resin powdered, an ounce and a half; cloves bruised, ginger root powdered, of each six drachms; oil of caraway, half a drachm; syrup of roses, as much as is sufficient. Rub the dry articles together, into very fine powder; next rub them again whilst the syrup is gradually added; then add the oil of caraway, and mix the whole well together. This is a strong stimulating cathartic, and calculated to remove worms from the primæ viæ, with which view it is mostly exhibited. Dose from ʒss. to ʒj.

Confectio sennæ. *Electuarium sennæ. Electuarium lenitivum.* Confection of senna. Take of senna leaves, eight ounces; figs, a pound; tamarind pulp, pulp of prunes, cassia pulp, of each half a pound; coriander seeds, four ounces; liquorice root, three ounces; refined sugar, two pounds and a half. Powder the senna leaves with the coriander seeds, and separate, by sifting ten ounces of the mixed powder. Boil the remainder with the figs and the liquorice root, in four pints of water, until it be reduced to half; then press out and strain the liquor. Evaporate the liquor, until a pint and a half only remains of the whole; then add the sugar, to make syrup. Lastly, mix the pulps gradually with the syrup, and, having added the sifted powder, mix the whole together. This is a mild and elegant aperient, well adapted for pregnant women, and those whose bowels are easily moved. Dose, ʒss. to ℥ss.

CONFERTUS. Clustered, or crowded together: applied to leaves. See *Leaf.*

CONFE'RVA. (*a, æ.* f.; from *conferveo,* to knit together.) 1. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Algæ.*

2. A kind of moss: named from its use formerly in healing broken bones.

Conferva dichotoma. See *Fucus helminthocorton.*

CONFERVA HELMINTHOCORTOS. See *Fucus helminthocorton.*

CONFERVA RIVALIS. This indigenous plant, called Crow silk and Hairy river weed,—*Conferva; filamentis simplicissimus æqualibus longissimus,* of Linnæus,—is green and fibrous, and found in stagnant waters. It has a marshy smell, and is used as a vermifuge by the country people. It has also been recommended in cases of spasmodic asthma, phthisis, &c. on account of the great quantity of vital air it contains. It is difficult to burn; adheres firmly to glass or paper; and was used by the ancients to bind up broken limbs, keeping it constantly moist.

CONFERVA RUPESTRIS. *Muscus marinus.* Sea-moss. This is said to be refrigerant, and was applied externally by the ancients in gout.

CONFIRMA'NS. (From *con,* and *firmo,* to strengthen.) 1. Restorative.

2. A medicine which fastens the teeth in their sockets.

CONFLUENT. *Confluens.* Running together. 1. In *Pathology,* applied to eruptions. See *Variola.*

2. In *Botany,* to leaves which run together at their base.

CONFLU'XION. *Confluxio.* Much used by Hippocrates, and his interpreter Galen, from a notion that parts at a distance have mutual consent with one another, and that they are all perspirable by many subtle streams. Paracelsus, according to his way, expressed the former by confederation.

CONFORMA'TION. (*Conformatio, onis.* f.; from *conformo,* to shape or fashion.) The natural shape and form of any part.

CONFORTA'NS. (From *conforto,* to strengthen.) Cordial and strengthening.

CONFORTATI'VUS. The same.

CONFU'SIO. (From *confundo,* to mix together.) A confusion, or disorder in the eyes, proceeding from a rupture of the membranes which include the humours, by which means they are all confounded together.

CONGELA'TION. (*Congelatio, onis.* f.; from *congelo,* to freeze.) That change of liquid bodies which takes place when they pass to a solid state, by losing the caloric which kept them in a state of fluidity.

CONGELATI'VUS. (From *congelo,* to congeal.) A medicine that inspissates humours, and stops fluxions and rheums.

CONGELA'TUS. (From *congelo,* to freeze.) *Congelaticus.* A person afflicted with a catalepsy is so called, because in it all sensation seems to be taken away.

CO'NGENER. (*er, eris.* adj.; from *con,* and *genus,* kind.) Of the same kind; concurring in the same action. It is usually said of the muscles.

CONGE'STION. (*Congestio, onis.* f.; from *congero,* to amass.) An unnatural collection of blood, mucus, bile, or other things in their proper vessels or places: thus we say a congestion of blood in the vessels, when they are over distended, and the motion is slow; a congestion of bile in the biliary ducts, &c.

CONGESTUS. Heaped together.

CONGLOBA'TE. (*Conglobatus;* from *conglobo,* to gather into a ball.) 1. A term applied to a gland, *Glandula conglobata,* which is formed of a contortion of lymphatic vessels, connected together by cellular structure, having neither a cavity nor any excretory duct: such are the mesenteric, inguinal, axillary glands, &c. See *Gland.*

2. A conglobate *flower,* is a compound one growing in the form of a sphere or globe.

CONGLOMERATE. (*Conglomeratus;* from *conglomero,* to heap upon one.) 1. In *Anatomy,* applied to a gland, *Glandula conglomerata,* which consists of a number of smaller glomerate glands, the excretory ducts of which all unite into one common duct: such are the salival, parotid glands, &c.

2. In *Botany,* applied to flowers which are closely compacted together on a footstalk, to which they are irregularly, but closely connected. See *Panicula.*

CONGLOMERITE. A compound mineral mass, in which angular fragments of rocks are imbedded. The Italian term *breccia,* has the same meaning. In pudding stone, the imbedded fragments are round, bearing the marks of having been polished by attrition.

CONGLUTINA'NS. (From *conglutino,* to glue together.) Conglutinating: applied to medicines which unite parts disjoined by accident.

CONICUS. Conical: applied to leaves, nectaries, receptacles, &c.—Nectarium conicum, in the *Utricularia foliosa,* and the receptacle of the daisy, *Anthemis arvensis, cotula,* and *Matricaria chamomilla.*

CONIFERÆ. Cone-bearing plants. The name of an order in Linnæus's Fragments of a Natural Method.

CONIFERUS. (From *conus,* a cone, and *fero,* to bear.) Coniferous: cone-bearing.

CO'NIS. (Κονις. *is, eos.* f.; dust.) Dust; fine powder; ashes; a nit in the hair; scurf from the head; and sometimes it signifies lime.

CONITE. 1. An ash or greenish grey-coloured mineral, which becomes brown on exposure to air. It is found in Saxony and Iceland.

2. Dr. Maccullock has given this name to a pulverulent mineral, as fusible as glass into a transparent bead, which he found in the trap hills of Kilpatrick, and the isle of Sky.

CONI'UM. (*um, ii.* n.: from κονια, dust, according to Linnæus; or from κωναω, *circumago,* on account of its inebriating and poisonous quality.) Hemlock.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

2. The pharmacopœial name of the officinal hemlock. See *Conium maculatum.*

CONIUM MACULATUM. The systematic name for the *conium* and *cicuta* of the pharmacopœias. Hemlock. It is called by some *camaran;* by others, *abiotos;* and, according to Erotian, *cambeion* is an old Sicilian word for cicuta.

Cicuta major fœtida. Conium — seminibus striatis, of Linnæus. Hemlock is found in every part of England, and is distinguished from those plants which bear some resemblance to it, by the spotted stem. It is generally believed to be a very active poison. In a very moderate dose it is apt to occasion sickness and vertigo; in a larger quantity it produces anxiety, cardialgia, vomiting, convulsions, coma, and death. Baron Stoerck was the first who brought hemlock into repute as a medicine of extraordinary efficacy: and although we have not in this country any direct facts, like those mentioned by Stoerck, proving that inveterate scirrhuses, cancers, ulcers, and many other diseases hitherto deemed irremediable, are to be completely cured by the cicuta; we have, however, the testimonies of several eminent physicians, showing that some complaints which had resisted other powerful remedies, yielded to hemlock; and that even some disorders, which, if not really cancerous, were at least suspected to be of that tendency, were greatly benefited by this remedy. In chronic rheumatisms, some glandular swellings, and in various fixed and periodical pains, the cicuta is now very generally employed; and from daily experience, it appears in such cases to be a very efficacious remedy. It has also been of singular use in the hooping-cough. Nor is it less efficacious when applied externally; a poultice made of oatmeal and the expressed juice, (or a decoction of the extract, when the other cannot be obtained,) allays the most excruciating torturing pains of a cancer, and thus gives rest to the distracted patient.

The proper method of administering conium internally, is to begin with a few grains of the powder or inspissated juice, and gradually to increase the dose until a giddiness affects the head, a motion is felt in the eyes as if pressed outwards, with a slight sickness, and trembling agitation of the body. One or more of these symptoms are the evidence of a full dose, which should be continued until they have ceased, and then after a few days the dose may be increased; for little advantage can be expected but by a continuance of the greatest quantity the patient can bear. In some constitutions even small doses greatly offend, occasioning spasms, heat, and thirst; in such instances it will be of no service. As the powder of the dried leaves has been thought to act, and may be depended upon with more certainty than the extract, the following direction should be observed in the preparation: — Gather the plant about the end of June, when it is in flower; pick off the little leaves, and throw away the leaf-stalks: dry the small selected leaves in a hot sun, or in a tin or pewter dish before the fire. Preserve them in bags made of strong brown paper, or powder them and keep the powder in glass phials where the light is excluded; for light dissipates the beautiful green colour very soon, and thus the medicine loses its appearance, if not its efficacy: this mode is recommended by Dr. Withering. The extract should also be made of the plant gathered at this period. From 2 to 20 grains of the powder may be taken twice or thrice a day.

CONJUGATUS. Conjugate or yoked: applied to a winged leaf with only one pair of leaflets; as in the *Mimosa.*

CONJUNCTIVE. (*Conjunctivus*: from *con* and *jungo*, to connect together.) Parts that join others together, receive this name; as conjunctive membrane of the eye, &c.

Conjunctive membrane. *Membrana conjunctiva.* A thin, transparent, delicate membrane of the eye, that lines the internal superficies of one eyelid, and is reflected from thence over the anterior part of the bulb, then reflected again to the edge of the other eyelid. That portion which covers the transparent cornea cannot, without much difficulty, be separated from it.

CONJUNCTUS. Conjoined: applied to a tuber, which is said to be conjoined when in immediate contact with another; as in many of the *Orchides.*

CONNA'TUS. (From *con*, and *nascor*, to grow together.) 1. In *Pathology*, born with a person; the same with *congenitus*.

2. In *Botany*, applied to leaves which are united at their base; as in *Chlora perfoliata.*

CONNEXION. See *Articulation.*

CONNIVENS. (From *conniveo*, to make as if he did not see.) Connivent.

1. In *Botany*, applied to petals of flowers, as in those of the *Rumex*, and to the receptacle of the fig, which the fruit really is, being a fleshy connivent receptacle, enclosing and hiding the florets.

2. In *Anatomy*, applied to the valvular projections from the internal surface of the small intestines; which are called *valvulæ conniventes*, from converging or approaching each other.

Connutri'tus. (From *con*, and *nutrior*, to be nourished with.) It is what becomes habitual to a person from his particular nourishment, or what breaks out into a disease in process of time, which gradually had its foundation in the first aliments, as from sucking a distempered nurse, or the like. Not used.

CONQUASSA'TIO. Conquassation. In *Pharmacy*, it is a species of comminution, or an operation by which moist concrete substances, as recent vegetables, fruits, the softer parts of animals, &c. are agitated and bruised, till partly, by their proper succulence, or by the affusion of some liquor, they are reduced to a soft pulp.

CONRI'NGIUS, Herman, was born in East Friesland, 1606. He wrote numerous works in philosophy, medicine, and history, displaying great learning. In one treatise he refers the degeneracy of the modern Germans to their altered mode of living, the use of stoves, tobacco, &c. He published, also, an "Introduction to the whole Art of Medicine, and its several Parts," containing a History and Bibliotheca Medica, with numerous Dis-

sertations on particular Diseases. He died in 1681.

CONSENT OF PARTS. See *Sympathy.*

CONSE'RVA. (*a, æ.* f.; from *conservo*, to keep.) A conserve. A composition of some recent vegetable and sugar, beat together into an uniform mass of the consistence of honey; as conserve of hips, orange-peel, &c. Conserves are called confections in the last edition of the London Pharmacopœia. See *Confectio.*

CONSERVA ABSINTHII MARITIMI. See *Artemisia maritima.*

CONSERVA ARI. See *Arum maculatum.*

CONSERVA AURANTII HISPALENSIS. See *Confectio aurantiorum.*

CONSERVA CYNOSBATI. See *Confectio rosæ caninæ.*

CONSERVA LUJULÆ. Confection of wood sorrel. See *Oxalis acetosella.*

CONSERVA MENTHÆ. This preparation of mint is given occasionally as a stomachic, in sickness and weakness of the stomach. See *Mentha viridis.*

CONSERVA PRUNI SYLVESTRIS. Astringent virtues are ascribed to this medicine, which is now seldom used but in private formulæ. See *Prunus sylvestris.*

CONSERVA ROSÆ. This conserve, rubbed down with water, to which is added some lemon-juice, forms an excellent drink in hæmorrhagic complaints. See *Confectio rosæ Gallicæ.*

CONSERVA SCILLÆ. A preparation of squills, which affords an excellent basis for an electuary, possessing expectorant and diuretic qualities.

CONSISTE'NTIA. (From *consisto*, to abide.) The state or acme of a disease. The appearance or state of the humours and excrements.

CONSO'LIDA. (*a, æ.* f. So called, *quia consolidandi et conglutinandi vi pollet;* from its power in agglutinating and joining together things broken.) See *Symphytum.*

CONSOLIDA AUREA. See *Solidago virga aurea.*

CONSOLIDA MAJOR. See *Symphytum.*

CONSOLIDA MEDIA. See *Ajuga.*

CONSOLIDA MINOR. See *Prunella.*

CONSOLIDA REGALIS. See *Delphinium.*

CONSOLIDA SARACENICA. See *Solidago.*

CONSOUND. See *Symphytum.*

Consound, middle. See *Ajuga pyramidalis.*

CONSPERSIO. The sprinkling of dry powders over the body. See *Catapasma.*

CONSTANTI'NUS, AFRICANUS, was born at Carthage, towards the middle of the 11th century. Two of his works were thought deserving of being printed at Bâle, about 4½ centuries after his death. They are thought, however, to have been chiefly translated from Arabian writers.

CONSTIPATION. (*Constipatio, onis.* f.; from *constipo*, to crowd together.) *Coprositus. Coprostasis. Copostrasia. Obstipatio. Obstipita.* Coctiveness.

Costiveness and obstipation are nearly synonymous: the former, however, means that the bowels act, though tardily; and the latter, that they do not. Tardiness in evacuating the bowels is not always disease; for many people, and especially the poorer and hard-working classes, are not accustomed to have their bowels emptied oftener than twice a week. Costiveness, in its simple and constitutional form, is rather troublesome than dangerous. The cause of costiveness is a great action of the absorbents of the bowels, under which they remove the more fluid part of the chyme from the intestines, and of the moisture from the fæcal part, so that they become hardened. This increased action of the absorbents is often produced by hard exercise, under which the skin is kept regularly perspiring; by a stimulating diet, and such as tends to constringe the bowels; by too small a quantity of fluids, compared with the solid substance.

As the fæces are forced forward by the peristaltic action of the intestines, it follows that whenever this action is weakened, there must necessarily be a retardation, and consequently an accumulation, of fæces. This sluggishness or torpitude of the bowels is produced by various causes: for sometimes the food is too insipid, destitute of stimulants; sometimes there is a deficiency of bile, which is the natural stimulus to the bowels; and, what is more frequently the cause than any other, the bile that is secreted is, and that in a variety of ways, insufficient for the purpose of imparting a due stimulus. Another set of causes of a sluggishness or torpitude of the intestines, are all those circumstances which diminish the healthy irritability and tone of the muscular fibres of the bowels; so that they do not exert their peristaltic movement, although there is not a deficiency of stimulus to them.

The medical treatment of constipation consists in adopting a diet free from all astringents, taking care especially that there is no alum in the bread, and using a coarser kind, with oleraceous vegetables, and supplying proper stimulants when the peristaltic motion is enfeebled. Coarse sugar, honey, manna, chocolate, figs, pulp of tamarinds, are excellent laxatives; and the best medicines are the mild purgatives.

In the more aggravated state, or that in which the disease is called obstipation, rather than costiveness, the peristaltic motion is generally faulty from its sluggishness, and the subjects are weakly, and prone to sedentary habits; the fæces, therefore, become hard, or deprived of moisture, and lay like a scroll, or in small lumps, like balls or scybala.

The best medicines against this form of the disease, are the compound aloëtic pill, and the compound extract of colocynth, with a little ipecacuanha or antimonial. The pilula aloes cum myrrhâ is an excellent aperient.

CONSTITUTION. *Constitutio.* The general condition of the body, as evinced by the peculiarities in the performance of its functions: such are, the peculiar predisposition to certain diseases, or liability of particular

organs to disease; the varieties in digestion, in muscular power and motion, in sleep, in the appetite, &c. Some marked peculiarities of constitution are observed to be accompanied with certain external characters, such as a particular colour and texture of the skin and of the hair, and also with a peculiarity of form and disposition of mind; all of which have been observed from the earliest time, and divided into classes; and which received names, during the prevalence of the humeral pathology, which they still retain. See *Temperament*.

Constricti'vus. (From *constringo*, to bind together.) Constrictive: styptic.

CONSTRI'CTOR. (*or, oris.* m.; from *constringo*, to bind together.) A name given to those muscles which contract any opening of the body.

Constrictor alæ nasi. See *Depressor labii superioris alæque nasi*.

Constrictor ani. See *Sphinctor ani*.

Constrictor isthmi faucium. *Glosso-staphilinus* of Winslow, Douglas, and Cowper. A muscle situated at the side of the entry of the fauces, that draws the *velum pendulum palati* towards the root of the tongue, which it raises at the same time, and, with its fellow, contracts the passage between the two arches, by which it shuts the opening of the fauces.

Constrictor labiorum. See *Orbicularis oris*.

Constrictor oris. See *Orbicularis oris*.

Constrictor palpebrarum. See *Orbicularis palpebrarum*.

Constrictores pharyngæi. The muscular fibres of the upper part of the œsophagus.

Constrictor pharyngis inferior. *Crico pharyngeus; Thyro-pharyngeus* of Douglas and Winslow. A muscle situated on the posterior part of the pharynx. It arises from the side of the thyroid cartilage, near the attachment of the sternohyoideus and thyrohyoideus muscles; and from the cricoid cartilage, near the crico-thyroideus, it is inserted into the white line, where it joins with its fellow, the superior fibres running obliquely upwards, covering nearly one-half of the middle constrictor, and terminating in a point: the inferior fibres run more transversely, and cover the beginning of the œsophagus. Its use is to compress that part of the pharynx which it covers, and to raise it with the larynx a little upwards.

Constrictor pharyngis medius. *Hyo-pharyngeus* and *cephalo-pharyngeus*, of Douglas and Winslow. *Chondro-pharyngeus*, of Douglas. *Syndesmo-pharyngeus*, of Winslow. *Cephalo-pharyngeus*, of Winslow and Douglas. A muscle situated on the posterior part of the pharynx. It arises from the appendix of the os hyoides, from the cornu of that bone, and from the ligament which connects it to the thyroid cartilage; the fibres of the superior part running obliquely upwards, and covering a considerable part of the superior constrictor, terminate in a point; and it is inserted into the middle of the cuneiform process of the os occipitis, before the foramen magnum, and joined to its fellow at a white line in the middle part of the pharynx. This muscle compresses that part of the pharynx which it covers, and draws it and the os hyoides upwards.

Constrictor pharyngis superior. *Glosso-pharyngeus; Mylo-pharyngeus; Pterygo-pharyngeus*, of Douglas and Winslow. A muscle situated on the posterior part of the pharynx. It arises above, from the cuneiform process of the os occipitis, before the foramen magnum, from the pterygoid process of the sphenoid bone, from the upper and under jaw, near the roots of the last dentes molares, and between the jaws. It is inserted in the middle of the pharynx. Its use is to compress the upper part of the pharynx, and to draw it forwards and upwards.

Constrictor vesicæ urinariæ. See *Detrusor urinæ*.

CONSTRICTO'RIUS. A disease attended with constriction, or spasm.

CONSTRIN'GENS. (From *constringo*, to bind together.) See *Astringent*.

CONSUMPTION. (*Consumptio;* from *consumo*, to waste away.) See *Phthisis*.

CONTABESCE'NTIA. (From *contabesco*, to pine or waste away.) An atrophy, or wasting of the body.

CONTAGION. (*Contagio, onis.* f.; from *contango*, to meet or touch each other.)

Contagion is used synonymously with miasm, infection, and virus. It is considered as a generic term, embracing all those poisons which communicate specific diseases; all the effluvia, miasmata, infections, and poisons that cause simple fevers, eruptive fevers, the plague, and those poisons which excite uniformly the diseases which give birth to them, as the venereal disease, the itch, tinea capitis, &c. Of these, some are conveyed through the air from their places of birth, and produce their diseases by being received into the lungs; as the miasm of agues and typhus: others are also conveyed in the same manner, and also by contact with the diseased, or inoculation; as small-pox, plague, scarlet fever, &c.: others, again, are poisons that require contact with the diseased, or inoculation, and cannot be communicated in any other way; as syphilis, cow-pox, itch, &c. Dr. Good was of opinion that all specific miasmata may be considered as morbid ferments, capable of suspension in the atmosphere, but varying very considerably in their degree of volatility, from that of the plague, which rarely quits the person except by immediate contact, to that of the spasmodic cholera of India, which, if it be really from a specific poison, works its way with great rapidity. They are of various kinds, and appear to issue from various sources, and we can only discriminate them by their specific effects. Those which we have to consider are,

1. The contagion of *typhus* fever. This is generally supposed to originate from human sources.

2. The contagion of *remittents* and *intermittents*.

It is a question of some importance to establish the identity of these two miasmata, and thus realise the distinction between human and marsh miasmata, which Dr. Cullen laid down, and which has been generally adopted from the weight of his authority. In the discussion of this enquiry, it must be recollected that eruptive fevers which are produced by their specific miasms, as small-pox and measles, have ever been of a determined character: the miasm of small-pox always continued true to small-pox, and that of measles to measles; and neither of them has, in a single instance, run into the other diseases, or produced any other malady than its own: but can the same be said of the supposed two distinct miasms of marsh and human effluvia? Is it equally true that the former has never produced any other than intermittent fever, or the latter any other than continued? And, is it also equally true that each of these maladies adheres as strictly to its own character, in every age, and every part of the world, as small-pox and measles? Dr. Cullen's system is built upon the affirmative of these questions; for it allows but of two kinds of fever, each as distinctly proceeding from its own specific miasm, as small-pox and measles. But this is to suppose what is contradicted by the occurrence of every day, which compels us to confess, that while we cannot draw a line of distinction between marsh and human effluvia from their specific effects, we have no other mode of distinguishing them.

Remote causes of these febrile contagions.—In the decomposition of all organised matter, whether vegetable or animal, when suddenly effected by the aid of heat and moisture, an effluvium is thrown forth that is at all times injurious to health, and, in a closely concentrated state, fatal to life. Fourcroy tells us, in his Elements of Chemistry, that in some of the burial grounds of France, the graves of which were dug up sooner than they ought to be, the effluvium influenced the grave-digger so forcibly, as to cause him to faint, or produce giddiness and other inconvenience for some time. This effluvium is from the decomposition of animal matter alone. Similar to this, is the noxious gas of cess-pools containing human excrement, and the offal and drainings of slaughter-houses, which is frequently productive of fevers.

The exhalations from vegetable matter only, in a state of decomposition, generate also an offal miasm that excites fever: of this nature is the foul and stinking *harmattan*, when it rushes from the south east upon the coast of Guinea, being loaded with vegetable exhalations alone, with which it impregnates itself while sweeping over the immense uninhabitable swamps, and oozy mangrove thickets, of the sultry regions of Benin. This active poison, in the year 1754 or 1755, is said to have killed so many, that in many negro towns the living were not sufficient to bury the dead. A great quantity of raw coffee becoming decomposed on the sea-shore, has been productive of a miasm almost as virulent.

The same thing results from the decomposition of both animal and vegetable matters mixed together under certain circumstances. The marsh and oozy soil of inhabited countries is necessarily a combination of animal and vegetable matter. When this decomposition or putrefaction is assisted by warmth, moisture, and stagnation, fever is excited in the neighbourhood by the miasm that is generated: hence in this country, in fenny and marshy places, much moisture, assisted by a burning sun, is sure to create agues and remittents, which vary in their type according to the time of the year and state of the constitution. This has been remarkably the case in the fevers of Great Britain during the last three years, which have assumed the remittent, intermittent, and continued forms; most of them beginning like remittents, and becoming intermittents, some of which have run into typhus; many intermittent in the beginning, becoming remittent or typhoid.

The atmosphere of the habitations of the poor, who crowd together many in one small apartment, containing much filth and poverty, and shut up so as to prevent any ventilation, is another source of a febrile contagion. In such places, the perspirations, expired air, the several excretions from the body, are contained a considerable time. A poison generated in this way, in the houses of narrow crowded alleys and courts, into the gutters of which every thing offensive is thrown and suffered to remain, has been known to produce fevers of the remittent and continued types, bilious remittents, and typhoid fevers.

The febrile miasm, then, generated by a decomposition of human effluvia and dead organised matter, appears to be essentially the same, modified alone in one or more of its qualities by the co-operation of heat, moisture, stagnant atmosphere, and perhaps some other unknown agents, that are necessary to give it birth and activity.

3. The contagion of *plague*. Of the first source of the plague, there is as much uncertainty as in respect to that of any other exanthematous fever; but that it is propagated by a specific miasm is unquestionable, for it is produced by inoculation, and, like the cause of other fevers, it spreads extensively when assisted by the same accessories as give rise to other febrile miasms: and hence it is, that when the atmospheric air about the diseased seems to be very pure, its sphere of action appears to be more limited than that of any other fever; on which account many have contended that the plague was communicable by contact alone: and that, when the circumambient air is more stagnant, when loaded with foulness from any other source, especially such as proceeds from the filth of close and crowded rooms, the disease is epidemic, and as readily communicable through the

medium of the air, as any typhus, small-pox, or other eruptive fever.

4. The contagion of *hooping cough.*
5. The contagion of *mumps.*
6. The contagion of malignant *sore throat.*
7. The contagion of *small-pox.*
8. The contagion of *measles.*
9. The contagion of *scarlet fever.*
10. The contagion of *varicella.*
11. The contagion of *erysipelas.*
12. The contagion of *dysentery.*
13. The virus of *yaws.*
14. The contagion of *cow-pox.*
15. The poison of *syphilis.*
16. The poison of the *clap.*
17. The poison of *scald head.*
18. The poison of the *itch.*
19. The poison of *ring-worm.*
20. The poison of *hydrophobia.*
21. The poison of a *dead body.*

We are in ignorance of the origins of most of these poisons. We only know that the persons labouring under the several diseases generate more poison, so that every atom of their composition can produce the same diseases if conveyed into the fluids of others.

The poisons of small-pox, chicken-pox, measles, scarlet fever, hooping cough, and yaws, may be said to produce such a change in the susceptibility of the system, when once it has influenced it, as to prevent the recurrence of the disease: this holds good as a general observation; whilst the poisons of erysipelas, cow-pox, syphilis, clap, scald head, ring-worm, itch, hydrophobia, and that from a dead body, will operate generally as often as they are applied.

The chemical nature of these poisons is not at all understood, and most probably never will be. Those which are visible to the eye, as the poison of small-pox, chicken-pox, measles, cow-pox, yaws, plague, syphilis, clap, the poison of erysipelas, of hydrophobia, of a dead body, that of the itch, scald head, and ring-worm, may be submitted to ocular, nasal, and oral investigation; and several of them have also been scientifically examined by the ablest chemists, but nothing rational has resulted. Some have asserted, as the result of their labours, that some of these miasmas undoubtedly consisted of hydrogene, united with sulphur, phosphorus, carbon, and azote, in unknown states of combination.

The antiloimies, or neutralisers, or destroyers of the gasiform miasmas, are,

1. Free *ventilation:* this is infinitely the best way of purifying infected air.

2. The *nitric* and *nitrous acid gases.* These must be applied at some distance from the sick, and so placed as to be diffused in a very dilute and respirable state by all in the house.

3. The *muriatic acid gas,* which requires the same management.

4. The *acetic acid gas,* which is obtained by making it hot, and applying it in the sick chamber.

5. The *nitro-muriatic acid gas* and *chlorine,* which are more penetrating and corrosive, and require more dilution.

6. Pure *aqueous vapour* is recommended by some; and this is to be obtained by sprinkling the floor, and keeping a good fire.

7. The *aroma* of some plants, as camphire, tobacco, &c. have been recommended; but, instead of being of use, they are prejudicial, by preventing other and noxious smells from being detected.

The other poisons have their antidotes, some of which act on the system, and others locally.

The poison of eruptive fevers are not neutralised by any means. Those who have not had the small-pox, and have not been vaccinated; those who have not had the chicken-pox and the measles, will take these diseases if they breathe the air of the apartment, even when its atmosphere is and has been for some time impregnated with the gases of the nitric, nitrous, or muriatic acids, and nitro-muriatic acid gas, and chlorine in a free state.

The poisons of syphilis, clap, yaws, scald head, ring-worm, hydrophobia, and that from a dead body, are said to be neutralised by caustics.

Conte'nsio. (From *contineo,* to restrain.) It is sometimes used to express a tension or stricture.

Co'ntinens febris. A continent fever, which proceeds regularly in the same tenor, without either exacerbation or remission. This rarely, if ever, happens. See *Continued.*

Continua febris. (From *continuo,* to persevere.) See *Continued.*

CONTINUED. (*Continuus;* from *continuo,* to persevere.) Applied to diseases which go on with a regular tenor of symptoms, but mostly to fevers the symptoms of which continue, without intermission, until the disease terminates: hence continual fevers, in distinction to intermittent fevers.

CONTO'RSIO. (From *contorqueo,* to twist about.) A contortion, or twisting. In medicine this word has various significations, and is applied to the iliac passion, to luxation of the vertebræ, head, &c.

Contortæ. Twisted plants. The name of an order in Linnæus's Fragments of a Natural Method, consisting of plants which have a single petal that is twisted or bent towards the side; as *Nerium, Vinca,* &c.

CONTORTUS. (From *con,* and *torqueo,* to twist.) Twisted: applied to the seed-vessel of plants; as the *legumen contortum* of the *Medicago sativa.*

CONTRA-APERTURA. (From *contra,* against, and *aperio,* to open.) A counter-opening. An opening made opposite to the one that already exists.

CONTRACTILITY. *Contractilitas.* A property in bodies, the effect of the cohesive power by which their particles resume their former propinquity when the force ceases which was applied to separate them. It also denotes the power, which muscular fibres possess, of shortening themselves.

CONTRACTION. (*Contractio, onis.* f.; from *contraho*, to draw together.) A contraction. Applied generally in the usual acceptation of the term; but in *Pathology*, to stiffened joints. See *Contractura.*

CONTRACTURA. (*a, æ.* f.; from *contraho*, to draw together.) A genus of disease in the class *Locales*, and order *Dyscinesiæ* of Cullen. The species are,

1. *Contractura primaria*, from a rigid contraction of the muscles, called also obstipitas; a word that, with any other annexed, distinguishes the variety of the contraction. Of this species he forms four varieties. 1. *Contractura ab inflammatione*, when it arises from inflammation. 2. *Contractura à spasmo*, called also tonic spasm and cramp, when it depends upon spasm. 3. *Contractura ob antagonistas paraliticos*, from the antagonist muscles losing their action. 4. *Contractura ab acrimoniâ irritante*, which is induced by some irritating cause.

2. *Contractura articularis*, originating from a disease of the joint.

CONTRAFISSU'RA. (*a, æ.* f.; from *contra*, against, and *findo*, to cleave.) *Contrecoup* of French writers. A fracture in a part opposite to that in which the blow is received; as when the frontal bone is broken by a fall on the occiput, where the bone remains sound.

CONTRAHE'NS. (From *contraho*, to contract.) A medicine which shortens and strengthens the fibres. Astringents are the only medicines of this nature.

CONTRA-INDICATION. (*Contraindicatio, onis.* f.; from *contra*, against, and *indico*, to show.) A symptom, or that which, in a disease, forbids the exhibition of a remedy which would otherwise be employed: for instance, bark and acids are usually given in putrid fevers; but if there be difficulty of breathing, or inflammation of any viscus, they are contra-indications to their use.

CONTRA-LUNA'RIS. (From *contra*, and *luna*, the moon.) An epithet given by Dietericus to a woman who conceives during the menstrual discharge.

CONTRA-SEMEN. See *Artemisia santonica.*

CONTRAYE'RVA. (*a, æ.* f.; from *contra*, against, and *yerva*, poison, Span.; *i. e.* a herb good against poison.) See *Dorstenia.*

CONTRAYERVA ALBA. *Contrayerva Germanorum.* A species of asclepias.

CONTRAYERVA NOVA. The Mexican contrayerva. See *Psoralea pentaphylla.*

CONTRAYERVA VIRGINIANA. See *Aristolochia serpentaria.*

Contre-coup. See *Contrafissura.*

CONTRI'TIO. Contrition, or the act of grinding, or reducing to powder.

CONTUSION. (*Contusio, onis.* f.; from *contundo*, to knock together.) A bruise.

CONUS. (Κωνος. *us, i.* m.; *involucrum pinis.*) A cone. See *Strobilus.*

CONVALESCENCE. (*Convalescentia, æ.* f.; from *convalesco*, to grow well.) The recovery of health after the cure of a disease. The period of convalescence is that space from the departure of a disease, to the recovery of the strength lost by it.

CONVALESCENT. Recovering, or returning to a state of health after the cure of a disease.

CONVALLA'RIA. (*a, æ.* f.; from *convallis*, a valley: named from its abounding in valleys and marshes.) The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia.*

CONVALLARIA MAJALIS. The lily of the valley. May-lily. *Convallaria, Lilium convallium, Maianthemum.* The flowers of this plant, *Convallaria—scapo nudo* of Linnæus, have a penetrating bitter taste, and are given in nervous and catarrhal disorders. When dried and powdered, they prove strongly purgative. Watery or spirituous extracts made from them, given in doses of a scruple, or drachm, act as gentle stimulating aperients and laxatives; and seem to partake of the purgative virtue, as well as the bitterness of aloes. The roots, in the form of tincture, or infusion, act as a sternutatory when snuffed up the nose, and as a laxative or purgative when taken internally.

CONVALLARIA POLYGONATUM. The Solomon's seal. *Sigillum Salomonis; Convallaria—foliis alternis amplexicaulibus, caule ancipiti, pedunculis axillaribus subunifloris*, of Linnæus. The roots are applied externally as astringents, and are administered internally as corroborants.

CONVEXUS. Convex. In very general use in anatomy, botany, &c.

CONVOLUTA OSSA. See *Spongiosa ossa.*

CONVOLU'TUS. Rolled up or folded. Applied to bones, membranes, leaves, &c.

CONVO'LVULUS. (*us, i.* m.; from *convolvo*, to roll together, or entwine.)

1. The iliac passion. See *Iliac passion.*

2. The name of a genus of plants in the Linnæan system, so called from their twisting round others, Class, *Pentandria*; Order, *Monogynia*, which affords the Jalapa, mechoacana, turbith, and scammony. The whole genus consists of plants containing a milky juice strongly cathartic and caustic.

CONVOLVULUS AMERICANUS. See *Convolvulus jalapa.*

CONVOLVULUS BATATAS. A native of the West Indies. Its root is firm, and of a pale brown on the outside, and white within. When boiled it is sweet, like chestnuts, and is esteemed by some as an esculent.

CONVOLVULUS CANTABRICA. The cantabricar. Lavender-leaved bind-weed. *Convolvulus minimus spicæ foliis, Convolvulus linariæ folio.* Pliny says it was discovered in the time of Augustus, in the country of the Cantabri in Spain; whence its name. It is anthelmintic and actively cathartic.

CONVOLVULUS COLUBRINUS. See *Cissampelos pareira.*

CONVOLVULUS JALAPA. The systematic name of the jalap plant. Called also, *Jalapium mechoacanna nigra, Convolvulus americanus, Convolvulus syriacus.*

Convolvulus jalapa—caule volubli; foliis ovatis, subcordatis, obtusis, obsolete repandis, subtus villosis; pedunculis unifloris of Linnæus. It is a native of South America. In the shops, the root is found both cut into slices and whole, of an oval shape, solid, ponderous, blackish on the outside, but grey within, and marked with several dark veins, by the number of which, and by its hardness, heaviness, and dark colour, the goodness of the root is to be estimated. It has scarcely any smell, and very little taste, but to the tongue, and to the throat, manifests a slight degree of pungency. The medicinal activity of jalap resides principally, if not wholly, in the resin, which, though given in small doses, occasions violent tormina. The root powdered is a very common, efficacious, and safe purgative, as daily experience evinces; but, according as it contains more or less resin, its effects must of course vary. In large doses, or when joined with calomel, it is recommended as an anthelmintic and hydragogue. In the pharmacopœias, this root is ordered in the form of tincture and extract; and the Edinburgh College directs it also in powder, with twice its weight of crystals of tartar.

Convolvulus major albus. See *Convolvulus sepium.*

Convolvulus maritimus. See *Convolvulus soldanella.*

Convolvulus mechoacan. Mechoacan. This plant has been called *Mechoacanna, Jalapa alba, Bryonia alba, Peruviana,* and *Rhabarbarum album.* The root of this species of convolvulus is brought from Mexico. It possesses aperient properties, and was long used as the common purge of this country, but is now wholly superseded by jalap.

Convolvulus scammonia. The systematic name of the scammony plant; called also, *Convolvulus syriacus, Scammonium syriacum,* and *Diagrydium.*

Convolvulus scammonia—foliis sagittatis postice truncatis, pedunculis teretibus subtrifloris, of Linnæus. It affords the concrete gummi-resinous juice termed scammony. It grows plentifully about Maraash, Antioch, Eallib, and towards Tripoli, in Syria. No part of the dried plant possesses any medicinal quality, but the root, which Dr. Russel administered in decoction, and found it to be a pleasant and mild cathartic. It is from the milky juice of the root that we obtain the officinal scammony, which is procured in the following manner by the peasants, who collect it in the beginning of June:—having cleared away the earth from about the root, they cut off the top in an oblique direction, about two inches below where the stalks spring from it. Under the most depending part of the slope, they fix a shell, or some other convenient receptacle, into which the milky juice gradually flows. It is left there about twelve hours, which time is sufficient for draining off the whole juice; this, however, is in small quantity, each root affording but a very few drachms. This juice from the several roots is put together, often into the leg of an old boot, for want of some more proper vessel, where, in a little time, it grows hard, and is the genuine scammony. The smell of scammony is rather unpleasant, and the taste bitterish and slightly acrid. The different proportions of gum and resin, of which it consists, have been variously stated; but, as proof spirit is the best menstruum for it, these substances are supposed to be nearly in equal parts. It is brought from Aleppo and Smyrna in masses, generally of a light shining grey colour, and friable texture; of rather an unpleasant smell, and bitterish and slightly acrid taste. The scammony of Aleppo is by far the purest. That of Smyrna is ponderous, black, and mixed with extraneous matters. Scammony appears to have been well known to the Greek and Arabian physicians, and was exhibited internally as a purgative, and externally for the itch, tinea, fixed pains, &c. It is seldom given alone, but enters several compounds, which are administered as purgatives.

Convolvulus sepium. *Convolvulus major albus.* The juice of this plant, *Convolvulus—foliis sagittatis postice truncatis pedunculis tetragonis, unifloris,* of Linnæus, is violently purgative, and given in dropsical affections. A poultice of the herb, made with oil, is recommended in white swellings of the knee joint.

Convolvulus soldanella. The systematic name of the sea convolvulus. Κραμβη θαλασσια. *Brassica marina. Convolvulus maritimus. Soldanella.* Soldanella. This plant, *Colvolvulus—foliis reniformibus, pedunculis unifloris,* of Linnæus, is a native of our coasts. The leaves are said to be a drastic purge. It is only used by the common people, the pharmacopœias having now substituted more safe and valuable remedies in its place.

Convolvulus syriacus. See *Convolvulus scammonia.*

Convolvulus turpethum. The systematic name of the turbith plant. The cortical part of the root of a species of convolvulus, brought from the East Indies, in oblong pieces: it is of a brown or ash colour on the outside, and whitish within. The best is ponderous, not wrinkled, easy to break, and discovers to the eye a large quantity of resinous matter. When chewed, it at first imparts a sweetish taste, which is followed by a nauseous acrimony. It is considered as a purgative, liable to much irregularity of action.

Convulsio canina. A wry mouth.

Convulsio cerealis. Cereal convulsion. A singular disorder of the spasmodic convulsive kind, not common to this country, said to arise from the use of spoiled corn. See *Secale cornutum.*

Convulsio habitualis. Habitual convulsion. See *Chorea.*

CONVULSION. (*Convulsio, onis. f.*; from *convello*, to pull together.) A convulsion is an agitation of all the limbs of the body, or of a part, known by alternate re-

laxations, with violent and involuntary contractions of the muscles, or what are called clonic spasms. Most writers on pathology assert that this state of convulsion is attended by a sound and unaffected state of the mind. It is mostly, however, otherwise; for in the generality of cases the mind is lost during the fit: but, with partial convulsions, it is unusual for the mind to be at all affected. The author has witnessed a convulsed state of one arm for more than an hour, and have conversed with the patient during the whole time: so he has frequently witnessed the one side of the body convulsed, and have found the person converse with the by-standers, until the convulsion became general, and then a state of torpor and sleep supervened. One of the most horrible instances of partial convulsion of the face and jaw that he ever witnessed, was in a noble lady, who would look stedfastly at him and talk until the convulsion prevented her by seizing the tongue, and alternately elongating and contracting it.

Convulsions are universal or partial.

When universal, all the limbs are more or less affected, as are the muscles of the face and those of respiration. This is the case with epilepsy and hysteria, which diseases are characterised by universal convulsion. See *Epilepsy*, and *Hysteria*.

A convulsion fit varies much in the mode of attack as well as its progress. Sometimes the assault is sudden and without any warning, but more generally there are precursive indications, and especially with those who are subject to returns of it: these forerunners are, coldness of the extremities, dizziness in the head, spectra floating before the eyes, tremors of some muscles, a cold air or *aura* creeping up a limb, or up the back. The struggle itself varies in extent, violence, and duration. The muscles are alternately rigid and relaxed; the teeth gnash, and often bite the tongue; the mouth foams; the eyelids open and shut in perpetual motion, or are stretched upon a full stare, while the protuberant balls roll rapidly in every direction: the whole face is hideously distorted. The force exerted in some cases is enormous, so as to overpower the strength of several attendants. In some instances, it has been so violent as to break a tooth, and even fracture a bone. When the lungs are much oppressed, the lips, cheeks, and, indeed, the entire surface of the face and arms, are of a dark or purple hue.

The paroxysm will sometimes cease in a few minutes, but occasionally it will last for hours, and after a short period of rest, it perhaps returns again with as much violence as before; this happens frequently in puerperal and infantile convulsion. Great languor commonly succeeds, sometimes headach and vertigo, but not unfrequently there are no secondary symptoms whatever.

Partial convulsions have received different names. 1. That kind which affects several muscles irregularly is called *chorea*; and if the arms only are affected, so that the person hammers, as it were, the knees, it is termed *malleatio*. See *Chorea*.

2. When the muscles of the face only are convulsed, it produces a kind of laughter; and this is called *risus sardonicus*.

From the period of life, a convulsion is called *infantile, juvenile*, &c.

From the particular cause, it is distinguished as being *puerperal, maniacal, dental*, &c.

The convulsion occasionally shifts about from one part to another irregularly, from the face to the arms, and from them to the feet; and in some cases the face, or the chest, or the limbs, are more affected than the other parts.

The causes of convulsions are very many and very varied.

In infants, children, and youths, the common causes are irritation of the bowels from gross and indigestible foods, teething, and worms. The remedies, consequently, are the appropriate purgatives, and allaying the irritation of the gums by removing the pressure caused by the superincumbent gum. The gums should be properly lanced.

In the puerperal convulsion, the attention must be directed to the uterus, the irritation of which is best allayed by copious, prompt, and repeated bleeding, and by the administration of opium by the mouth and rectum.

Some of the *narcotic poisons* are productive of convulsions when taken in a sufficient dose, as opium, prussic acid, the upas tienti, &c. The removal of the cause, as far as possible, is here imperiously called for, and the free exhibition of ammonia and stimulants.

Another set of causes which produce a convulsion, are affections of the mind; as excess of anger, joy, grief, and fear. The treatment during the fit must apply to the state of the constitution which gives a tendency to its recurrence.

In many cases there is an apparent congestion in the vessels of the face and head, and probably a similar state of the vascular system exists within the skull: in such cases, venesection must be had recourse to, and is a good measure of caution, more particularly if the person be of a plethoric habit; but when there are no such evidences of vascular fullness, and especially if, on the contrary, the subject is weak and nervous, bloodletting should be had recourse to with reluctance. If any medicine can be taken, it should be selected from the nervous class, as æther, ammonia, valerian, assafœtida, and camphire. I have known the following glyster remove the convulsion almost instantly in adults:—

℞. Tincturæ assafœtidæ, f.ʒiij.
Tincturæ opii, f.ʒjss.
Aquæ tepidæ, f. ℥x. Misce pro enemate.

A warm bath is very generally extolled, and for children is very beneficial: but for adults, the inconvenience attending the management of the patient almost prevents its use, and often overbalances the good that might otherwise result.

Another remedy during the fit, is cold water and cold air.

The treatment after the paroxysm is over, in order to prevent a recurrence of the fit, must vary: all the exciting causes being removed, the attention should be directed to effect the healthy condition of the system by removing any vascular plethora, or nervous weakness; and the exhibition of such remedies as have been known to destroy the state of the nervous system which favoured the recurrence. These are, cold bathing, especially sea bathing; regular exercise, especially on horseback; an abstemious, but nourishing diet; aperients, so as to procure a daily and satisfactory elimination of the fæces; and a steady perseverance in antispasmodics and tonics, as cinchona, cascarilla, gentian, colomba, quassia, nux vomica, valerian, camphire, oxide of zinc, sulphate and carbonate of iron, &c.

CONY'ZA. (*a, æ.* f.; from κονις, dust: because its powder is sprinkled to kill fleas in places where they are troublesome.) A genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.* There is some difficulty in ascertaining the plants called conyzas by the older practitioners: they are either of the genus conyza, inula, gnaphalium, erigeron, or chrysocoma.

Conyza æthiopica. The plant so called is most probably the *Chrysocoma comaurea* of Willdenow, a shrub which grows wild about the Cape of Good Hope, and is cultivated in our green-houses, because it flowers the greater part of the year.

Conyza cœrulea. See *Erigeron acre.*

Conyza major. Supposed to be the *Inula viscosa* of Linnæus.

Conyza major vulgaris. See *Inula.*

Conyza media. See *Inula dysenterica.*

Conyza minor. The *Inula pulicaris* of Linnæus answers to the description given of this plant in most books. Its chief use is to destroy fleas and gnats.

Cooperto'ria. (From *co-operio,* to cover over.) The thyroid cartilage.

Coo'strum. The centre of the diaphragm.

COPA'IBA. (*a, æ.* f.; from *copal,* the American name for any odoriferous gum, and *iba,* or *iva,* a tree.) See *Copaifera officinalis.*

COPAI'FERA. (*a, æ.* f.; from *copaiva,* the Indian name, and *fero,* to bear.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

Copaifera officinalis. The systematic name of the plant from which the Copaiba balsam—*Balsamum Braziliense*—*Balsamum copaibæ*—*Balsamum de copaiba*—*Balsamum capivi*—*Capevi;* is obtained.

Copaiba is a yellow resinous juice, of a moderately agreeable smell, and a bitterish biting taste, very permanent on the tongue. The tree which affords it grows in the Brazils and New Spain. It is obtained by making deep incisions near its trunk, when the balsam immediately issues, and, at the proper season, flows in such abundance, that sometimes, in three hours, twelve pounds have been procured. The older trees afford the best balsam, and yield it two or three times in the same year. The balsam supplied by the young and vigorous trees, which abound with the most juice, is crude and watery, and is, therefore, accounted less valuable. While flowing from the tree, this balsam is a colourless fluid; in time, however, it acquires a yellowish tinge, and the consistence of oil; but, though by age it has been found thick, like honey, yet it never becomes solid, like other resinous fluids. By distillation in water, the oil is separated from the resin; and, in the former, the taste and smell of the balsam are concentrated. If the operation is carefully performed, about one half of the balsam rises into the receiver, in the form of oil. The balsam unites with fixed and volatile oils, and with spirit of wine. It is given in all diseases of the urinary organs, when no inflammation is present. In gleets, and in gonorrhœa, it was once a favourite remedy, but is now disused. In diseases of the kidneys it is still employed, though less frequently than usual; and in hæmorrhoids it is occasionally trusted. The dose is from 20 to 30 drops, twice or three times a day, mixed with water, by means of an egg, or any mucilage. The balsam of copaiva is occasionally adulterated with turpentine, but its virtues are not greatly injured by the fraud.

Copaiva. See *Copaiba.*

COPAL. (The American name of all clear odoriferous gums.) Gum copal. This resinous substance is imported from Guinea, where it is found in the sand on the shore. It is a hard, shining, transparent, citron-coloured, odoriferous, concrete juice of an American tree, but which has neither the solubility in water common to gums, nor the solubility in alkohol common to resins, at least in any considerable degree. By these properties it resembles amber. It may be dissolved by digestion in linseed oil, rendered drying by quicklime, with a heat very little less than sufficient to boil or decompose the oil. This solution, diluted with oil of turpentine, forms a beautiful transparent varnish, which, when properly applied, and slowly dried, is very hard, and very durable. This varnish is applied to snuff-boxes, tea-boards, and other utensils. It preserves and gives lustre to paintings, and greatly restores the decayed colours of old pictures, by filling up the cracks, and rendering the surfaces capable of reflecting light more uniformly.

Cope'lla. See *Cupel.*

Co'pher. A name for camphire.

CO'PHOS. (Κωφος, dumb.) 1. Deaf, or dumb.

2. A dulness in any of the senses.

COPHO'SIS. (From κωφος, deaf.) A difficulty of hearing. See *Dysecœa.*

COPPER. (*Cuprum, i.* neut. *quasi æs*

Cyprium; so named from the island of Cyprus, whence it was formerly brought.) A metal of a peculiar reddish-brown colour; hard, sonorous, very malleable and ductile, and of considerable tenacity. At a degree of heat far below ignition, the surface of a piece of polished copper becomes covered with various ranges of prismatic colours, the red of each order being nearest the end which has been most heated: an effect which must be attributed to oxidation, the stratum of oxide being thickest where the heat is greatest, and growing gradually thinner and thinner towards the colder part. A greater degree of heat oxidises it more rapidly, so that it contracts thin powdery scales on its surface, which may be easily rubbed off; the flame of the fuel becoming at the same time of a beautiful bluish-green colour. In a heat, nearly the same as is necessary to melt gold or silver, it melts, and exhibits a bluish-green flame; by a violent heat it boils, and is volatilised partly in the metallic state.

Copper rusts in the air; but the corroded part is very thin, and preserves the metal beneath from farther corrosion.

There are two oxides of copper:

1st. The *protoxide,* obtained by digesting a solution of muriate of copper with copper turnings, in a close phial. The colour passes from green to dark brown, and grey crystalline grains are deposited. The solution of these yields, by potash, a precipitate of an orange colour, which is the protoxide. It consists of 8 copper + 1 oxygene.

2d. The *deutoxide,* or black, procurable by heat, or by drying the hydratic oxide precipitated by potash from the nitrate. It consists of 8 copper + 2 oxygene.

Copper, in filings, or thin laminæ, introduced into chlorine, unites with flame into the chloride, of which there are two varieties: the protochloride, a fixed yellow substance; and the deutochloride, a yellowish-brown pulverulent sublimate.

1. The crystalline grains deposited from the above muriatic solution, are *protochloride.*

2. *Deutochloride* is best made by slowly evaporating to dryness, at a temperature not much above 400° Fahrenheit, the deliquescent muriate of copper. It is a yellow powder.

Of the saline compounds of this metal, the acetate and sulphate and ammoniated copper only are employed in the cure of diseases.

The joint agency of air and acetic acid is necessary to the production of the *acetates.* By exposing copper plates to the vapours of vinegar, the bluish-green *verdigris* is formed, which, by solution in vinegar, constitutes *acetate of copper.* See *Verdigris.*

The *sulphate,* or blue vitriol of commerce, is a bisulphate. See *Cupri sulphas.*

The *subsulphate of ammonia and copper* is the *cuprum ammoniacum* of the pharmacopœias. See *Cuprum ammoniatum.*

Copper combines readily with the metals. Tin combines at a temperature lower than is necessary to fuse copper alone. On this is grounded the method of tinning copper vessels. For this purpose, they are first scraped or scoured; after which they are rubbed with sal-ammoniac. They are then heated, and sprinkled with powdered resin, which defends the clean surface of the copper from acquiring the slight film of oxide that would prevent the adhesion of the tin to its surface. The melted tin is then poured in, and spread about. An extremely small quantity adheres to the copper, which may perhaps be supposed insufficient to prevent the noxious effects of the copper as perfectly as might be wished.

All the preparations of copper act as virulent poisons, when introduced in very small quantities into the stomachs of animals. A few grains are sufficient for this effect. Death is commonly preceded by very decided nervous disorders, such as convulsive movements, tetanus, general insensibility, or a palsy of the lower extremities. This event happens frequently so soon, that it could not be occasioned by inflammation or erosion of the *primæ viæ;* and, indeed, where these parts are apparently sound. It is probable that the poison is absorbed, and, through the circulation, acts on the brain and nerves. The cupreous preparations are, no doubt, very acrid, and if death do not follow their immediate impression on the sentient system, they will certainly inflame the intestinal canal. The symptoms produced by a dangerous dose of copper are exactly similar to those which are enumerated under arsenic, only the taste of copper is strongly felt. The only chemical antidote to cupreous solutions, whose operation is well understood, is water strongly impregnated with sulphuretted hydrogene. The alkaline hydrosulphurets are acrid, and ought not to be prescribed.

But we possess, in sugar, an antidote to this poison, of undoubted efficacy, though its mode of action be obscure. Duval introduced into the stomach of a dog, by means of a caoutchouc tube, a solution in acetic acid, of four French drachms of oxide of copper. Some minutes afterwards he injected into it four ounces of strong syrup. He repeated this injection every half-hour, and employed altogether 12 ounces of syrup. The animal experienced some tremblings and convulsive movements. But the last injection was followed by a perfect calm. The animal fell asleep, and awakened free from any ailment.

Orfila relates several cases of individuals who had, by accident or intention, swallowed poisonous doses of acetate of copper, and who recovered by getting large doses of sugar. He uniformly found, that a dose of verdigris which would kill a dog in the course of an hour or two, might be swallowed with impunity, provided it was mixed with a considerable quantity of sugar.

As alkohol has the power of completely neutralising, in the æthers, the strongest

muriatic and hydriodic acids, so it would appear that sugar can neutralise the oxides of copper and lead. The neutral saccharite of lead, indeed, was employed by Berzelius in his experiments, to determine the prime equivalent of sugar. If we boil for half an hour, in a flask, an ounce of white sugar, an ounce of water, and 10 grains of verdigris, we obtain a green liquid, which is not affected by the nicest tests of copper, such as ferro-prussiate of potash, ammonia, and the hydro-sulphurets. An insoluble green carbonate of copper remains at the bottom of the flask.

Copper, ammoniated solution of. See *Cupri ammoniati liquor.*

COPPERAS. A name given to blue, green, and white vitriol.

COPRAGO'GUS. (From κοπρος, alvine flux, and αγω, to bring away.)

1. A purgative.

2. The name of a gently purging electuary, mentioned by Rulandus.

COPRIE'MESIS. (From κοπρος, excrement, and εμεω, to vomit.) A vomiting of fæces. See *Iliac passion.*

COPROCRI'TICUS. (From κοπρος, excrement, and κρινω, to separate.) A mild cathartic medicine.

COPROPHO'RIA. (From κοπρος, excrement, and φορεω, to bring away.) A purging.

CO'PROS. (*os, i.* f. Κοπρος.) The fæces, or excrements from the bowels.

COPROSTA'SIA. (From κοπρος, fæces, and ἵϛημι, to remain.) Costiveness.

COPROSTASIS. See *Costiveness.*

COPTA'RIOM. (Κοπ7η, a small cake.) *Coptarium.* A lozenge.

CO'PTE. (Κοπ7η, a small cake.) 1. The form of a medicine used by the ancients.

2. A cataplasm generally made of vegetable substances, and applied externally to the stomach, and on many occasions given internally.

CO'PULA. (*Quasi compula; from compello*, to restrain.) A name for a ligament.

COQUE'NS. (From *coquo*, to digest.) A medicine which promotes digestion.

COR. (*Cor, dis.* neut.) 1. The heart. See *Heart.*

2. Gold.

3. An intense fire.

CORACI'NE. (From κοραξ, a crow; so named from its black colour.) A name for a lozenge, quoted by Galen from Asclepiades.

CORACO. The first part of the name of some muscles which are attached to the coracoid process of the blade-bone.

CORACO-BRACHIALIS. *Coraco-brachiæus.* A muscle, so called from its origin and insertion. It is situated on the humerus, before the scapula. It arises, tendinous and fleshy, from the fore-part of the coracoid process of the scapula, adhering, in its descent, to the short head of the biceps; inserted, tendinous and fleshy, about the middle of the internal part of the os humeri, near the origin of the third head of the triceps, called *brachialis externus*, where it sends down a thin tendinous expansion to the internal condyle of the os humeri. Its use is to raise the arm upwards and forwards.

CORACO-HYOIDEUS. See *Omo-hyoideus.*

CO'RACOID. (*Coracoideus; Coracoides;* from κοραξ, a crow, and ειδος, resemblance: shaped like the beak of a crow.) Some processes of the bones are so named which were supposed to resemble the beak of a crow.

CORACOID PROCESS. See *Scapula.*

CO'RAL. See *Corallium.*

CORALLI'NA. (*a, æ.* f.; diminutive of *corallium.*) A genus of the Class *Vermes;* Order, *Zoophyta;* the animal of which is of a plant-like form, with the stem fixed, and the branches subdivided, calcareous, and mostly jointed. All the corallines adhere to the rocks or other solid bodies, and are concretions formed by the polype animals which inhabit them; the coralline itself being only the habitation of these creatures.

CORALLINA OFFICINALIS. *Muscus maritimus; Corallina alba.* Sea coralline; Sea moss; White wormseed. It resembles a small plant, without leaves, consisting of numerous brittle cretaceous substances, friable betwixt the fingers, and crackling between the teeth. Powdered, it is administered to children as an anthelmintic, in the dose of half a drachm to a drachm once or twice a day.

CORALLINA CORSICANA. See *Fucus helminthocorton.*

CORALLINA MELITOCHORTON. See *Fucus helminthocorton.*

CORALLINA MELITO-CORTON. See *Fucus helminthocorton.*

CORALLINA RUBRA. See *Corallina corsicana.*

CORALLINE. See *Corallina.*

Coralline, Corsican. See *Fucus helminthocorton.*

Coralline, Sea. See *Corallina officinalis.*

Coralline, White. See *Corallina officinalis.*

CORA'LLIUM. (*um, i.* n.; from κορη, a daughter, and αλς, the sea, because it is the production of the sea.) Coral.

CORALLIUM ALBUM. A hard, white, calcareous brittle substance; the nidus of the *Madrepora oculata.* It is sometimes exhibited as an absorbent earth.

CORALLIUM RUBRUM. *Acmo. Azur.* This coral is mostly employed medicinally. It is a hard, brittle, calcareous substance, resembling the stalk of a plant, and is the habitation of the *Isis nobilis.* When powdered, it is exhibited as an absorbent earth to children; but does not appear to claim any preference to common chalk.

CORALLODE'NDRON. (From κοραλλιον, coral, and δενδρον, a tree, resembling in hardness and colour a piece of coral.) The coral tree of America; antivenereal.

CORALLOI'D. (*Coralloides;* from κοραλλιον, coral, and ειδος, likeness.) Coral-like. See *Clavaria coralloides.*

CO'RCHOROS. (*us, i.* m.; from κορη, the pupil of the eye, and κορεω, to purge: so

called because it was thought to purge away rheum from the eyes.) A name given by the ancients to one or more of their common pot-herbs: but now applied to a genus of plants of the Class, *Polyandria*; Order, *Monogynia.*

CORCULUM. (*um, i.* n.; a little heart: diminutive of *cor*, a heart.) An essential part of a germinating seed, called also the *embryo*, or germ. It lies between the cotyledons. It is the point from which the life and organisation of the future plant originate. In some seeds it is much more conspicuous than in others. The walnut, bean, pea, and lupine, show it in perfection. Its internal structure, before it begins to vegetate, is observed to be very simple, consisting of a uniformly medullary substance, enclosed in its appropriate bark or skin. Vessels are formed in it as soon as the vital principle is excited to action, and parts are then developed which seemed not previously to exist. There are observed in it,

1. The *rostellum*, or little beak, which penetrates into the earth, and becomes the root.

2. The *plumula*, which shoots above the ground, and becomes a tuft of young leaves, with which the young stem, if there be any, ascends. See *Cotyledon.*

Co'rda. See *Chorda.*

Corda tympani. See *Chorda tympani.*

Corda willisii. See *Dura mater.*

CORDATUS. Heart-shaped: applied to leaves, petals, &c. which are ovate, hollowed out at the base, according to the vulgar idea of a heart; a form very frequent in leaves; as in those of *Arctium lappa*, and *Tamus communis*, and the petals of the *Sium selinum.*

A leaf is called *obcordate*, when the apex of the heart-shaped leaf is fixed to the petiole.

CO'RDIA. (*a, æ.* f. So called by Plumier in honour of Euricius Cordius and his son Valerius, two eminent German botanists.) A genus of plants. Class, *Pentandria*; Order, *Monogynia.*

Cordia myxa. The Sebesten plant. *Sebesten, Sebestina. Cordia—foliis ovatis, supra glabris; corymbis lateralibus; calycibus decemstriatis*, of Linnæus. The dark black fruit of this plant possesses glutinous and aperient qualities, and is exhibited in form of decoction in various diseases of the chest, hoarseness, cough, difficult respiration, &c.

CORDIAL. *Cardiacus.* A medicine is generally so termed, which possesses warm and stimulating properties, and is given to raise the spirits.

Cordine'ma. (From *καρα*, the head, and *δινεω*, to move about.) A headach attended with a vertigo.

CORDO'LIUM. (*um, i.* n.; from *cor*, the heart, and *dolor*, pain.) Heartach.

CORDUS, Valerius, was born in 1515. He died at the early age of 29, leaving several works: a "History of Plants," many of them never before described; "Annotations on Dioscorides;" a Nuremberg Dispensatory, &c.

CO'RE. (*e, es.* f. *Κορη.*) The pupil of the eye.

Core'matus. (From *κορεω*, to cleanse.) A medicine for cleansing the skin.

CORIACEOUS. (*Coriaceus*; from *corium*, leather.) Leathery: applied to leaves and pods that are thick and tough without being pulpy, or succulent; as in the leaves of *Magnolia grandiflora, Aucuba*, &c. and the pods of the lupin.

CORIANDER. See *Coriandrum.*

CORIAN'DRUM. (*um, i.* n.; from *κορη*, a pupil, and *ανηρ*, a man: because of its roundness, like the pupil of a man's eye; or probably so called from *κορις, cimex*, a bug, because the green herb, seed and all, stinks intolerably of bugs.) Coriander. 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia.*

2. The pharmacopœial name of the officinal coriander. See *Coriandrum sativum.*

Coriandrum sativum. The systematic name of the coriander plant: called also, *Cassibor*, and *Corianon.*

Coriandrum—fructibus globosis, of Linnæus. This plant is a native of the south of Europe, where, in some places, it is said to grow in such abundance, as frequently to choke the growth of wheat and other grain. From being cultivated here as a medicinal plant, it has for some time become naturalised to this country, where it it usually found in corn-fields, the sides of roads, and about dunghills. Every part of the plant, when fresh, has a very offensive odour; but, upon being dried, the seeds have a tolerably grateful smell, and their taste is moderately warm, and slightly pungent. They give out their virtue totally to rectified spirit, but only partially to water. In distillation with water, they yield a small quantity of a yellowish essential oil, which smells strongly, and pretty agreeably of the coriander.

Dioscorides asserts, that the seeds, when taken in a considerable quantity, produce deleterious effects; and in some parts of Spain and Egypt, where the fresh herb is eaten as a cordial, instances of fatuity, lethargy, &c. are observed to occur very frequently: but these qualities seem to have been unjustly ascribed to the coriander; and Dr. Withering informs us, that he has known six drachms of the seeds taken at once, without any remarkable effect. These seeds, and indeed most of those of the umbelliferous plants, possess a stomachic and carminative power. They were directed in the infusum amarum, the infusum sennæ tartarizatum, and some other compositions of the pharmacopœias; and, according to Dr. Cullen, the principal use of these seeds is, "that infused along with senna, they more powerfully correct the odour and taste of this than any other aromatic that I have employed; and are, I believe, equally powerful in obviating the griping that senna is very ready to produce."

Coria'non. See *Coriandrum.*

CO'RIS. (*is, is.* f.; from *κειρω*, to cleave

or cut: so called, because it was said to heal wounds.) The herb St. John's wort. See *Hypericum*.

Coris cretica. See *Hypericum saxatile*.

Coris lutea. See *Hypericum coris*.

Coris monspeliensis. Heath pine. *Symphetum petreum*. This plant is intensely bitter and nauseous, but apparently an active medicine; and employed, it is said, with success in syphilis.

CORK. *Suber*. See *Quercus suber*, and *Suberic acid*.

Cork, fossil. See *Asbestos*.

CORN. See *Clavus*.

Corn salad. See *Valeriana locusta*.

Cornachini pulvis. Scammony, antimony, and cream of tartar.

CORNARIUS, John, was born in Saxony, in 1500. Besides translating Hippocrates, and some other Greek writers, into Latin, he was author of several works on medicine.

CORNARO, Lewis, of a noble Venetian family, was born in 1467. Having impaired his constitution by a debauched and voluptuous life, and brought on at last a severe illness, on recovering from this, at the age of more than 40, he adopted a strict, abstemious regimen, limiting himself to twelve ounces of solid food, and fourteen of wine, daily; which quantity he rather diminished in the latter part of his life. He carefully avoided also the extremes of heat or cold, with all violent exercise; and took care to live in a pure dry air. He thus preserved a considerable share of health and activity to the great age of 98. His wife, by whom he had an only child, a daughter, when they were both advanced in years, survived him, and attained nearly the same period. When he was 83, he published a short treatise in commendation of temperance, which has been repeatedly translated, and printed in every country of Europe. He then states himself to have been able to mount his horse, without assistance, from any rising ground. He wrote three other discourses on similar subjects at subsequent periods, the last only three years before his death. The best English translation is said to be that of 1779.

CO'RNEA. (*a*, *æ*. f.; so called, because it is of a horny consistence.) See *Sclerotic coat*.

Cornea opaca. See *Sclerotic*.

Cornea transparens. See *Sclerotic*.

Corne'sta. A chemical retort.

CORNFLOWER. See *Centaurea*.

CORNI'CULA. (*a*, *æ*. f.; from *cornu*, a horn.) A cupping instrument, made of horn.

CORNICULA'RIS. (From *cornu*, a horn.) Shaped like a horn; the coracoid process of the scapula.

CORNIFORMIS. (From *cornu*, a horn, and *forma*, resemblance.) Horn-shaped: applied to the nectary of plants: — *nectarium corniforme*, in the orchis tribe.

CO'RNU. (*Cornu*. n. indeclinable.) A horn. This term is used both in anatomy, surgery, and materia medica.

1. A wart. See *Verruca*.

2. A corn or horny induration of the cuticle. See *Clavus*.

3. The horn of an animal. See *Horn*.

4. The cavities of the brain have three horns, as they are termed. See *Cerebrum*.

5. A horn or spur. See *Calcar*.

6. A section of the pes hippocampi of the brain is called *Cornu ammonis*.

Cornu ammonis. *Cornu arietis*. When the pes hippocampi of the human brain is cut transversely through, the cortical substance is so disposed as to resemble a ram's horn. This is the true cornu ammonis, though the name is often applied to the *pes hippocampi*.

Cornu arietis. See *Cornu ammonis*.

Cornu cervi. Hartshorn. The horns of several species of stag, as the *Cervus alces*, *Cervus dama*, *Cervus elaphus*, and *Cervus taranda*, are used medicinally. Boiled, they impart to the water a nutritious jelly, which is frequently served at table. Hartshorn jelly is made thus: — Boil half a pound of the shavings of hartshorn, in six pints of water, to a quart; to the strained liquor add one ounce of the juice of lemon, or of Seville orange, four ounces of mountain wine, and half a pound of sugar; then boil the whole to a proper consistence. The chief use of the horns is for calcination, and to afford the *liquor volatilis cornu cervi*, and subcarbonate of ammonia.

Cornu cervi calcinatum. See *Cornu ustum*.

Cornu ustum. *Cornu cervi calcinatum*. Burn pieces of hartshorn in an open fire, till they become thoroughly white; then powder, and prepare them in the same manner as is directed for chalk. Burnt hartshorn shavings possess absorbent, antacid, and astringent properties, and are given in the form of decoction, as a common drink in diarrhœas, pyrosis, &c.

Cornua uteri. The horns of the womb; the womb is in some animals triangular, and its angles resemble horns.

Cornumu'sa. A retort.

CO'RNUS. (*us*, *i*. f.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria*; Order, *Monogynia*.

2. The pharmacopœial name of the cornel-tree. See *Cornus sanguinea*.

Cornus sanguinea. The fruit of this plant is moderately cooling and astringent.

Cornu'ta. (From *cornu*; from its resemblance to a horn.) A retort.

CORNU'TUS. Horn-shaped.

COROLLA. (*a*, *æ*. f.; from *coronula*, a little crown.) The leaves of a flower, which consist of those more delicate and dilated, and generally more coloured leaves, which are always internal with respect to the calyx, between it and the internal organs of the flower, and which constitute its chief beauty. It always consists of one or more coloured leaves, which are termed *petals*.

A coloured calyx is to be distinguished from a corolla, which may be readily done in the *Allyssum alpestre*, and *Lamium orvala*.

There are four general divisions of corols :

1. *Monopetalous*, which consists of one petal; as in *Nicotiana tabacum*.

2. *Polypetalous*, having many; as in *Lilium candidum*.

3. *Compound*, consisting of many corolla, which are not calyculated, and are on a common receptacle and calyx; as in *Helianthus annuus*.

4. *Aggregate*, consisting of many calyculated corolla placed on a common calyx; as in *Scabiosa arvensis*, and *Echinops sphærocephalus*.

A. *Monopetalous*. This is formed of one petal, which, for the most part, forms a cavity, and is divided into,

a. *Limbus*, the limb, which is the margin, or horizontal spreading portion.

b. *Tubus*, the tube, which is the cylindrical and inferior part, and is enclosed in the calyx.

c. *Fauces*, or the orifice of the tube.

From the figure of a *regular* or *uniform limb* are derived the following terms :—

1. *Corolla campanulata*, bell-shaped; as in *Campanula* and *Atropa*.

2. *Globosa*, globular; as in *Hyacinthus botryoides* and *Erica ramentacea*.

3. *Tubulosa*, tubular; as in *Primula* and *Erica massoni*.

4. *Claviculata;* as in *Erica tubiflora*.

5. *Cyathiformis*, cup-shaped; as in *Sympathum officinale*.

6. *Infundibuliformis*, funnel-shaped ; as in *Nicotiana tabacum*, and *Datura stramonium*.

7. *Hypocrateriformis*, salver-shaped, a flat limb upon a long tube; as in *Vinca rosea*.

8. *Rotata*, wheel-shaped, that is salver-shaped, with scarcely any tube; as in *Borago officinalis*, and *Physalis alkekengi*.

9. *Urceolata*, saucer-like; as in *Evolvulus alcinoides*.

10. *Contorta*, obliquely bent; as in *Vinca minor*, and *Nerium oleander*.

11. *Ligulata*, the tube very short, and ending suddenly in an oblong petal; as in the corolla of the radius of the *Helianthus annuus*.

From the figure of an *unequal limb :—*

1. *Corolla ringens*, irregular and gaping like the mouth of an animal; as in *Lamium album*, and *Salvia sclarea*.

2. *Personata*, irregular and closed by a kind of palate; as in *Antirrhinum majus*.

In the ringent and personate corollæ are to be noticed the following parts :—

a. *Tubus*, the inferior part.

b. *Rictus*, the space between the two lips.

c. *Faux*, the orifice of the tube in the rictus.

d. *Galea*, the helmet or superior arched lip.

e. *Labellum*, or *barba*, the inferior lip.

f. *Palatum*, the palate, an eminence in the inferior lip which shuts the rictus of a personate corolla.

g. *Calcar*, the spur which forms an obtuse or acute bag at the side of the receptacle.

3. *Corolla bilabiata*, two-lipped, the tube divided into two irregular lips opposite each other, without any visible rictus; as in *Aristolochia bilabiata*.

In the bilabiate corolla are to be noticed,

a. The *tubus*.

b. The *faux*.

c. The *superior lip*, formed of one or two lobes.

d. The *inferior lip*, mostly three-lobed.

e. *One-lipped*, the upper or lower wanting; as in *Aristolochia clematitis*, and *Teucrium*.

Corolla infera, means that it is below the germen, which is the most common-place of the corolla; and *corolla supera*, above the germen, as in roses.

B. *Corolla polypetala*, formed of many petals.

In the petal of this division are noticed,

a. The *unguis*, the claw, the thin inferior part.

b. The *lamina*, or border, the broader and superior part; example, *Dianthus caryophyllus*.

From the *number* of *uniform* petals, the corol of this division is named,

1. *Dipetalous;* as in *Euphorbia graminea*.

2. *Tripetalous;* as in *Tradescantia virginica*.

3. *Tetrapetalous;* as in *Chieranthus incanus*.

4. *Pentapetalous;* as in *Pæonia officinalis*.

5. *Hexapetalous;* as in *Lilium candidum*.

6. *Polypetalous;* as in *Rosa centifolia*.

From the *figure*, the corolla is called,

1. *Malvaceous;* pentapetalous, with its claws united laterally, so that it appears monopetalous; as in *Malva sylvestris*, and *Alcea*.

2. *Rosaceous;* spreading like a rose, pentapetalous, almost destitute of claws; as in *Rosa canina*, and *Pæonia officinalis*.

3. *Liliaceous;* six-petalled, sometimes three without a calyx; as in *Lilium candidum*.

4. *Caryophyllaceous;* five-petalled, with a long claw, spreading border, and a monophyllous tubular calyx; as in *Dianthus caryophyllus*, and *Saponaria officinalis*.

5. *Cruciform;* three-petalled, like a cross; as in *Sinapis alba* and *Lunaria alba*.

6. *Manifold;* many corols lying one on another; as in *Cactus flagelliformis*.

From the *figure* of *unequal petals*, the corollæ are called,

1. *Orchideal*, five petals, three of which are bent backward, and two are lateral and in the middle of these: the labellum is bent back on the nectary.

2. *Papilionaceous*, four petals, irregular and spreading somewhat like a butterfly; as in *Lathyrus latifolius*, and *Robinii pseudacacia*.

In a *papilionaceous* corolla, observe,

a. The *vexillum*, the standard or large concave one at the bark.

b. *Alæ*, the wings, or two side-petals, placed in the middle.

c. The *carina*, or keel, consisting of two petals, united or separate, embracing the internal organs.

3. The *calcar*, or spur, pentapetalous, one petal formed into a spur-like tube.

C. *Compound corolla;* consisting of numerous florets, not calyculate, and within a common perianthium.

It affords,

a. The *discus*, disk, or middle.

b. The *radius*, which forms the circumference. The marginal white florets of the daisy exemplify the rays, and the central yellow ones the disk.

From the difference in the florets of a compound flower, it is said to be,

a. *Tubulate*, when all the florets are cylindrical.

b. *Ligulate*, or *semiflosculose*, shaped like a strap or riband; as in *Leontodon taraxacum*.

c. *Radiate*, if the florets in the radius are ligulate, and those in the disk tubular.

d. *Semiradiate*, the radius consisting of only a few ligulate florets on one side; as in *Bidens*. See also *Petala*.

COROLLULA. (*a*, *æ*. f.; a diminutive of *corolla*, a little wreath or crown.) The partial petal or floret of a compound flower.

CORO'NA. (*a*, *æ*. f.) A crown. This term is used, in *Anatomy*, to designate the basis of some parts; and, in *Botany*, to parts of plants, from their resemblance. In the writings of some botanists it is synonymous with *radius*.

Corona ciliaris. The ciliar ligament.

Corona glandis. The margin of the glans penis.

Corona imperialis. A name for crown-imperial. The Turks use it as an emetic. The whole plant is poisonous.

Corona regia. See *Trifolium melilotus officinalis*.

Corona solis. See *Helianthus annuus*.

Corona veneris. (So called because the venereal eruption often encompasses the head, around the temples, as the head is crowned with laurel, &c.) Venereal blotches on the forehead.

CORONAL. (*Coronalis;* from *corona*, a crown or garland.) Belonging to a crown or garland: applied to a suture of the skull, because the ancients wore their garlands in its direction.

Coronal suture. *Sutura coronalis; Sutura arcualis*. The suture of the head, that extends from one temple across to the other, uniting the two parietal bones with the frontal.

Coronariæ plantæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as have beautiful flowers, thus forming a floral crown.

CORONA'RIUS. See *Coronary*.

CORONARY. (*Coronarius;* from *corona*, a crown.) This term is applied to vessels and nerves, which supply the corona or basis of parts, or because they spread round the part like a garland or crown.

Coronary ligament. 1. The ligament uniting the radius and ulna.

2. A ligament of the liver.

Coronary vessels. *Vasa coronaria*. The arteries and veins of the heart and stomach.

Coronatæ plantæ. The name of a class of plants in Linnæus's Fragments of a Natural Method, consisting of plants which have the seed-bud placed under the flower-cup, which serves it for a crown.

CORONATUS. Coronate: applied to little crown-like eminences on the surface of a petal; as in *Nerium oleander*.

CORO'NE. (Κορωνη, a crow: so named from its supposed likeness to a crow's bill.) The acute process of the lower jaw-bone.

CORONOID. (*Coronoideus, Coronoides;* from κορωνη, a crow, and ειδος, likeness.) Processes of bones are so called, that have any resemblance to a crow's beak; as coronoid process of the ulna, jaw, &c.

CORONO'PUS. (*us, odis*. m.; from κορωνη, a carrion crow, and πους, a foot: the plant being said to resemble a crow's foot.) See *Plantago*.

CORONULA. (*a*, *æ*. f.; diminutive of *corona*.) The hem or border which surrounds the seeds of some flowers in the form of a crown.

CORPULENCY. (*Corpulentia*, *æ*. f.) See *Polysarcia*.

CO'RPUS. (*us*, *oris*. n.) A body or substance.

Corpus albicans. Two white eminences in the basis of the brain, discovered by Willis, and called *corpora albicantia Willisii*. See *Cerebrum*.

Corpus annulare. See *Pons varolii*.

Corpus callosum. The white medullary part joining the two hemispheres of the brain, and coming into view under the falx of the dura mater when the hemispheres are drawn from each other. On the surface of the *corpus callosum* two lines are conspicuous, called the *raphe*. See *Cerebrum*.

Corpus cavernosus clitoridis. See *Clitoris*.

Corpus cavernosus penis. See *Penis*.

Corpus fimbriatum. The flattened terminations of the posterior crura of the fornix of the brain, which turn round into the inferior cavity of the lateral ventricle, and end in the *pedes hippocampi*.

Corpus glandulosum. The prostate gland.

Corpus lobosum. Part of the cortical substance of the kidney.

Corpus luteum. A yellow spot found in that part of the ovarium of females, from whence an ovum has proceeded: hence their presence generally determines that the female has been impregnated. The number of the *corpora lutea* corresponds with the number of impregnations. It is, however, asserted by a modern writer, that *corpora lutea* have been detected in young virgins, where no impregnations could possibly have taken place.

Corpus mucosum. See *Rete mucosum*.

Corpus nerveo-spongiosum. The cavernous substance of the penis.

CORPUS NERVOSUM. The cavernous substance of the clitoris.

CORPUS OLIVARE. Two external prominences of the medulla oblongata, shaped somewhat like an olive, are called *corpora olivaria*.

CORPUS PAMPINIFORME. Applied to the spermatic chord, and thoracic duct; also to the plexus of veins surrounding the spermatic artery in the cavity of the abdomen.

CORPUS PYRAMIDALE. Two internal prominences of the medulla oblongata, which are of a pyramidal shape, are called *corpora pyramidalia*.

CORPUS QUADRIGEMINUM. See *Tubercula quadrigemina*.

CORPUS RETICULARE. See *Rete mucosum*.

CORPUS SESAMOIDEUM. The little cartilaginous prominence in the semilunar valves of the heart.

CORPUS SPONGIOSUM URETHRÆ. *Substantia spongiosa urethræ. Corpus spongiosum penis.* The spongy structure around the urethra. It commences before the prostate gland, surrounds the urethra, and forms the *bulb;* then proceeds to the end of the corpora cavernosa, and terminates in the *glans penis,* which it forms.

CORPUS STRIATUM. See *Cerebrum*.

CORPUS VARICOSUM. The spermatic chord.

CORRA'GO. (From *cor,* the heart; it being supposed to have a good effect in comforting the heart.) See *Borago officinalis*.

CO'RRE. (From κειρω, to shave.) 1. The temples.

2. That part of the jaws where the beard grows, and which it is usual to shave.

CORROBORANT. (*Corroborans;* from *corroboro,* to fortify or strengthen.) Whatever gives strength to the body; as bark, wine, beef, cold-bath, &c. See *Tonic*.

CORROSIVE. (*Corrosivus;* from *corrodo,* to eat away.) See *Escharotic*.

Corrosive sublimate. See *Hydrargyri oxymurias*.

CORRUGA'TOR. (*or, oris.* m.; from *corrugo,* to wrinkle.) The name of muscles, the office of which is to wrinkle or corrugate the parts they act on.

CORRUGATOR SUPERCILII. A small muscle situated on the forehead. *Musculus supercilii,* of Winslow; *Musculus frontalis verus, seu corrugator coiterii,* of Douglas. When one muscle acts, it is drawn towards the other, and projects over the inner canthus of the eye. When both muscles act, they pull down the skin of the forehead, and make it wrinkle, particularly between the eyebrows.

CO'RTEX. (*ex, icis.* m. or f.) 1. The universal covering of the stem and branches of all plants.

2. The Peruvian bark. See *Cinchona*.

CORTEX ANGELINÆ. See *Angelina*.

CORTEX ANGUSTURÆ. See *Cusparia*.

CORTEX ANTISCORBUTICUS. See *Winteria aromatica*.

CORTEX AROMATICUS. See *Winteria*.

CORTEX BELA-AYE. See *Nerium*.

CORTEX CANELLÆ MALABARICÆ. See *Laurus cassia*.

CORTEX CARDINALIS DE LUGO. See *Cinchona*.

CORTEX CEREBRI. See *Cerebrum*.

CORTEX CHINÆ REGIUS. See *Cinchona*.

CORTEX CHINÆ SURINAMENSIS. This bark is remarkably bitter, and preferable to the other species in intermittent fevers.

CORTEX CHINCHINÆ. See *Cinchona*.

CORTEX ELUTHERIÆ. See *Croton*.

CORTEX GEOFFROYÆ JAMAICENSIS. See *Geoffroya jamaicensis*.

CORTEX JAMAICENSIS. See *Achras*.

CORTEX LAVOLA. The bark bearing this name is supposed to be the produce of the tree which affords the *Anisum stellatum.* See *Illicium anisatum*.

CORTEX MAGELLANICUS. See *Winteria*.

CORTEX MASSOY. The produce of New Guinea, where it is beaten into a pultaceous mass with water, and rubbed upon the abdomen to allay pain of the bowels. It has the smell and flavour of cinnamon.

CORTEX PATRUM. See *Cinchona*.

CORTEX PERUVIANUS. See *Cinchona*.

CORTEX PERUVIANUS FLAVUS. See *Cinchona*.

CORTEX PERUVIANUS RUBER. See *Cinchona*.

CORTEX POGGEREBÆ. A bark sent from America; said to be serviceable in diarrhœas, and dysenteries.

CORTEX QUASSIÆ. See *Quassia amara*.

CORTEX WINTERIANUS. See *Winteria aromatica*.

CO'RTICAL. (*Corticalis;* from *cortex.*) 1. Belonging to the bark of a plant or tree.

2. Embracing or surrounding any part like the bark of a tree; as the cortical substance of the brain, kidney, &c.

CORTICO'SUS. Like bark, or rind. Applied to the hard pod of the *Cassia fistularis*.

CORTU'SA. See *Sanicula europæa*.

CO'RU CANARICA. A quince-like tree of Malabar; it is antidysenteric.

CORUNDUM. A genus of minerals, which, according to Jameson, contains three species; the octohedral, rhomboidal, and prismatic.

CORYDALES. (From κορυς, a helmet.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of plants which have flowers somewhat resembling a helmet or hood.

CO'RYLUS. (*us, i.* f.; derivation uncertain: according to some, from καρυα, a walnut.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Polyandria*.

2. The pharmacopœial name of the hazel-tree. See *Corylus avellana*.

CORYLUS AVELLANA. The hazel-nut tree. *Corylus avellana—stipulis ovatis, obtusis,* of Linnæus. The nuts of this tree are much

eaten in this country; they are hard of digestion, and often pass the bowels very little altered; if, however, they are well chewed, they give out a nutritious oil. An oil is also obtained from the wood of this tree, which is efficacious against the toothach, and is said to kill worms.

Corymbiferæ plantæ. Plants which bear corymbal flowers.

CORYMBIFERUS. (From *corymbus*, a species of florescence; and *fero*, to bear.) Corymb-bearing. See *Corymbus*.

CORYMBUS. (*us, i.* m. Κορυμβον, or κορυμβος, a branch or cluster, crowning the summit of a plant; from κορυς, a helmet.) A corymb. That species of inflorescence formed by many flowers, the partial flower-stalks of which are gradually longer, as they stand lower on the common stalk, so that all the flowers are nearly on a level; as in the *Chrysanthemum corymbosum*. It is said to be *simple*, when not divided into branches; as in *Thlaspi arvense*, and *Gnaphalium dentatum*: and *compound*, when it has branches; as in *Gnaphalium stœchas*.

Co'ryphe. Κορυφη. The vertex of the head. — *Galen*.

CORY'ZA. (*a, æ.* f. Κορυζα; from καρα, the head, and ζεω, to boil. Dr. Good says that coryza is a very genuine and a very extensive, as well as a very ancient oriental term, common, under some modification or other, to the Hebrew, Arabic, Chaldee, and Syriac dialects; from one of which it was undoubtedly imported into the Greek tongue. By Hippocrates it was used in a very extensive sense, so as to signify defluxion of any kind, whether from the head, nostrils, fauces, or chest. The later Greek physicians restrained coryza to a defluxion from the head and nostrils, and applied the term *catastagmus* to a defluxion from the fauces and thorax.) Coryza is a defluxion from the nostrils, of a pellucid, limpid, or ropy mucus, with a sense of fulness of the nose. To constitute this disease, the defluxion must exist independent of other symptoms, and without those of catarrh, of which it is mostly symptomatic. It is produced by sternutatories, weeping, and crying. As a symptomatic affection, it occurs in polypi of the nose, measles, and organic obstructions of the nostrils. See *Catarrh*.

Coscu'lia. The grains of kermes.

COSME'TIC. (*Cosmeticus*; from κοσμεω, to adorn.) A term applied to remedies against blotches and freckles.

Co'smos. A regular series. In Hippocrates it is the order and series of critical days.

Co'ssis. A little tubercle in the face, like the head of a worm.

Co'ssum. A malignant ulcer of the nose, mentioned by Paracelsus.

COSTA. (*a, æ.* f.; from *consto* probably.) 1. In *Anatomy*, the rib of an animal. The ribs are the long curved bones which are placed in an oblique direction at the sides of the chest. Their number is generally twelve on each side; but, in some subjects, it has been found to be thirteen, and in others, though more rarely, only eleven. They are distinguished into true and false ribs. The seven upper ribs, which are articulated to the sternum, are called *true* ribs; and the five lower ones, which are not immediately attached to that bone, are called *false* ribs. At the posterior extremity of each rib we observe a small head, divided by a middle ridge into two articulating surfaces, covered with cartilage, which are received into two cavities contiguous to each other, and formed in the upper and lower part of each dorsal vertebra, as we have observed in our description of the spine. This articulation, which is secured by a capsular ligament, is a species of ginglymus, and allows only of motion upwards and downwards. The head of each rib is supported by a short neck, and immediately beyond this we find a flattened tubercle, affording an oblong and slightly convex surface, which is articulated with the transverse process of the lowest of the two dorsal vertebræ, with which its head is articulated. At some little distance from this tuberosity, the rib makes a considerable curve, which is usually called its angle. From the tubercle to the angle the ribs are of considerable thickness, and approaching to a cylindrical shape; but, from the angle to their anterior extremity, they become thinner and flatter. To this anterior extremity is fixed a long, broad, and strong cartilage, which, in each of the true ribs, reaches to the sternum, where its articulation is secured by a capsular ligament, and by other ligamentous fibres. The cartilages of the sixth and seventh ribs being longer than the rest, are extended upwards, in order to reach the sternum, the inferior portion of which is about on a level with the fifth rib. The cartilages of these two ribs are usually united into one, so as to leave no space between them. The false ribs are supported in a different manner; their cartilages terminate in an acute point before they reach the sternum, the eighth rib being attached by its cartilage to the lower edge of the cartilage of the seventh, or last of the true ribs; the ninth in the same manner to the eighth; and the tenth to the ninth; the cartilages of each rib being shorter than that of the rib above it. The eleventh and twelfth, which are the two lowermost ribs, are not fixed at their anterior extremities like the other ribs, but hang loose, and are supported only by their ligamentous fibres, and by muscles and other soft parts.

The external surface of each rib is somewhat convex, and its internal surface slightly concave. On the inferior and interior surface of these bones we observe a long fossa, for the lodgment of the intercostal vessels and nerves. This channel, however, does not extend through the whole length of the rib,

being observable neither at the posterior extremity, where the vessels have not yet reached the bone, nor at the fore-end, where they are distributed to the parts between the ribs. We seldom see any marks of it in the short ribs, as in the first, second, eleventh, and twelfth.

Thus far we have given a description, which is applicable to the ribs in general; but, as we find them differing from each other in shape, length, situation, and other respects, it will be right to speak of each rib in particular.

The *first* rib, which is the shortest of any, is likewise the most curved. It is broader than the other ribs, and, instead of being placed, as they are, obliquely, and with its edges upwards and downwards, it is situated nearly in a transverse direction, one of its edges being placed inwards, or nearly so. Of these edges, the inner one is sharp, and the outer one somewhat rounded. Its inner surface is smooth, and its superior surface is sometimes slightly depressed anteriorly by the clavicle. The head of this rib, instead of being angular, is flattened, and slightly convex, being received into a cavity, which is formed wholly in the first vertebra, and not by two vertebræ, as in the case with the other ribs.

The *second* rib is longer than the first, but shorter than the ribs below it. Its angle is placed at a small distance from its tuberosity, and its head is articulated with two vertebræ, like the other ribs. The other ten ribs, the two last only excepted, differ from the general description we have given, chiefly in the difference of their length, which goes on gradually increasing, from the first or uppermost, to the seventh or last of the true ribs, and as gradually diminishing from that to the twelfth. Their obliquity, in respect to the spine, likewise increases as they descend, as does the distance between the head and angle of each rib, from the first rib to the ninth. The two lowest ribs differ from all the rest in the following particulars: — Their heads, like that of the first rib, are rounded, and received into a cavity formed entirely in the body of one vertebra; they have no tubercle for their articulation with the transverse processes, to which they are only loosely fixed by ligaments, and, in this respect, the tenth rib is sometimes found to agree with them: they are much shorter than the rest of the false ribs, and the twelfth is still shorter than the eleventh. The length of the latter, however, is different in different subjects, and is not always found to be the same on both sides. Anteriorly, as we have already observed, their cartilages are short and loose, not being attached to the cartilages of the other ribs; and this seems to be, because the most considerable motions of the trunk are not performed on the lumbar vertebræ alone, but likewise on the lower vertebræ of the back; so that if these two ribs had been confined anteriorly, like the rest, and likewise united to the bodies of two vertebræ, and to the transverse process, this disposition would have impeded the motion of the two last vertebræ of the back, and consequently would have affected the motion of the trunk in general.

The use of the ribs is to give form to the thorax, and to cover and defend the lungs; also to assist in breathing; for they are joined to the vertebræ by regular hinges, which allow of short motions, and to the sternum by cartilages, which yield to the motion of the ribs, and return again when the muscles cease to act.

2. In *Botany*, the thick middle nerve-like cord of a leaf, which proceeds from its base to the apex. See *Leaf.*

Costa herba. See *Hypochæris.*

Costa pulmonaria. See *Hypochæris.*

COSTAL. (*Costalis*; from *costa*, a rib.) Belonging to a rib: applied to muscles, arteries, nerves, &c.

COSTA'TUS. Ribbed: applied to leaves, and is synonymous with *nervous*; the leaf having simple lines extended from the base to the point. See *Leaf.*

COSTIVENESS. See *Constipation.*

Costo-hyoideus. A muscle, so named from its origin and insertion. See *Omohyoideus.*

CO'STUS. (*us, i.* m.; from *kasta*, Arabian.) The name of a genus of plants in the Linnæan system. Class, *Monandria*; Order, *Monogynia.*

Costus amarus. See *Costus arabicus.*

Costus arabicus. The sweet and bitter costus. *Costus indicus*; *amarus*; *dulcis*; *orientalis.* The root of this tree possesses bitter and aromatic virtues, and is considered as a good stomachic. Formerly there were two other species, the *bitter* and *sweet*, distinguished for use. At present, the Arabic only is known, and that is seldom employed. It is, however, said to be stomachic, diaphoretic, and diuretic.

Costus corticosus. See *Winteria aromatica.*

Costus hortorum minor. The *Achillæa ageratum.*

Costus nigra. The artichoke.

Cotaro'nium. A word coined by Paracelsus, implying a liquor into which all bodies, and even their elements, may be dissolved.

Co'tis. (From κοτ́η, the head.) The back part of the head; sometimes the hollow of the neck.

COTTON. See *Gossypium herbaceum.*

Cotton-weed. See *Filago.*

CO'TULA. (*a, æ.* f.; diminutive of *cos*, a whetstone, from the resemblance of its leaves to a whetstone; or from κοτυλη, a hollow.) Stinking chamomile.

Cotula fœtida. See *Anthemis cotula.*

CO'TULE. (*e, es.* f. Κοτυλη, the name of an old measure.) The socket of the hipbone. See *Acetabulum.*

COTYLEDON. (*on, onis. f.*; from κοτυλη, a cavity.) Seed-lobe, or cotyledon. The *cotyledones* are the two halves of a seed, which, when germinating, become two pulpy leaves, called the *seminal leaves.* These leaves are often of a different *form* from those which are about to appear; as in the *Raphanus sativus:* and sometimes they are of another *colour;* as in *Cannabis sativa,* the seminal leaves of which are white.

Almost all the cotyledons wither and fall off, as the plant grows up.

These bodies are spoken of in the plural, because it is much doubted whether any plant can be said to have a solitary cotyledon, so that most plants are *dicotyledonous.* Plants without any, are called *acotyledones.* Those with more than two, *polycotyledonous.*

Between the two cotyledons of a germinating seed, is seated the *embryo*, or germ of the plant, called by Linnæus, *corculum*, or little heart, in allusion to the heart of the walnut. Mr. Knight denominates it the germen: but that term is appropriated to a very different part, the rudiment of the fruit. The expanding embryo, resembling a little feather, has, for that reason, been called by Linnæus, *plumula:* it soon becomes a tuft of young leaves, with which the young stem ascends. See *Corculum.*

COTYLOID. (*Cotyloides:* from κοτυλη, the name of an old measure, and ειδος, resemblance.) Resembling the old measure or *cotule.*

Cotyloid cavity. See *Innominatum os.*

COUCHING. A surgical operation that consists in removing the opake lens out of the axis of vision, by means of a needle constructed for the purpose.

Couch-grass. See *Triticum repens.*

COUGH. A cough is, by the Latins, called *tussis*, and by the Greeks, *bex.* It is a sonorous and violent expulsion of air from the lungs, and is well known to accompany, as a symptom, a great multiplicity of other affections, some of which are very remote from the seat of coughing: thus it occurs in pleurisy, pneumonitis, quinsy, asthma, catarrh, phthisis, hysteria, &c.: on this account some nosologists, and amongst them Dr. Cullen, have omitted cough as an idiopathic disease, and have only introduced it as synonymous with catarrh, though it belongs as much to phthisis. Cough undoubtedly occurs in its most frequent appearance as a symptom of some other complaint, but it is at times as truly idiopathic as any other disease, and ought to be treated as such. Under this form its seat is in the chest; and the parts principally affected are the trachea, bronchia, the membranes and substance of the lungs. In the act of coughing, the lungs, like the stomach in vomiting, continue inert; and the active or convulsive part by which the lungs are emptied, is performed by the muscles of respiration. "It is not necessary," Mr. John Hunter observes, "that the stomach should act violently, to produce the evacuation of its contents; nor is it even necessary that it should act at all: for the lungs themselves do not act in the least when any extraneous matter is to be thrown up; and coughing is to the lungs what vomiting is to the stomach. The muscles of respiration are the active parts in emptying the lungs, and can act naturally and preternaturally. The action of vomiting is performed entirely by the diaphragm and abdominal muscles; and we know, by the same action, that the contents of the rectum can be expelled." Generally speaking, idiopathic cough is not dangerous in itself, or while running its regular course: but it has often proved highly dangerous in its results, by superinducing inflammation of some organ, an hæmoptoe, or phthisis.

A cough is in some cases attended by an expectoration, which is either mucous or serous, and sometimes it exists without any.

The *mucous cough.*—This has been named by writers, *anaptysis, anacatharsis, bex humida,* and *tussis humida.* The expectoration is chiefly mucous, and is excreted very freely: it is closely allied to catarrh. In it the exhalents of the mucous membrane of the bronchia are stimulated by an irritation of some kind or other, frequently by a reverse sympathy, in consequence of cold and torpid feet, to act more powerfully than in a state of ordinary health, whence the bronchial vessels become overloaded, and relieve themselves by an expectoration that takes place freely, and without the hoarseness that usually accompanies catarrh, or any other troublesome disturbance of the respiratory organs. This kind of cough is often a chronic disease in old age, when it takes place in long paroxysms, with a viscid and mucous discharge, excreted with some difficulty, and more or less of difficulty of breathing. Here the bronchial secretion of mucous is, perhaps, less copious than in ordinary health; but the action of the absorbents being as weak and sluggish as that of the excretories, the thinner parts of the mucus alone are imbibed and carried off: and hence what remains is necessarily small in quantity, peculiarly tenacious, and thrown up with great labour and repeated efforts. A cough of this nature, though common to persons advanced in life, occurs also to those whose lungs and bronchial vessels are rendered weak and irritable from a neglect of common mucous coughs, which have thus become habitual, and which are much increased on every change of atmosphere, and particularly during the inclemency of winter.

In some cases, the fluid that is coughed up is thin, frothy, and saline, and generally a depraved secretion: constitutions that are gouty, rheumatic, and bilious, and more especially such as have had occasional attacks of chronic hepatitis, afford this kind of expectoration and cough.

The *dry cough.* There is a cough which is mostly unattended by any expectoration, and which often returns periodically. It is ob-

served in highly irritable, and nervous, and hysterical constitutions, and is obviously *nervous*.

With respect to the treatment of cough: that which is produced by the irritation of the phlegm, and by cold, requires diaphoretics, demulcents, and expectorants; as small doses of compound powder of ipecacuanha, with saline draughts, tepid pediluvia, warm baths, and ptisans of barley water, the decoctum hordei compositum, oily emulsions, and pleasant mucilaginous and oily linctuses, honey, the jelly of subacid fruits, as currants and raspberries, preparations of liquorice; and, where the cough has become more habitual, and attends old age, the more stimulating expectorants, as garlic, ammoniacum, benzoin, styrax, and, where the expectoration is considerable and the temperament phlegmatic, the vapour of tar inhaled twice a day for half an hour at each time, and the internal use of dilute acidum abietis, or tar water. The nervous cough requires narcotics; as henbane, stramonium, camphire, volatile alkali, and the milder sedatives of papaver, opium, hyosciamus, conium, &c.

The hooping-cough is different from these. See *Pertussis*.

Co'um. Colchicum, or meadow-saffron.

COUNTER-OPENING. *Contra-apertura.* An opening made in any part of an abscess opposite to one already in it. This is often done in order to afford a readier egress to the collected pus.

Coup de soleil. The French for an erysipelas or apoplexy, or any affection produced instantaneously from a scorching sun.

Cou'rap. (Indian.) The provincial name of a disease of the skin common in Java, and other parts of the East Indies, accompanied by a perpetual itching and discharge of matter.

Cou'rbaril. The tree which produces the gum anime. See *Anime*.

Couro'ndi. An evergreen tree of India, said to be antidysenteric.

Couroy moelli. A shrub of India, said to be antivenomous.

Cou'scous. An African food, much used about the river Senegal. It is a composition of the flour of millet, with some flesh, and what is there called lalo.

COUVRE-CHEF. The name of a bandage.

Covola'm. See *Cratæva marmelos*.

COW. See *Bos taurus*.

COWHAGE. See *Dolichos pruriens*.

COW-ITCH. See *Dolichos pruriens*.

COWPER, William, was born about the middle of the 17th century, and became distinguished as a surgeon and anatomist in this metropolis. His first work, entitled *Myotomia Reformata*, in 1694, far excelled any which preceded it on that subject in correctness, though since surpassed by Albinus. Three years after, he published at Oxford, "The Anatomy of Human Bodies," with splendid plates, chiefly from Bidloo; but forty of the figures were from drawings made by himself: he added also some ingenious and useful anatomical and surgical observations. Having been accused of plagiarism by Bidloo, he wrote an apology, called "Eucharistia," preceded by a description of some glands, near the neck of the bladder, which have been called by his name. He was also author of several communications to the Royal Society, aud some observations inserted in the Anthropologia of Drake. He died in 1710.

Cowper's glands. (*Glandulæ Cowperi;* named from Cowper, who first described them.) Three large muciparous glands of the male, two of which are situated before the prostate gland, under the accelerator muscles of the urine, and the third more forward, before the bulb of the urethra. They excrete a fluid, similar to that of the prostate gland, during the venereal orgasm.

COW-POX. *Vaccinia. Variola vaccina.* Any pustulous disease affecting the cow may be called the cow-pox: whether it arises from an over-distension of the udder, in consequence of a neglect in milking the cow, or from the sting of an insect, or any other cause. But the species which claims our particular attention, is that which was recommended to the world by Dr. Jenner, in the year 1798, as a substitute for the small-pox. This, which originates from the grease in the horse's heel, is called the *genuine cow-pox;* all other kinds are *spurious*.

That the vaccine fluid, fraught with such unspeakable benefits to mankind, derives its origin from this humble source, however it may mortify human pride or medical vanity, is confirmed by the observations and experiments of competent judges. For proofs of this assertion, the reader may consult the works of Dr. Jenner; the Medical and Physical Journal; and a treatise on the subject by Dr. Loy, of which an analysis is given in the Annals of Medicine for the year 1801; and Mr. Ring's work on this disease, which contains the whole mass of evidence that has appeared concerning it.

The genuine cow-pox appears on the teats of the cow, in the form of vesicles, of a blue colour approaching to livid. These vesicles are elevated at the margin, and depressed at the centre. They are surrounded with inflammation. The fluid they contain is limpid. The animals are indisposed; and the secretion of milk is lessened. Solutions of the sulphates of zinc and copper are a speedy remedy for these pustules; otherwise they degenerate into ulcers, which are extremely troublesome. It must, however, be recollected, that much of the obstinacy attending these cases is owing to the friction of the pustules, in consequence of milking. It is probable, that a solution of the acetate of lead would be preferable to irritating appliations.

Similar effects are produced in the hands of the milkers, attended with febrile symptoms, and sometimes with tumours in the axilla. Other parts, where the cuticle is abraded, or which are naturally destitute of

that defence, are also liable to the same affection, provided active matter is applied. It even appears that, in some instances, pustules have been produced by the application of vaccine virus to the sound cuticle. One case of this kind may be found in a letter from Dr. Fowler, of Salisbury, to Dr. Pearson, published in the first work of Dr. Pearson on this subject.

The spurious cow-pox is white; and another criterion is, that both in the brute animal and in the human subject, when infected with the casual cow-pox, the sores occasioned by the genuine species are more difficult to heal than those which are occasioned by the spurious kind. It is of the utmost importance to distinguish the genuine from the spurious sort, which is also, in some degree, infectious; since a want of such discrimination would cause an idea of security against the small-pox, which might prove delusive.

Dr. Jenner has elucidated one point of the first importance, relative to the genuine cow-pox itself. It had frequently been observed, that when this disorder prevailed in a farm, some of the persons who contracted it by milking were rendered insusceptible of the small-pox, while others continued liable to that infection. This is owing to the different periods at which the disease was excited in the human subject: one person, who caught the disease while the virus was in an active state, is rendered secure from variolous contagion; while another, who received the infection of the cow-pox when it had undergone a decomposition, is still susceptible of the small-pox. This uncertainty of the prevention, the value of which is beyond all calculation, is probably the reason why it was not before introduced into practice.

From the violent opposition which vaccine inoculation has met with, in consequence of certain apparent failures in the casual way, it may be doubted whether the public would ever have adopted the practice, had not this fallacy been detected by Dr. Jenner. To him, also, we are indebted for another discovery of the first importance, namely, that the pustule excited in the human subject by vaccine matter, yields a fluid of a similar nature with that which was inserted. This experiment, so essential to the general propagation of the practice, and so happy in its result, was never before attempted. It was reserved to crown the labours of Dr. Jenner.

A considerable number of instances are on record, to prove that farriers and others, who receive infection from the heel of a horse, are either partly or totally deprived of the susceptibility of the small-pox. When Dr. Jenner first published an account of his discoveries, this point was enveloped in some degree of obscurity. He then conceived, that the matter of grease was an imperfect preservative against the small-pox. This opinion was founded on the following circumstance:—It had been remarked, that farriers either wholly escaped the small-pox, or had that distemper in a milder manner than other people. This, however, is easily reconcileable to reason, if we only suppose, that in some cases the infection is communicated when the virus possesses all its prophylactic virtue; and in others, when its specific quality is in some measure lost.

This variation in the effects produced by the virus of the horse, inclined Dr. Jenner to believe that it was modified, and underwent some peculiar alteration in the teats of the cow. He concluded, that it is perfect when it excites the genuine disease in the cow; yet a considerable advantage is derived from its being transferred to the latter animal, the nipples of which furnish a more obvious and a more abundant source of this inestimable fluid, than its original element the horse.

This theory, that the preservative against variolous contagion is perfect when it issues from the fountain-head, and comes immediately from the hands of Nature, is consonant with reason, and consistent with analogy. Thus one obstacle more to the universal adoption of the practice is removed.

Another point respecting vaccine inoculation, which has been much controverted, is the permanency of its effect. Instances have been known where persons have escaped the small-pox for a number of years, and yet have ultimately proved not insusceptible of its infection. When such persons had previously undergone the vaccine disease, their apparent security was erroneously ascribed to that cause; but we have not even a shadow of proof, that the cow-pox possesses in the least degree the property of a temporary prophylactic, since it appears not even to retard the eruption of the small-pox, where previous infection has been received.

By this remark, it is not meant to be asserted, that it never supersedes or modifies the small-pox, for we have great reason to believe that such beneficial effects often flow from vaccination; but where an eruption of the small-pox actually takes place after vaccine inoculation, the two diseases frequently co-exist, without retarding each other in the smallest degree. It is, therefore, contrary to all reason and analogy, to consider the cow-pox as a mere temporary preservative: it is nothing less than a perfect and permanent security against that terrible disease.

A number of cases are recorded by Dr. Jenner, and other authors who have written on this subject, in which persons who have received the cow pox by casual infection, twenty, thirty, forty, and fifty years before, still continued insusceptible of variolous contagion, in whatever form it was applied.

As the cow-pox destroys the susceptibility of the small-pox, so the small-pox destroys that of the cow-pox. To this general rule, however, a few exceptions are said to have occurred. Certain it is, that a pustule has now and then been excited by the insertion of vaccine virus, in those who have had the

small-pox, and that this pustule has been known to yield the genuine virus; but it is not equally certain that the pustule has been perfect in all respects. Possibly it may have been defective in point of size or duration, in respect to its areola, or the limpidity of its contents. That such a pustule has, in some instances, yielded effectual virus, is admitted; but this is no more than what has often happened, in cases where persons who have had the small-pox are a second time submitted to that infection in the same form.

The artificial cow-pox in the human subject is much milder than the casual disease; and incomparably milder than the small-pox, even under the form of inoculation. It neither requires medicine nor regimen; it may be practised at any season of the year; and, not being infectious by effluvia, one person may be inoculated without endangering the life of another.

This affection produces no pustulous eruptions. When such attend vaccine inoculation, they are owing to some adventitious cause, such as the small-pox, which it is well known may co-exist with the cow-pox. The vaccine vesicle is confined to the parts where matter is inserted; it is, therefore, entirely a local and an inoculated disease. Nevertheless, it is certain, that eruptions of other kinds, in some instances, attend vaccine inoculation; such as a nettle-rash, or an eruption resembling a tooth-rash, but rather larger than what is commonly called by that name.

Among other singularities attending the cow-pox, the mildness of the disease, under the form of inoculation, has been urged as an argument against the practice, the cause appearing, to ordinary comprehensions, inadequate to the effect. This, it must be allowed, is the best apology that can be offered for scepticism on that point; but it will weigh but little when put into the scale against actual observation, and incontrovertible fact. The efficacy of the cow-pox as a safeguard against the small-pox, rests, perhaps, on more extensive evidence, and a more solid foundation, than any other axiom in the whole circle of medical science.

That the cow-pox is not infectious by effluvia, is naturally concluded from its never being communicated from one person to another in the dairies, where the disease is casual, and appears under its worst form. The same inference may be drawn from its never spreading in a family, when only one person is inoculated at a time. To confirm this proposition more fully, the vaccine pustules have been ruptured, and persons who have never had the disorder have been suffered to inhale the effluvia several times a day, but to no purpose. This is no more than might be expected, in an affection where the pustulous appearance on the surface of the body is nearly local.

As to the constitutional indisposition, it is seldom considerable, unless there is a complication of this with some other distemper; and whenever any unfavourable symptoms appear, they may in general be traced to some other cause. We have, indeed, great reason to believe, that no ill consequence ever arises from the cow-pox itself, unless from ignorance or neglect.

But notwithstanding the symptoms are so mild, they frequently occur at a very early period. A drowsiness, which is one of the most common attendants of the disease, is often remarked by the parents themselves, within forty-eight hours after the matter is inserted. In a majority of cases, a slight increase of heat is perceptible, together with an acceleration of the pulse, and other signs of pyrexia; but not in such a degree as to alarm the most timorous mother. Sometimes the patient is restless at nights; and now and then a case is met with, in which vomiting occurs; but, in many cases, no constitutional indisposition can be perceived. Even then, the cow-pox has never failed to prove an effectual preservative against the small-pox, provided the pustule has been perfect.

This being the grand criterion of the security of the patient, too minute an attention cannot be paid to its rise, progress, and decline. The best mode of inoculating, is by making a very small oblique puncture in the arm, near the insertion of the deltoid muscle, with the point of a lancet charged with fluid matter. In order to render infection more certain, the instrument may be charged again, and wiped upon the puncture.

In places where the patient is likely to be exposed to variolous contagion, it is advisable to inoculate in more places than one; but unless there is danger of catching the small-pox, it is better not to make more than one puncture in each arm, lest too much inflammation should ensue.

The vaccine fluid may be taken for inoculation as soon as a vesicle appears; but if the vesicle is punctured at a very early period, it is more apt to be injured. When virus is wanting for inoculating a considerable number, it is better to let the pustule remain untouched, till about the eighth day, by which time it has in general acquired a reasonable magnitude. After that day, if the pustule has made the usual progress, the matter begins to lose its virtue; but it may, in general, be used with safety, though with less certainty of producing infection, till the areola begins to be extensive.

The first sign of infection commonly appears on the third day. A small red spot, rather elevated, may be perceived at the place where the puncture was made. Sometimes, however, the mark of infection having succeeded, is not visible till a much later period. It may be retarded, or even entirely prevented, by any other disorder; such as dentition, or any complaint attended with fever, or by extreme cold. Another frequent cause of a slow progress in the pustule, or a total failure of success, is debility. Sometimes it is impossible to discover any sign of infec-

tion for above a fortnight. In this respect the cow-pox is subject to the same laws, and liable to the same variation, as the small-pox.

When a considerable inflammation appears within two or three days after inoculation, there is reason to suspect that infection has not taken place; and if suppuration ensues, that suspicion ought, in general, to stand confirmed. Now and then, however, it happens, that after the spurious pustule, or more properly speaking, the phlegmon, has run its course, which is within a few days, a vesicle begins to appear, bearing every characteristic of the genuine vaccine disease, and yielding a limpid and efficient virus for future inoculations. In this case the patient is as perfectly secured from all danger of the small-pox, as if no festering of the puncture had preceded. The occurrence of such a case, though rare, is worthy to be recorded; because some practitioners have concluded a spurious pustule to be a certain proof of failure.

The areola commonly begins to be extensive on the ninth day, and to decline about the eleventh or twelfth. At this period also the pustule begins to dry; the first sign of which is a brown spot in the centre. In proportion as this increases, the surrounding efflorescence decreases, till at length nothing remains but a circular scab, of a dark brown mahogany colour, approaching to black. Sometimes it resembles the section of a tamarind stone; and it often retains the depression in the centre, which characterises this disease before exsiccation takes place.

Instances have been known, where the vaccine pustule, though regular, and perfect in all other respects, has been totally destitute of areola; at least, where neither the medical practitioner, on visiting the patient, nor the attendants, have remarked any appearance of that symptom. In these cases, the patient has proved as insusceptible of variolous infection, as if the surrounding efflorescence had covered the whole arm. It must, however, be confessed, that we have no proof of the non-existence of an areola in these cases. It might have been trivial, it might have been transient; yet it might have been effectual. There is, however, greater reason to believe, that the surrounding efflorescence, though usually a concomitant circumstance, is not an essential requisite to the vaccine disease.

If by any accident the vesicle is ruptured, suppuration often ensues. In this case more attention than ordinary ought to be paid to the progress, and to all the phænomena of the local affection; both on account of the uncertainty of success in the pustule, as a prophylactic, and the greater probability of tedious ulceration.

If there is room for the least doubt of the sufficiency of the first inoculation, a second ought to be performed without delay. This, if unnecessary, is seldom attended with inconvenience, and never with danger. Either no effect is produced, or a slight festering, which terminates in a few days. An exception occurs but rarely where a spurious, or perhaps even a genuine, pustule takes place in those persons who are known to have had the cow-pox, or the small-pox already; but this cannot be the least cause of alarm to any one who knows the benign character of the distemper.

Various topical applications, both stimulant and sedative, have been recommended, in order to allay the violence of inflammation. If the operation for the insertion of matter is not unnecessarily severe, nor the pustule irritated by friction, or pressure, or other violence, no such applications are necessary. Nevertheless, if either the anxiety of the professional man, or the importunity of a tender parent, should demand a deviation from this general rule, any of the following remedies may be had recourse to. The pustule may be touched with very diluted sulphuric acid; which should be permitted to remain on the part half a minute, and then be washed off with a sponge dipped in cold water. This has been ignorantly, or artfully, called an escharotic; but any one who tries the application will soon discover that its operation is mild and harmless.

To avoid cavil and misrepresentation, it is better to apply a saturnine lotion; compresses, dipped in such a lotion, may be applied at any time when inflammation runs high, and renewed as occasion requires.

If the pustule should chance to be broken, a drop of the liquor plumbi acetatis undiluted, may be applied as an exsiccant; but if ulceration threatens to become obstinate or extensive, a mild cataplasm is the best resource. In case the ulceration is only superficial, and not attended with immoderate inflammation, a bit of any adhesive plaster, spread on linen, will prove the most convenient dressing, and seldom fail of success. It will, in general, be unnecessary to renew it oftener than every other day.

These minute observations no one will despise, unless there be any person so ignorant as not to know that the care of the arm is almost the whole duty of the medical practitioner in vaccine inoculation; and that nothing disgusts the public so much against the practice as a sore arm, and the ill consequences which, from a neglect of that symptom, too often ensue.

When fluid virus cannot be procured, it is necessary to be cautious how it is preserved in a dry state. The most improper mode is that of keeping it on a lancet; for the metal quickly rusts, and the vaccine matter becomes decomposed. This method, however, is as likely to succeed as any, when the matter is not to be kept above two or three days. If the virus be taken on glass, care must be taken not to dilute it much, otherwise it will probably fail.

Cotton thread is a very commodious vehicle. If it is intended to be sent to any considerable distance, it ought to be repeat-

edly dipped in the virus. No particular caution is necessary with regard to the exclusion of air; nevertheless, as it can be done with so little trouble, and is more satisfactory to those who receive the matter, it is better to comply with the practice. On this account it may be enclosed in a glass tube, or in a tobacco-pipe sealed at each end, or between two square bits of glass, which may, if necessary, be also charged with the matter, and wrapped in gold-beater's skin.

Nothing is more destructive to the efficacy of cow-pock matter than heat: on this account it must not be dried near the fire, nor kept in a warm place. The advantage of inserting it in a fluid state is so great, that it is to be wished every practitioner would endeavour to keep a constant supply for his own use, by inoculating his patients in succession, at such periods as are most likely to answer that purpose.

The rapidity with which this practice now spreads in various parts of the globe, justifies our cherishing a hope, that it will, ere long, extinguish that most dreadful pestilence, and perpetual bane of human felicity, the small-pox.

CO'XA. (*a, æ.* f.) The hip, haunch, or hip-joint; also, the ischium and the os coccygis.

COXE'NDIX. (*ix, icis.* f.; from *coxa*, the hip.) The ischium; the hip-joint.

CRAB. See *Cancer.*

Crablouse. A species of pediculus which infests the axillæ and pudenda.

Crab-yaws. A name in Jamaica for a kind of ulcer on the soles of the feet, with callous lips, so hard that it is difficult to cut them.

CRA'MBE. (*e, es.* f. Κραμϐη, the name given by Dioscorides, Galen, and others, to the cabbage; the derivation is uncertain.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliculosa.* Cabbage.

Crambe maritima. The sea-cole, or sea-kale. A delicious vegetable when forced and blanched. It is brought to table about Christmas, has a delicate flavour, and is much esteemed. Like to all oleraceous plants, it is flatulent and watery.

CRAMP. (*Crampus*; from *krempen*, to contract. Germ.) See *Spasm.*

CRANESBILL. See *Geranium.*

Cranesbill, bloody. See *Geranium sanguineum.*

Crangon. See *Cancer crangon.*

CRA'NIUM. (*um, ii.* n. Κρανιον, *quasi* καρανιον; from καρα, the head.) The skull, or superior part of the head. See *Caput.*

Crante'res. (From κραινω, to perform.) A name given to the dentes sapientiæ and other molares, from their office of masticating the food.

CRA'PULA. (*a, æ.* f. Κραιπυλα.) A surfeit; drunkenness.

CRA'SIS. (*is, is.* f.; from κεραννυμι, to mix.) Mixture. Applied to the humours of the body, when there is such an admixture of their principles as to constitute a healthy state: hence in dropsies, scurvy, &c., the crasis, or healthy mixture of the principles of the blood, is said to be destroyed.

Cra'spedon. (Κρασπεδον, the hem of a garment; from κρεμαω, to hang down, and πεδον, the ground.) A relaxation of the uvula, when it hangs down in a thin, long membrane, like the hem of a garment.

CRASSAME'NTUM. (*um, i.* n.; from *crassus*, thick.) See *Blood.*

CRA'SSULA. (*a, æ.* f.; from *crassus*, thick: so named from the thickness of its leaves.) See *Sedum telephium.*

CRATÆ'GUS. (*us, i.* f.; from κραἶος, strength: so called from the strength and hardness of its wood.) The wild service-tree, of which there are many, are all species of the genus *Prunus.* The fruits are most of them astringent.

CRATEVA. (*a, æ.* f.; so called from Cratevas, a Greek physician, celebrated by Hippocrates for his knowledge of plants.) The name of a genus of plants. Class, *Polyandria*; Order, *Monogynia.*

Crateva marmelos. The fruit of this tree is astringent whilst unripe; but when ripe of a delicious taste. The bark strengthens the stomach, and relieves hypochondriac languors.

Crati'cula. (From *crates*, a hurdle.) The bar or grate which covers the ash-hole in a chemical furnace.

CRATON, John, called also Crafftheim, was born at Breslaw in 1519. His works were numerous: the principal are, "A Commentary on Syphilis;" "A Treatise on Contagious Fever;" another on "Therapeutics;" and seven volumes of Epistles and Consultations.

CRAW-FISH. See *Cancer fluviatilis.*

Cream of Tartar. See *Potassæ supertartras.*

CREEPING. See *Repens.*

CREMA'STER. (*er, eris.* m.; from κρεμαω, to suspend.) A muscle of the testicle, by which it is suspended, and drawn up and compressed, in the act of coition. It arises from Poupart's ligament, passes over the spermatic chord, and is lost in the cellular membrane of the scrotum, covering the testicles.

CRE'MNUS. (*us, i.* m.; from κρημνος, a precipice, or shelving place.) 1. The lip of an ulcer.

2. The labium pudendi.

CRE'MOR. (*or, oris.* m.) 1. Cream. The oily part of milk which rises to the surface of that liquid, mixed with a little curd and serum. When cream is agitated, as is done by the common process of churning, it separates into two parts, a thick animal oil, which is called *butter*, and a fluid which possesses exactly the same properties as milk that has been deprived of its cream. This change has been supposed to be owing to the combination of the cream with the oxygene of the atmosphere; but it takes place, though perhaps not equally well, in vessels from which the air is excluded.

Butter is generally of a yellow colour, and a soft consistence. At the temperature of 96° or 98° it melts, and when kept in this state for some time, a portion both of whey and curd separates from it. Butter, therefore, may be considered as an animal oil, united with a portion of whey and of curd.

2. Any substance floating on the top, and skimmed off.

CRENATUS. Crenate: notched, or scolloped. Applied to a leaf or petal, when the indentations are blunted or rounded, and not directed towards either end of the leaf; as in *Glecoma hederacea*. The two British species of *Salvia* are examples of doubly crenate leaves. The petals of the *Linum usitatissimum* are crenate.

CRE'PITUS. (*us, ûs.* m; from *crepo*, to make a noise.) A puff or little noise.

1. The word is generally employed to express the pathognomonic symptoms of air being collected in the cellular membrane of the body; for when air is in these cavities, and the part is pressed, a little cracking noise, or crepitus, is heard.

2. A belching. See *Flatulency*.

Crepitus lupi. See *Lycoperdon bovista*.

Crescent-shaped. See *Leaf*.

CRESS. There are several kinds of cresses eaten at the table, and used medicinally, as antiscorbutics.

Cress, garden. See *Lepidium sativum*.

Cress, sciatica. See *Lepidium iberis*.

Cress, water. See *Sisymbrium nasturtium aquaticum*.

Cress, wild. See *Sysimbrium nasturtium aquaticum*.

CREST. See *Crista*.

CRESTED. See *Cristatus*.

CRE'TA. (*a, æ.* f.) Chalk. An impure carbonate of lime. See *Creta præparata*.

Creta præparata. Prepared chalk. Take of chalk a pound; add a little water, and rub it to a fine powder. Throw this into a large vessel full of water; then shake them, and after a little while pour the still turbid liquor into another vessel, and set it by that the powder may subside; lastly, pouring off the water, dry this powder. This is a pure carbonate of lime, and is absorbent, and possesses antacid qualities: it is exhibited in form of electuary, mixture, or bolus, in pyrosis, cardialgia, diarrhœa, acidities of the primæ viæ, rachitis, crusta lactea, &c. and is said by some to be an antidote against white arsenic.

CRETACEOUS. (*Cretaceus; from creta*, chalk.) Chalky: appertaining to chalk.

Cretaceous acid. See *Carbonic acid*.

Crete, dittany of. See *Origanum*.

CRETINISMUS. (*us, i.* m.) Cretinism: a disease affecting chiefly the head and neck, and known by a vacant and stupid countenance; the mental faculties being feeble, or idiotic; the sensibility obtuse, and the thyroid gland mostly enlarged.

CRIBRIFO'RM. (*Cribriformis;* from *cribrum*, a sieve, and *forma*, likeness; because it is perforated like a sieve.) Perforated like a sieve. See *Ethmoid bone*.

CRICHTONITE. A mineral named after Dr. Crichton, which Jameson thinks is a new species of titanium ore. It is of a splendent velvet-black colour.

CRI'CO. Names compounded of this word belong to muscles which are attached to the cricoid cartilage.

Crico-arytænoideus lateralis. A muscle of the glottis, that opens the *rima* by pulling the ligaments from each other.

Crico-arytænoideus posticus. A muscle of the glottis, that opens the *rima glottidis* a little, and by pulling back the arytænoid cartilage, stretches the ligament so as to make it tense.

Crico-pharyngeus. See *Constrictor pharyngis inferior*.

Crico-thyroideus. The last of the second layer of muscles between the os hyoides and trunk, that pulls forwards and depresses the thyroid cartilage, or elevates and draws backwards the cricoid cartilage.

CRICOI'D. (*Cricoideus; Cricoides:* from κρικος, a ring, and ειδος, resemblance.) Ring-like: applied to a round ring-like cartilage of the larynx. See *Cartilago cricoidea*.

CRIMNO'DES. (From κριμνον, bran, and ειδος, resemblance.) Bran-like: applied to urine, which deposits a sediment like bran.

CRINA'TUS. (From κρινον, the lily.)

1. A term given to a suffumigation mentioned by P. Ægineta, composed chiefly of the roots of lilies.

2. Crinate. (from *crinis*, hair.) Hairy: hair-like.

CRI'NIS. The hair. See *Capillus*.

Crinomy'ron. (From κρινον, a lily, and μυρον, ointment.) An ointment composed chiefly of lilies.

CRINO. (*o, onis.;* from *crinis*, the hair.) The *malis a crinonibus*, of Etmuller and Sauvages. The *morbus pilaris*, of Horst. This is supposed to be a species of hair-worm, that insinuates itself under the skin of infants. It was epidemic, in the year 1776, at Seyne, and was called *cie*, which means a hair. It was cured by friction, which brought forth a kind of dark, rough filaments, resembling hair, not more than the twelfth of an inch in length, in some cases furnished with a minute bulb at the extremity.

Crio'genes. An epithet for certain troches, mentioned by P. Ægineta, and which he commends for cleansing ulcers.

CRIPSO'RCHIS. See *Crypsorchis*.

CRI'SIS. (*is, is.* f. Κρισις is a Greek term that imports separation, secretion, or the excretion of something from the body.) That tendency which fevers are, by many, supposed to possess, of undergoing a sudden change at particular periods of their progress. A sudden and considerable variation of any kind, whether favourable or unfavourable, occurring in the course of the general disease, and producing an influence on its character, is also expressed by the name of crisis. That changes

of this kind are perpetually occurring in the progress of continued fevers, is admitted by every considerate and experienced practitioner: nothing is more common than to see a patient suddenly and unexpectedly grow decidedly better or worse in the progress of a fever of almost any kind, and pass on rapidly towards a successful or unsuccessful termination: but the important consideration is, whether there be any particular periods in the progress of a fever in which such changes may be expected? Hippocrates conceived there were: he endeavoured to point out and distinguish them by the name of critical days. Asclepiades and Celsus denied the existence of such periods; and the same diversity of opinion has prevailed in modern times.

Crispatu'ra. (From *crispo*, to curl.) A spasmodic contraction or curling of the membranes and fibres.

CRISPUS. Crisp: curled. Applied to a leaf, when the border is so much more dilated than the disk, that it necessarily becomes curled and twisted; as in *Malva crispa*, &c.

CRI'STA. (*a, æ.* f.; *quasi cerista*, from κερας, a horn; or *carista*, from καρα, the head, as being on the top of the head.) Any thing which has the appearance of a crest, or the comb upon the head of a cock.

1. In *Anatomy*, it is thus applied to a process of the ethmoid bone, *christa galli*, and to a part of the *nymphæ; — crista clitoridis.*

2. In *Surgery*, to excrescences, like the comb of a cock, about the anus.

3. In *Botany*, to several accessary parts or appendages, chiefly belonging to the antheræ of plants; as the pod of the *Hedysarum crista galli*, &c.

Crista galli. An eminence of the ethmoid bone, so called from its resemblance to a cock's comb. See *Ethmoid bone.*

CRISTATUS. Crested: applied to several parts of plants.

Cri'thamum. See *Crithmum.*

CRI'THE. (*e, es.* f. Κριθη, barley.) A stye or tumour on the eyelid, in the shape and of the size of a barley-corn.

Crithe'rion. (From κρινω, to judge.) The same as crisis.

CRI'THMUM. (*um, i.* n.; from κρινω, to secrete: so named from its supposed virtues in promoting a discharge of the urine and menses.) Samphire, or sea-fennel.

Crithmum maritimum. The samphire, or sea-fennel. *Herba Sancti Petri. Crithmum* of the pharmacopœias. It is a low perennial plant, and grows about the sea-coast in several parts of the island. It has a spicy aromatic flavour, which induces the common people to use it as a pot-herb. Pickled with vinegar and spice, it makes a wholesome and elegant condiment, which is in much esteem.

CRITHO'DES. (From κριθη, barley, and ειδος, resemblance.) Resembling a barley-corn: applied formerly to small protuberances.

CRI'TICAL. (*Criticus*; from *crisis*; from κρινω, to judge.) Determining the event of a disease. See *Crisis.*

CROCEUS. A deep yellow. In general use to designate the colour of plants, animals, minerals, &c.

CROCIDI'XIS. (*is, idis.* f.; from κροκιδιζω, to gather wool.) Floccilation. A fatal symptom in some diseases, where the patient gathers up the bed-clothes, and seems to pick up substances from them.

Cro'cinum. (From κροκος, saffron.) A mixture of oil, myrrh, and saffron.

Croco'des. (From κροκος, saffron; so called from the quantity of saffron they contain.) A name of some old troches.

Crocoma'gma. (From κροκος, saffron, and μαγμα, the thick oil or dregs.) A troch made of oil of saffron and spices.

CROCONIC. (*Croconicus*, from *crocus*; the plant the stamina of which afford a yellow colour; and so called because the acid which bears this name yields many combinations of the same colour.) Of or belonging to an acid, obtained from tartar by a peculiar method, which is yellow. See *Croconic acid.*

Croconic acid. *Acidum croconicum.* When potassium is prepared from calcined tartar by Brunner's process, a gas is evolved which deposits a greyish-brown substance on cold bodies. This substance, with a little water, is separated into two parts; one very soluble, yielding a brownish-yellow liquid, which, spontaneously concentrated, furnishes an acicular orange coloured salt. This salt, purified by repeated crystallisation, has been called, by M. Gmelin, *croconate of potash*, because it contains a yellow acid, which yields many combinations of the same colour. Croconic acid is obtained by treating this salt with absolute alkohol, to which a little sulphuric acid has been added. — *Ure.*

CRO'CUS. (*us, i.* and *um, i.* n. Κροκος of Theophrastus. The story of the young Crocus, turned into this flower, may be seen in the fourth book of Ovid's Metamorphoses. Some derive this name from κροκη or κροκις, a thread; whence the stamens of flowers are called κροκιδες. Others, again, derive it from *Coriscus*, a city and mountain of Cilicia, and others from *crokin*, Chald.) Saffron.

1. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Monogynia.* Saffron.

2. The pharmacopœial name of the prepared stigmata of the saffron plant. See *Crocus sativus.*

3. A term given by the older chemists to several preparations of metallic substances, from their resemblance: thus, *Crocus martis, Crocus veneris.*

Crocus antimonii. A sulphuretted oxide of antimony.

Crocus germanicus. See *Carthamus.*

Crocus indicus. See *Curcuma.*

Crocus martis. Burnt green vitriol.

Crocus metallorum. A sulphuretted oxide of antimony. See *Antimony.*

Crocus officinalis. See *Crocus sativus.*

CROCUS SARACENICUS. See *Carthamus.*

CROCUS SATIVUS. The systematic name of the saffron plant.

Crocus — spatha univalvi radicali, corollæ tubo longissimo, of Linnæus. Saffron has a powerful, penetrating, diffusive smell, and a warm, pungent, bitterish taste. Many virtues were formerly attributed to this medicine, but little confidence is now placed in it. The Edinburgh college directs a tincture, and that of London, a syrup of this drug.

CROCUS VENERIS. Copper calcined to a red powder.

CRO'MMYON. (Παρα το τας κορας μυειν, because it makes the eyes wink.) An onion.

CROMMYOXYRE'GMA. (From κρομμυον, an onion, οξυς, acid, and ρηγνυμι, to break out.) An acid eructation, accompanied with a taste resembling onions.

CROONE, WILLIAM, was born in London, where he settled as a physician, after studying at Cambridge. In 1659, he was chosen rhetoric professor of Gresham College, and soon after register of the Royal Society, which then assembled there. In 1662, he was created doctor in medicine, by mandate of the king, and the same year elected fellow of the Royal Society, and of the College of Physicians. In 1670 he was appointed lecturer on anatomy to the Company of Surgeons. On his death, in 1684, he bequeathed them 100*l.*; his books on medicine to the College of Physicians, as also the profits of a house, for Lectures, to be read annually, on Muscular Motion; and donations to seven of the colleges at Cambridge, to found Mathematical Lectures. He left several papers on philosophical subjects, but his only publication was a small tract, *De Ratione Motus Musculorum.*

CROSS-STONE. A crystallised greyish-white mineral, harder than fluor spar, but not so hard as apatite, found only in mineral veins and agate balls in the Hartz, Norway, and Scotland.

CROTALUS. (*us, i.* m.) The name of a genus of serpents.

CROTALUS HORRIDUS. 1. The rattle-snake; the stone out of the head of which is erroneously said to be an antidote to the poison of venomous animals.

2. A name also of the Cobra de capella, the *Coluba naja* of Linnæus.

CROTA'PHICA ARTERIA. The tendon of the temporal muscle.

CROTAPHICUS. Of or belonging to the temples.

CROTAPHI'TES. (From κροταφος, the temple. See *Temporalis.*

CROTA'PHIUM. (From κροτεω, to pulsate; so named from the pulsation which in the temples is eminently discernible.) *Crotaphos. Crotaphus.* A pain in the temples.

CRO'TAPHOS. See *Crotaphium.*

CRO'TAPHUS. See *Crotaphium.*

CROTCHET. A curved instrument, with a sharp hook, to extract the fœtus.

CRO'TON. (*on, onis.* f.; from κροτεω, to beat.) 1. An insect called a tick, from the noise it makes by beating its head against wood.

2. The ricinus, or castor-oil berry, from its likeness to a tick.

3. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.*

CROTON BENZOE. See *Styrax benzoe.*

CROTON CASCARILLA. The systematic name of the plant which affords the Cascarilla bark: called also, *Cascarilla, Chocarilla, Elutheria,* and *Eluteria.* The bark comes to us in quills, covered upon the outside with a rough, whitish matter, and brownish on the inner side, exhibiting, when broken, a smooth, close, blackish-brown surface. It has a light agreeable smell, and a moderately bitter taste, accompanied with a considerable aromatic warmth. It is a very excellent tonic, astringent, and stomachic, and is deserving of a more general use than it has hitherto met with.

CROTON LACCIFERUM. The systematic name of the plant upon which gum-lac is deposited. See *Lacca.*

CROTON TIGLIUM. The systematic name of the tree which affords the pavana wood, and tiglia seeds. *Croton — foliis ovatis glabris acuminatis serratis, caule arboreo,* of Linnæus.

1. Pavana wood. *Lignum pavanæ, Lignum pavanum, Lignum moluccense.* The wood is of a light spongy texture, white within, but covered with a greyish bark; and possesses a pungent, caustic taste, and a disagreeable smell. It is said to be useful as a purgative in hydropical complaints.

2. *Grana tiglia. Grana tilli. Grana tiglii. Pineæ purgantes.* The grana tiglia are seeds of a dark grey colour, in shape very like the seed of the *ricinus communis.* They abound with an oil which is far more purgative than castor oil, which has been lately imported from the East Indies, where it has been long used, and is now admitted into the London pharmacopœia. Two grains of the seed, powdered and mixed with sugar, are given against tape-worm. The inhabitants of the Mollucca islands take one of the seeds for a dose, as their common purge. In an over-dose, it purges and vomits, inflames the stomach and bowels, and often kills. One drop proves a drastic purge; but it may be so managed as to become a valuable addition to the materia medica.

CROTON TINCTORIUM. The systematic name of the lacmus plant. *Croton — foliis rhombeis repandis, capsulis pendulis, caule herbaceo,* of Linnæus. *Bezetta cærulea.* This plant yields the *Succus heliotropii; Lacmus seu tornæ; Lacca cærulea; Litmus.* It is much used by chemists as a test.

CROTO'NE. (From κροτον, the tick.) A fungus on trees produced by an insect like a tick; and, by metaphor, applied to tumours and small fungous excrescences on the periosteum.

CROTOPHIUM. (From κροτος, the pulse.) Painful pulsation.

CROTOPHUS. (From *κροτος, pulsus.*) Painful pulsation.

CROUP. The disease which is called croup is known by a permanently laborious and suffocative breathing, accompanied by a stridulous noise, a short and dry cough, and an expectoration of a concrete membraneous sputum. There are three very distinct kinds of it: — the acute, the chronic, and the spasmodic.

1. The acute croup. In this the sense of suffocation is great and constrictive, chiefly seated in the throat; the respiration is sonorous, the voice harsh, the cough ringing: there is great restlessness, and active inflammatory fever. The disease essentially consists of a peculiar inflammation, that spreads through different parts, or even the whole range of the windpipe, from the larynx to the minutest ramifications of the bronchiæ; and, as the whole tube was called *bronchus* by the ancients, the most appropriate name for it is bronchitis. It has also received many other appellations, from its prominent symptoms, or the nosological arrangements of physicians; as *tracheitis, cynanche trachealis, cynanche laryngea, suffocatio stridula, angina perniciosa, cynanche stridula, morbus strangulatorius, catarrhus suffocativus, angina polyposa sive membranacea,* &c. &c. Dr. Home first called the attention of medical practitioners to it as a distinct disease. It usually commences in the larynx, or trachea, during which a peculiar effusion is secreted, that readily assumes a membraneous form, and lines the tube, not only above its bifurcation, but also in its minutest branches. When chemically examined, the secretion appears to consist chiefly, if not entirely, of the albuminous part of the blood, diluted with its serosity, and copiously combined with that peculiar substance of the blood called fibrin. By what means the mucous secernents throw out this peculiar effusion on this peculiar occasion, we know not. It is not a little singular that children should be chiefly subject to this disease, at whose age fibrin is not peculiarly abundant, and whose blood contains, comparatively, but a small proportion of azote, which in fibrin is so large a constituent. Dr. Cullen asserts that acute croup seldom attacks infants till after they have been weaned; and that there is no instance of its occurring in children above twelve years of age. Those who have once had it are more susceptible of it than before; though the susceptibility gradually wears off as they grow older. It is found equally in midland regions and on the coast, but perhaps more frequently in low, marshy grounds, than in drier uplands. There is no unequivocal instance of its being contagious, though it seems to have been occasionally epidemic.

It commences usually with a slight cough, hoarseness, and sneezing, as though cold had been taken, and the person was about to suffer from catarrh. To these symptoms, in a day or two, and sometimes in a few hours, succeed a peculiar shrillness and singing of the voice, as if the sound was sent through a brazen tube. "At the same time," says Dr. Cullen, who has well described the progress of the disease, "there is a sense of pain about the larynx, some difficulty of respiration, with a wheezing sound in inspiration, as if the passage of the air were straitened. The cough which attends it is sometimes dry; and if any thing be spit up, it is a matter of a purulent appearance, and sometimes films, resembling portions of a membrane. Together with these symptoms, there is a frequency of pulse, a restlessness, and an uneasy sense of heat. When the internal fauces are viewed they are sometimes without any appearance of inflammation; but frequently a redness and even swelling appear: and sometimes in the fauces there is an appearance of matter like to that rejected by coughing. With the symptoms now described, and particularly with great difficulty of breathing, and a sense of strangling in the fauces, the patient is sometimes suddenly cut off. The countenance generally exhibits great distress; the head and face are covered with perspiration, from the violence of the struggle, and the lips and cheeks are alternately pale and livid. The essence of this species of croup consists in the secretion of the concrete lining, which is perpetually endangering suffocation." Dr. Cullen does not dwell sufficiently on this symptom, but ascribes this danger principally to spasmodic action; and represents the accompanying fever, which, on his hypothesis, is also a spasmodic action, to be very considerable. But spasm was with him a favourite doctrine, and often warped his judgment. Dr. Marcus regards croup as a local inflammation alone, utterly independent of spasm, and attributes the danger to this symptom solely. That there is some degree of spasmodic action, however, is unquestionable; and the locality of the disease, as well as the peculiar character of the inflammation, sufficiently distinguish it from catarrh, in which there is also some inflammation of the mucous membrane of the trachea, though of a common kind, and rarely limited to this organ.

The cure demands a prompt and active attention; and must depend, not so much upon searching into and correcting the remote cause, or even counteracting the spasm, as in counteracting and removing the membraneous secretion, which is every moment in danger of producing suffocation; and especially in children, in whom the natural aperture of the glottis is much smaller in proportion than in adolescents, and occasionally not more than a line and a half in breadth. There is in the patient a perpetual effort to remove this solid secretion by coughing; but the cough is, for the most part, dry and ineffectual, and nothing more than a little flaky mucus is excreted. Very copious bleeding, at the commencement of the attack, by breaking abruptly upon the inflammatory action, has sometimes carried off the disease at once. This may

be effected from the jugular vein, or by leeches, in infancy. Emetics have been given immediately after. These are of doubtful effect; in many instances however, they have soon removed the disease. The inhalation of warm vapour, recommended by Dr. Home, can rarely be practised, from the extreme restlessness of the little patient, but is mostly beneficial when practicable. The remedy principally relied on in the present day, and which in many instances has acted like a charm, is large and repeated doses of the submuriate of mercury. Of this, not less than five or six grains are commonly given to very young children, and continued every two or three hours, till there is a discharge of green bilious matter, which seems to be the criterion of its having taken effect.

2. The *chronic* form of croup is very rare. A concrete parenchymatous material, obstructing the bronchia, and formed occasionally in the trachea, is coughed up in smaller or larger masses; sometimes easily, and without any attachment to the sides of the bronchial tubes, and sometimes so extensively inosculated by radicals or radiating vessels, as to cause a fatal hæmorrhage when expelled with violence. In some instances, the material is membraneous, like white paper, the size of a shilling, or larger, or they are tubular, having the form of the bronchia. Dr. Warren gives a good account of this disease in the first volume of the Transactions of the College of Physicians. It is attended with difficulty of breathing, a short, dry, and almost incessant cough, which vanish when the membrane is expelled. This disease returns by paroxysms, which recur as more membrane is forming. At other times there is little deviation from health, and febrile symptoms are seldom noticed. Mercury, in small doses, with expectorants, have, in the several cases which I have seen, removed the morbid and peculiar action of the mucous membrane, which is the essence of the disease.

3. The *spasmodic croup*. This is a very different disease from the two former, the very essence of which is inflammation, and a membrane-like secretion, neither of which exist in this, which is of a pure nervous or spasmodic nature. Dr. Good very properly gives another name—*laryngismus stridulus*, and places it amongst his nervous diseases. It mostly attacks infants and children, and that very suddenly. The destructive character is established immediately, in which respect it differs from the inflammatory croup. The voice becomes instantly stridulous, and there is great constriction observable about the larynx. This state often subsides as suddenly as it set in, and but for a short time; for it generally returns in an hour or two, or less, and in the interval the patient seems free from uneasiness. The exciting causes are not always clear: cold and teething are the most common. It appears most frequently in relaxed and irritable habits, where, in truth, we should soonest expect a display of spasmodic action. As there is mostly some degree of cough, and always a secretion of some viscid mucus, and a croaking voice, there is great reason to suppose some degree of local irritation.

An active and speedy plan of treatment is imperiously demanded; yet an antimonial emetic generally effects a cure as soon as it begins to operate, if employed early; but the perspiration which it excites should be maintained some hours, by keeping the child in bed, and the use of diluents, which will be the most effectual way of preventing a return of the spasm. The bowels should also be excited by a purgative of calomel; and if the emetic do not prove effectual, or the stricture should be renewed, some opiate should be exhibited, according to the age of the patient, and a blister be applied to the throat. But bleeding, which is indispensable in acute croup, should here be avoided, as it will only add to the irritability. Those who contend that this disease is an asthma, strongly recommend the fœtid antispasmodics, as assafœtida, both by the mouth and injections. The child generally falls into a deep and quiet sleep after the emetic, and awakes with few remains of the complaint. Those who have once laboured under spasmodic croup are more susceptible of it than before; and the younger branches of some families seem much more predisposed to it than those of others.

Crousis. (From κρουω, to beat, or pulsate.) Pulsation.

Crou'smata. (From κρουω, to pulsate.) Rheums or defluxions from the head.

CROWFOOT. See *Ranunculus*.

Crowfoot-cranesbill. See *Geranium pratense*.

Crow-silk. See *Conferva rivalis*.

CROWN. See *Corona*.

Crown imperial. See *Corona imperialis*.

CRUCIAL. (*Crucialis*; from *crus*, the leg.) 1. Cross-like. Some parts of the body are so called when they cross one another, as the crucial ligaments of the thigh.

2. A name of the mugweed or crosswort.

CRUCIA'LIS. See *Crucial*.

CRUCIA'TUS. See *Cruciformis*.

CRUCIBLE. (*Crucibulum*, i. n.; from *crucio*, to torment: so named, because, in the language of old chemists, metals are tormented in it, and tortured, to yield up their powers and virtues.) A chemical vessel, made mostly of earth, to bear the greatest heat. They are of various shapes and composition.

CRUCIFORMIS. *Cruciatus*. Cross-like. Applied to leaves, flowers, &c. which have that shape.

CRU'DITAS. (From *crudus*, raw.) It is applied to undigested substances in the stomach, and formerly to humours in the body unprepared for concoction.

CRUICKSHANK, William, a celebrated teacher of anatomy, born in Edinburgh, in 1745, where he distinguished himself in classical acquirements at an early period, and was removed to Glasgow, in order to take his academic degrees, and prepare for

the church. On making known to the celebrated Doctor Moore his predilection for physic, he was recommended to Dr. William Hunter, and came to London in 1771. Under his roof he gave himself up to the study of anatomy, and was continually associated with the Hunters, Cowper, Watler, Loder, and Baillie, and most of those who after became the distinguished men of the day, and the ornaments of the profession. It was not long before Dr. Hunter appreciated his value, his acquirements, and his talents; and he soon became demonstrator in the dissecting room, and was left joint lecturer with Dr. Baillie, after the decease of his uncle. Mr. Cruickshank was a man of elegant stature, and the most pleasing and gentlemanly manners. As a scholar, his acquirements were beyond mediocrity; and when in the society of the talents of the day, with whom he constantly associated, he displayed great learning and a brilliant memory. His class in Windmill-street was numerously attended, and his lectures were full of information; for, in addition to the plain and regular exposition of parts, and detail of their functions, he illuminated his subject with extemporaneous passages from the Greek poets and historians, and from every anatomical and surgical source, and was constantly adverting to practical points and his own experience, with an unparalleled clearness, precision, and animation. To illustrate his lectures and demonstrations, he made, with indefatigable labour and great expense, a valuable collection of preparations, which, after his death, was purchased by the Russian government, and is now at Petersburgh. He died suddenly, of apoplexy, in the fifty-fifth year of his age. In the year 1776, he published an ingenious paper on the "Regeneration of Nerves," and was soon after elected a fellow of the Royal Society; and in 1786, his valuable work on the "Anatomy of the Absorbent System."

Cru'nion. (From κρουνος, a torrent.) A medicine mentioned by Aëtius, and named from the violence of its operation as a diuretic.

CRU'OR. (*or, oris.* m.; from κρυος, *frigus*, it being that which appears like a coagulum as the blood cools.) The red part of the blood. See *Blood.*

CRU'RA. The plural of *crus.*

Crura clitoridis. See *Clitoris.*

Crura medullæ oblongatæ. The roots of the medulla oblongata.

CRURÆ'US. (From *crus*, a leg; so named, because it covers almost the whole foreside of the upper part of the leg or thigh.) *Cruralis.* A muscle of the leg, situated on the fore-part of the thigh. It arises, fleshy, from between the two trochanters of the os femoris, but nearer the lesser, firmly adhering to most of the fore-part of the os femoris; and is inserted, tendinous, into the upper part of the patella, behind the rectus. Its use is to assist the vasti and rectus muscles in the extension of the leg.

CRURAL. (*Cruralis;* from *crus*, the leg.) Belonging to the crus, leg, or lower extremity.

Crural hernia. See *Hernia cruralis.*

CRURA'LIS. See *Cruræus.*

CRUS. (*Crus, ris.* n.) 1. The leg.

2. The root or origin of some parts of the body, from their resemblance to a leg or root; as *Crura cerebri, Crura cerebelli; Crura* of the diaphragm, &c.

CRU'STA. (*a, æ.* f.) 1. A shell.

2. A scab.

3. The scum or surface of a fluid.

Crusta lactea. A disease of the face mostly. So called from the milky, or rather the creamy appearance and consistency of the discharge. See *Porrigo.*

Crusta villosa. The inner coat of the stomach and intestines.

Crustula. (Dim. of *crusta*, a shell.) A discoloration of the flesh from a bruise, where the skin is entire, and covers it over like a shell.

Crustumina'tum. (From *Crustuminum*, a town where they grew.) 1. A kind of Catherine pear.

2. A rob or electuary made of this pear and apples boiled up with honey.

Crymo'des. (From κρυος, cold.) An epithet for a fever, wherein the external parts are cold.

CRYOLITE. A white or yellowish brown mineral, composed of alumina, soda, and fluoric acid. It is curious and rare, and found hitherto only at West Greenland.

CRYOPHORUS. (From κρυος, cold, and φερω, to bear.) The frost-bearer, or carrier of cold; an elegant instrument, invented by Dr. Wollaston, to demonstrate the relation between evaporation at low temperatures, and the production of cold.

CRYPSO'RCHIS. (*is, idis.* m.; from κρυπlω, to conceal, and ορχις, a testicle.) Concealed testicle. Applied to a man whose testicles are hid in the belly, or have not descended into the scrotum.

CRY'PTA. (*a, æ.* f.; from κρυπτω, to hide.) The little rounded appearances at the end of the small arteries of the cortical substance of the kidneys, that appear as if formed by the artery being convoluted upon itself.

CRYPTOGAMIA. (*a, æ.* f.; from κρυπτω, to conceal, and γαμος, a marriage.) The twenty-fourth and last class of the sexual or Linnæan system of plants, containing several numerous genera, in which the parts essential to their fructification have not been sufficiently ascertained to admit of their being referred to the other class. It is divided by Linnæus into four orders, *Filices, Musci, Algæ*, and *Fungi.*

CRYSO'RCHIS. (*is, idis.* m. Κρυσορχις; from κρυπlω, to conceal, and ορχις, a testicle.)

1. A retraction or retrocession of one of the testicles.

2. See *Crypsorchis.*

CRYSTAL. See *Crystallus.*

CRYSTALLINE. (*Crystallinus;* from its crystal-like appearance.) Crystal-like.

Crystalline lens. A lentiform pellucid

part of the eye, enclosed in a membraneous capsule, called the capsule of the crystalline lens, and situated in a peculiar depression in the anterior part of the vitreous humour. Its use is to transmit and refract the rays of light. See *Eye*.

CRYSTALLI'NUM. (From κρυςαλλος, a crystal: so called from its transparency.) White arsenic.

CRYSTALLISATION. (*Crystallizatio, onis*. f.; from *crystallus*, a crystal.) A property by which crystallisable bodies tend to assume a regular form, when placed in circumstances favourable to that particular disposition of their particles. Almost all minerals possess this property; but it is most eminent in saline substances. The circumstances which are favourable to the crystallisation of salts, and without which it cannot take place, are two: 1. Their particles must be divided and separated by a fluid, in order that the corresponding faces of those particles may meet and unite. 2. In order that this union may take place, the fluid which separates the integrant parts of the salt must be gradually carried off, so that it may no longer divide them.

CRYSTAL. (*Crystallus, i.* m.; from κρυος, cold, and ςελλω, to contract: *i. e.* contracted by cold into ice.) 1. In *Mineralogy*, a crystal. "When fluid substances are suffered to pass with adequate slowness to the solid state, the attractive forces frequently arrange their ultimate particles, so as to form regular polyhedral figures, or geometrical solids, to which the name of crystals has been given. Most of the solids which compose the mineral crust of the earth are found in the crystallised state. Thus granite consists of crystals of quartz, felspar, and mica. Even mountain masses, like clay slate, have a regular tabulated form. Perfect mobility among the corpuscles is essential to crystallisation. The chemist produces it either by igneous fusion, or by solution in a liquid. When the temperature is slowly lowered in the former case, or the liquid slowly abstracted by evaporation in the latter, the attractive forces resume the ascendancy, and arrange the particles in symmetrical forms. Mere approximation of the particles, however, is not alone sufficient for crystallisation. A hot, saturated saline solution, when screened from all agitation, will contract, by cooling, into a volume much smaller than what it occupies in the solid state, without crystallising. Hence the molecules must not only be brought within a certain limit of each other, for their concreting into crystals, but they must also change the direction of their poles, from the fluid collocation to their position in the solid state.

This reversion of the poles may be effected, 1st, By contact of any part of the fluid with a point of a solid, of similar composition, previously formed. 2d, Vibratory motions communicated, either from the atmosphere or any other moving body, by deranging, however slightly, the fluid polar direction, will instantly determine the solid polar arrangement, when the balance had been rendered nearly even by previous removal of the intersticial fluid. On this principle we explain the regular figures which particles of dust or iron assume, when they are placed on a vibrating plane, in the neighbourhood of electrised or magnetised bodies. 3d, Negative or resinous voltaic electricity instantly determines the crystalline arrangement, while positive voltaic electricity counteracts it. Light also favours crystallisation, as is exemplified with camphire dissolved in spirits, which crystallises in bright, and redissolves in gloomy weather.

It might be imagined, that the same body would always concrete in the same, or at least in a similar crystalline form. This position is true, in general, for the salts crystallised in the laboratory; and on this uniformity of figure, one of the principal criteria between different salts depends. But even these forms are liable to many modifications, from causes apparently slight; and in nature we find frequently the same chemical substance crystallised in forms apparently very dissimilar. Thus, carbonate of lime assumes the form of a rhomboid, of a regular hexaëdral prism, of a solid terminated by twelve scalene angles, or of a dodecahedron, with pentagonal faces, &c. Bisulphuret of iron or martial pyrites produces sometimes cubes and sometimes regular octohedrons, at one time dodecahedrons with pentagonal faces, at another, icosahedrons with triangular faces, &c.

While one and the same substance lends itself to so many transformations, we meet with very different substances, which present absolutely the same form. Thus fluate of lime, muriate of soda, sulphuret of iron, sulphuret of lead, &c., crystallise in cubes, under certain circumstances; and in other cases, the same minerals, as well as sulphate of alumina and the diamond, assume the form of a regular octohedron.

Romé de l'Isle first referred the study of crystallisation to principles conformable to observation. He arranged together, as far as possible, crystals of the same nature. Among the different forms relative to each species, he chose one as the most proper, from its simplicity, to be regarded as the primitive form; and by supposing it truncated in different ways, he deduced the other forms from it, and determined a gradation, a series of transitions between this same form and that of polyhedrons, which seem to be still further removed from it. To the descriptions and figures which he gave of the crystalline forms, he added the results of the mechanical measurement of their principal angles, and showed that these angles were constant in each variety.

The illustrious Bergman, by endeavouring to penetrate to the mechanism of the structure of crystals, considered the different forms relative to one and the same substance as produced by a superposition of planes, sometimes constant and sometimes variable, and decreasing around one and the same

primitive form. He applied this primary idea to a small number of crystalline forms, and verified it with respect to a variety of calcareous spar by fractures, which enabled him to ascertain the position of the nucleus, or of the primitive form, and the successive order of the laminæ covering this nucleus. Bergman, however, stopped here, and did not trouble himself either with determining the laws of structure, or applying calculation to it. It was a simple sketch of the most prominent point of view in mineralogy, but in which we see the hand of the same master who so successfully filled up the outlines of chemistry.

In the researches which Haüy undertook, about the same period, on the structure of crystals, he proposed combining the form and dimensions of integrant molecules with simple and regular laws of arrangement, and submitting these laws to calculation. This work produced a mathematical theory, which he reduced to analytical formulæ, representing every possible case, and the application of which to known forms leads to valuations of angles, constantly agreeing with observation."— *Ure's Chem. Dict.*

2. In *Pathology*, a white transparent eruption.

CTE'DONES. (From κληδων, a rake.) Fibres were so called from their pectinated course.

CTEIS. Κτεις. A comb or rake. *Ctenes*, in the plural number, implies those teeth which are called incisores, from their likeness to a rake.

CUBE-ORE. A mineral arseniate of iron, of a pistachio-green colour.

CUBE-SPAR. See *Anhydrite.*

CUBEB. See *Piper cubeba.*

CUBE'BA. (*a, æ.* f.; from *cubabah*, Arab.) See *Piper cubeba.*

CUBITÆUS EXTERNUS. See *Extensor digitorum communis.*

CUBITÆUS INTERNUS. See *Flexor sublimis*, and *profundus.*

CUBITAL. (*Cubitalis*; from *cubitus*, the fore-arm.) Belonging to the fore-arm.

CUBITAL ARTERY. *Arteria cubitalis. Arteria ulnaris.* A branch of the brachial that proceeds in the fore-arm, and gives off the recurrent and inter-osseals, and forms the palmary arch, from which arise branches going to the fingers, called digitals.

CUBITAL NERVE. *Nervus cubitalis. Nervus ulnaris.* It arises from the brachial plexus, and proceeds along the ulna.

CUBITALIS MUSCULUS. See *Anconeus.*

CU'BITUS. (*us, i.* m.; from *cubo*, to lie down: because the ancients used to lie down on that part at their meals.) 1. The fore-arm, or that part between the elbow and wrist.

2. The larger bone of the fore-arm is called *os cubiti.* See *Ulna.*

CUBOI'DES. (From κυβος, a cube or die, and ειδος, likeness.) Cuboid: cubelike. Applied in the several departments to various parts, from their resemblance to the cube.

CUBOIDES OS. *Os grandinosum.* A tarsal bone of the foot.

CUCKOW-FLOWER. See *Cardamine.*

Cuckow pint. See *Arum maculatum.*

CUCU'BALUS. (*us, i.* m.; the name of a herb mentioned by Pliny.) The name of a genus or family of plants in the Linnæan system. Class, *Decandria*; Order, *Trigynia.*

CUCUBALUS BACCIFERUS. The systematic name of the berry-bearing chick-weed, which is sometimes used as an emollient poultice.

CUCUBALUS BEHEN. The systematic name of the *Behen officinarum*, or spatling poppy, formerly used as a cordial and alexipharmic.

CUCULLA'RIS. (From *cucullus*, a hood; so named, because it is shaped like a hood.) See *Trapezius.*

CUCULLATUS. Hooded; cone-shaped. Applied to a leaf, when the edges meet in the lower part, and expand in the upper, forming a sheath or hood, like the paper rolled by grocers to put small quantities of any thing in, or like a hollow cone, of which the genus *Sarracenia* are an example; and applied also to the nectary of the aconite tribe, &c.

CUCULLUS. (*us, i.* m.) 1. A hood.

2. An odoriferous cap for the head.

CUCUMBER. See *Cucumis.*

Cucumber, bitter. See *Cucumis colocynthis.*

Cucumber, squirting. See *Momordica elaterium.*

Cucumber, wild. See *Momordica elaterium.*

CU'CUMIS. (*is, is.* m.; also *cucumer, ris.*; *quasi curvimeres*, from their curvature.) The cucumber. 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Syngenesia.* The cucumber.

2. The pharmacopœial name of the garden cucumber. See *Cucumis sativus.*

CUCUMIS AGRISTIS. See *Momordica elaterium.*

CUCUMIS ASININUS. See *Momordica elaterium.*

CUCUMIS COLOCYNTHIS. The systematic name for the officinal bitter apple, bitter gourd, or bitter cucumber. *Colocynthis. Alhandula* of the Arabians. *Coloquintida.* The fruit, which is the medicinal part of this plant, *Cucumis—foliis multifidis, pomis globobis glabris*, of Linnæus, is imported from Turkey. Its spongy membraneous medulla, or pith, is directed for use; it has a nauseous, acrid, and intensely bitter taste; and is a powerful irritating cathartic. In doses of ten or twelve grains, it operates with great vehemence, frequently producing violent gripes, bloody stools, and disordering the whole system. It is recommended in various complaints, as worms, mania, dropsy, epilepsy, &c.; but is seldom resorted to, except where other more mild remedies have been used without success, and then only in the form of the *extractum colocynthidis compositum*, and the *pilulæ ex colocynthide cum aloë* of the pharmacopœias.

CUCUMIS MELO. The systematic name of the melon plant. *Melo.* Musk melon. This

fruit, when ripe, has a delicious refrigerating taste, but must be eaten moderately, with pepper, or some aromatic, as all this class of fruits are obnoxious to the stomach, producing spasms and colic. The seeds possess mucilaginous qualities.

Cucumis sativus. The systematic name of the cucumber plant. *Cucumis. Cucumis—foliorum angulis rectis; pomis oblongis scabris,* of Linnæus. It is cooling and aperient, but very apt to disagree with bilious stomachs. It should always be eaten with pepper and oil. The seeds were formerly used medicinally.

Cucumis sylvestris. See *Momordica elaterium.*

Cu'cupha. A hood. An odoriferous cap for the head, composed of aromatic drugs.

CUCU'RBITA. (*a, æ.* f.; *à curvitate,* according to Scaliger, the first syllable being doubled; as in *Cacula, Populus,* &c.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Syngenesia.* The pumpion.

2. The pharmacopœial name of the common gourd. See *Cucurbita pepo.*

3. A chemical distilling vessel, shaped like a gourd.

4. A cupping-glass.

Cucurbita citrullus. The systematic name of the water-melon plant, or Sicilian citrul, or water-melon. *Citrullus. Angura. Jace brasilientibus. Tetranguria.* The seeds of this plant, *Cucurbita—foliis multipartitis,* of Linnæus, were formerly used medicinally, but now only to reproduce the plant. Water-melon is cooling and somewhat nutritious; but so soon begins to ferment, as to prove highly noxious to some stomachs, and bring on spasms, diarrhœas, cholera, colics, &c.

Cucurbita lagenaria. See *Cucurbita pepo.*

Cucurbita pepo. The common pumpion, gourd, or bottle gourd. *Cucurbita.* The seeds of this plant, *Cucurbita—foliis lobatis, pomis lævibus,* are used indifferently with those of the *Cucurbita lagenaria—foliis subangulatis, tomentosis, basi subtus biglandulosis; pomis lignosis.* They contain a large proportion of oil, which may be made into emulsions; but is superseded by that of sweet almonds.

Cucurbitaceæ plantæ. The name of an order of Linnæus's Fragments of a Natural Method, consisting of plants which resemble the gourd.

CUCURBITACEOUS. (*Cucurbitaceus,* from *cucurbita,* the pumpion.) Appertaining to the pumpion.

CUCURBI'TINUS. A species of worm, so called from its resemblance to the seed of the gourd. See *Tænia.*

CUCURBI'TULA. (*a, æ.* f.; a diminutive of *cucurbita,* a gourd: so called from its shape.) A cupping-glass. See *Cupping.*

Cucurbitula cruenta. A cupping-glass, with scarification to procure blood.

Cucurbitula cum ferro. A cupping-glass, with scarification to draw out blood.

Cucurbitula sicca. A cupping-glass, without scarification.

Cudweed. See *Filago.*

CUE'MA. (From κυω, to carry in the womb.) The conception, or rather, as Hippocrates signifies by this word, the complete rudiments of the fœtus.

Culbi'cio. A sort of strangury, or rather heat of urine.

Culila'wan. See *Laurus culilawan.*

CULI'NARY. (*Culinarius,* from *culina,* a kitchen.) Any thing belonging to the kitchen, as salt, pot-herbs, &c.

CULEX. (*ex, icis.* m.) A genus of the diopterous order of insects. The gnat family.

Culex pipiens. The common gnat, and the musquito, the bite of which is so pungent. The best application to the bitten part, is diluted hartshorn or sal volatile.

CULLEN, William, was born at Lanark, Scotland, in 1712, of respectable, but not wealthy parents. After the usual school education, he was apprenticed to a surgeon and apothecary at Glasgow, and then made several voyages as surgeon to the West Indies. He afterwards settled in practice at Hamilton, and formed a connection with the celebrated William Hunter; but their business being scanty, they agreed to pass a winter alternately at some university. Cullen went first to Edinburgh, and attended the classes so diligently, that he was soon after able to commence teacher. Hunter came the next winter to London, and engaged as assistant in the dissecting-room of Dr. William Douglas, who was so pleased with his assiduity and talent, as to offer him a share in his lectures: but though the partnership with Cullen was thus dissolved, they continued ever after a friendly correspondence. Cullen had the good fortune, while at Hamilton, to assist the Duke of Argyle in some chemical pursuits; and still more of being sent for to the Duke of Hamilton, in a sudden alarming illness, which he speedily relieved by his judicious treatment, and gained the entire approbation of Dr. Clarke, who afterwards arrived. About the same time he married the daughter of a neighbouring clergyman, who bore him several children. In 1746, he took the degree of doctor in medicine, and was appointed teacher of chemistry at Glasgow. His talents were peculiarly fitted for this office; his systematic genius, distinct enunciation, lively manner, and extensive knowledge of the subject, rendered his lectures highly interesting. In the mean time his reputation as a physician increased, so that he was consulted in most difficult cases. In 1751, he was chosen professor in medicine to the university; and five years after the chemical chair at Edinburgh was offered him, on the death of Dr. Plummer, which was too advantageous to be refused. He soon became equally popular there, and his class increased, so as to exceed that of any other professor, except the anatomical. This success was owing not only to his assiduity, and

his being so well qualified for the office, but also in a great measure to the kindness which he showed to his pupils, and partly to the new Views on the Theory of Medicine, which he occasionally introduced into his lectures. He appears also about this time to have given Clinical Lectures at the Infirmary. On the death of Dr. Alston, Lecturer on the Materia Medica, he was appointed to succeed him; and six years afterwards, jointly with Dr. Gregory, to lecture on the Theory and Practice of Medicine, when he resigned the Chemical Chair to his pupil, Dr. Black. Dr. Gregory having died the following year, he continued the Medical Lectures alone, till within a few months of his death, which happened in February 1790, in his seventy-seventh year; and he is said, even at the last, to have shown no deficiency in his delivery, nor in his memory, being accustomed to lecture from short notes. His Lectures on the Materia Medica being surreptitiously printed, he obtained an injunction against their being issued, until he had corrected them, which was accomplished in 1772: but they were afterwards much improved, and appeared in 1789, in two quarto volumes. Fearing a similar fate to his Lectures on Medicine, he published an outline of them in 1784, in four volumes, octavo, entitled *First Lines of the Practice of Physic.* He wrote also the *Institutions of Medicine*, in one volume, octavo: and a Letter to Lord Cathcart, on the *Recovery of Drowned Persons.* But his most celebrated work is his *Synopsis Nosologiæ Methodicæ*, successively improved in different editions; the fourth, published in 1785, in two octavo volumes, contains the systems of other Nosologists till that period, followed by his own, which certainly, as a practical arrangement of diseases, greatly surpasses them.

CULMIFERÆ. Plants which have smooth soft stems.

CULMUS. (*us, i.* m.; from the Greek καλαμος, a reed.) Culm. Straw. The stem of grasses, rushes, and plants nearly allied to them. It bears both leaves and flowers, and its nature is more easily understood than defined. The varieties of the culmus are,

1. *Teres*, round; as in *Carex uliginosa.*
2. *Tetragonus*; as in *Festuca ovina.*
3. *Triangularis*; as in *Eriocaulon triangulare.*
4. *Capillaris*; as in *Scirpus capillaris.*
5. *Prostratus*; as in *Agrostis canina.*
6. *Repens*; as in *Agrostis stolonifera.*
7. *Nudus*; as in *Carex montana.*
8. *Enodis*, without joints; as in *Juncus conglomeratus.*
9. *Articulatus*, jointed; as in *Agrostis alba.*
10. *Geniculatus*, bent like the knee; as in *Alopecurus geniculatus.*

It is also either solid or hollow, rough or smooth, sometimes hairy or downy, scarcely woolly.

CULPEPER, Nicholas, settled in Spitalfields, London, about the year 1642. In the troubles prevailing at that period, he appears to have favoured the Puritans; but his decided warfare was with the College of Physicians, whom he accuses of keeping the people in ignorance, like the Popish clergy. He therefore published a translation of the *Dispensary*, with practical remarks; also a *Herbal*, pointing out, among other matters, under what planet the plants should be gathered; and a directory to midwives, showing the method of insuring a healthy progeny, &c. These works were for some time popular.

CU'LTER. (*ter, tri.* m.; from *colo*, to cultivate.) 1. A knife or shear.

2. The third lobe of the liver is so called, from its supposed resemblance.

CU'LUS. (*us, i.* m.; from κουλος.) The anus or fundament.

Cu'mamus. See *Piper cubeba.*

Cumana brassica. Red colewort.

CUMIN. See *Cuminum.*

CU'MINUM. (*um, i.* n.; from κυω, to bring forth: because it was said to cure sterility.) 1. The name of a genus of plants in the Linnæan system. Class, *Heptandria*; Order, *Digynia.* The cumin plant.

2. The pharmacopœial name of the cumin plant. See *Cuminum cyminum.*

Cuminum æthiopicum. See *Sison.*

Cuminum cyminum. The systematic name of the cumin plant; called also, *Fœniculum orientale.* A native of Egypt and Ethiopia, but cultivated in Sicily and Malta, from whence it is brought to us. The seeds of cumin, which are the only part of the plant in use, have a bitterish taste, accompanied with an aromatic flavour, but not agreeable. They are generally preferred to other seeds for external use in discussing indolent tumours, as the encysted, scrophulous, &c. and give name both to a plaster and cataplasm in the pharmacopœias.

Cunea'lis sutura. The suture by which the os sphenoides is joined to the os frontis.

CUNEIFORM. (*Cuneiformis*; from *cuneus*, a wedge, and *forma*, likeness.) Wedge-like. Applied to bones, leaves, &c. which are broad and abrupt at the extremity. See *Sphenoid bone*; *Tarsus*; *Carpus*; *Leaf*; and *Petalum.*

Cune'olus. (From *cuneo*, to wedge.) A crooked tent to put into a fistula.

CUP. See *Calyx.*

CUPEL. (*Kuppel*, a cup. German.) *Copella*, *Catullus cinereus*, *Cineritium*, *Patella docimastica*, *Testa probatrix*, *exploratrix*, or *docimastica.* A shallow earthen vessel like a cup, made of phosphate of lime, which suffers the baser metals to pass through it, when exposed to heat, and retains the pure metal. This process is termed cupellation.

CUPELLATION. *Cupellatio.* The purifying of perfect metals by means of an addition of lead, which, at a due heat, becomes vitrified, and promotes the vitrification and calcination of such imperfect metals as may be in the mixture, so that these last are carried off in the fusible glass that is formed, and the

perfect metals are left nearly pure. The name of this operation is taken from the vessels made use of, which are called cupels.

Cu'phos. (Κουφος. *Levis*. Light.) When applied to aliments, it imports their being easily digested; when to distempers, that they are mild.

CUPPING. (So called, most probably, from the cup-like shape of the glasses.) The application of the *cucurbitula*, or cupping-glass. This practice is of great antiquity, being mentioned by Hippocrates, and then the instrument was made of horn or metal. A figure of a cupping apparatus may be seen in the surgical works of Albucasis.

Cupping is performed by glasses, called from their shape *cucurbitulæ*, of different sizes and shapes, mostly open like a cup, but more ample and round at the bottom part, a spirit lamp, and a scarificator. When the operation is about to be done, a basin of warm water, a piece of fine sponge, and the lighted lamp must be at hand. As many of the cupping-glasses as may be judged necessary, are to be put into the basin. Each glass is then to be held for an *instant only* over the flame of the spirit lamp, and immediately placed upon the skin: by this the air in the glass is rarified; and the moment the glass is applied, the skin and integuments are drawn up, and become swollen, from the blood being drawn into the small vessels, where it becomes stagnant, and perhaps affused into the cellular tissue. When nothing more is done, the operation is called *dry cupping*. The glasses are removed after two or three minutes, and again applied in the same way for five or six times: but cupping being mostly intended to remove a quantity of blood, the operator proceeds, after the glass has been on a minute, to remove it, which he does by pressing the nail of a finger between the edge of the glass and the skin to let the air in, and in its place he quickly applies the scarificator — See *Scarificator* — and as quickly lays it aside, and immediately puts on the cupping-glass, having rarified the air within it by the flame of the spirit lamp as before. This is called cupping with scarifications. It is by the adroitness of these circumstances that the operation is well performed, by the quickness with which the application of the scarificator succeeds the removal of the glass; and by this adroitness the patient is saved a degree of pain which he would otherwise suffer from the scarifications. When the glasses are so full as to be in danger of falling off, or the blood is coagulated in them, they should be removed, emptied, and applied again. For the sake of neatness, care should be taken to insert the nail under the upper part of the glass, and remove it so as to keep its bottom downwards, the scarifications being at the same time wiped with a sponge, wet in warm water. The glasses also, previously to each application, should be rinsed in warm water, but not dried.

A bit of soft rag is usually doubled and put over the scarified part, at the end of the operation.

CUPRE'SSUS. (So called, απο του κυειν παρισους τους ακρεμονας, because it produces equal branches.) Cypress.

1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.* The cypress-tree.

2. The pharmacopœial name of the cypress tree. See *Cupressus sempervirens.*

Cupressus sempervirens. The systematic name of the cupressus of the shops. *Cupressus—foliis imbricatis squamis quadrangulis,* of Linnæus; called also *cyparissus.* Every part of the plant abounds with a bitter, aromatic, terebinthinate fluid; and is said to be a remedy against intermittents. Its wood is extremely durable, and constitutes the cases of Egyptian mummies.

Cupri ammoniati liquor. Solution of ammoniated copper. *Aqua cupri ammoniati. Aqua sapphirina.* Take of ammoniated copper, a drachm; distilled water, a pint. Dissolve the ammoniated copper in the water, and filter the solution through paper. This preparation is employed by surgeons for cleansing foul ulcers, and disposing them to heal.

Cupri rubigo. Verdigris.

Cupri sulphas. Sulphate of copper; called formerly, *Vitriolum cupri, Vitriolum cœruleum, Vitriolum Romanum,* and *Cuprum vitriolatum.* It possesses acrid and styptic qualities; is esteemed as a tonic, emetic, astringent, and escharotic; and is exhibited internally in the cure of dropsies, hæmorrhages, and as a speedy emetic. Externally, it is applied to stop hæmorrhages, to hæmorrhoids, leucorrhœa, phagedænic ulcers, proud flesh, and condylomata.

CU'PRUM. (*Quasi æs Cyprium;* so called from the island of Cyprus, whence it was formerly brought.) See *Copper.*

Cuprum ammoniacale. See *Cuprum ammoniatum.*

Cuprum ammoniatum. Ammoniated copper. Ammoniacal sulphate of copper. *Cuprum ammoniacale.* Take of sulphate of copper, half an ounce; subcarbonate of ammonia, six drachms: rub them together in a glass mortar, till the effervescence ceases; then dry the ammoniated copper, wrapped up in bibulous paper, by a gentle heat. In this process the carbonic acid is expelled from the ammonia, which forms a triple compound with the sulphuric acid and oxide of copper. This preparation is much milder than the sulphate of copper. It is found to produce tonic and astringent effects on the human body. Its principal internal use has been in epilepsy, and other obstinate spasmodic diseases, given in doses of half a grain, gradually increased to five grains or more, two or three times a day. For its external application, see *Cupri ammoniati liquor.*

Cuprum vitriolatum. See *Cupri sulphas.*

CUPULA. An accidental part of a seed, being a rough calyculus, surrounding the

lower part of a gland, as that of the oak, of which it is the cup.

Cura avanacea. A decoction of oats and succory roots, in which a little nitre and sugar were dissolved, was formerly used in fevers, and was thus named.

Cu'rcas. See *Jatropha curcas.*

CU'RCULIO. (From *karkarah*, Hebrew.) The throat, and the aspera arteria.

Cu'rcum. See *Cheledonium majus.*

CURCU'MA. (*a, æ.* f.; from the Arabic *curcum*, or *hercum.*) Turmeric.

1. The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Monogynia.*

2. The pharmacopœial name of the turmeric-tree. See *Curcuma longa.*

Curcuma longa. The systematic name of the turmeric plant; also called, *Crocus Indicus, Terra marita, Cannacorus radice croceo, Curcuma rotunda,* and *Mayella; Kua kaha* of the Indians.

Curcuma —foliis lanceolatis; nervis lateralibus numerossimis, of Linnæus. The Arabians call every root of a saffron colour by the name of *curcum.* The root of this plant is imported here in its dried state from the East Indies, in various forms. Externally, it is of a pale yellow colour, wrinkled, solid, ponderous, and the inner substance of a deep saffron or gold colour: its odour is somewhat fragrant; to the taste it is bitterish, slightly acrid, exciting a moderate degree of warmth in the mouth, and, on being chewed, it tinges the saliva yellow. It is an ingredient in the composition of *Curry powder,* is valuable as a dyeing drug, and furnishes a chemical test of the presence of uncombined alkalies. It is now very seldom used medicinally, but retains a place in our pharmacopœias.

Curcuma rotunda. See *Curcuma longa.*

CURD. The coagulum, which separates from milk, upon the addition of acid and other substances.

CURETTE. (French.) An instrument, shaped like a little scoop, for taking away any opake matter that may be left behind the pupil, after extracting the cataract from the eye.

CURLED. See *Crispus.*

CU'RMI. (From κεραω, to mix.) Ale. A drink made of barley, according to Dioscorides.

CURRANT. See *Ribes.*

Cu'rsuma. *Curtuma.* See *Ranunculus ficaria.*

Cursu'ta. (Corrupted from *cassuta, kasuth,* Arabian.) The root of the *Gentiana purpurea* of Linnæus.

CURTAIN. See *Volva.*

CURVATOR. (*or, oris.* m.) The name of a muscle.

Curvator coccygis. The name of a muscle described by Albinius, but not by any other anatomist; situated in the lower and internal part of the sacrum.

CURVATUS. (From *curvus,* a curve.) Curvate: bent.

CUSCUTA. (*a, æ.* f.; according to Linnæus, a corruption from the Greek Κασυ7ας, or Καδυ7ας, which is from the Arabic *Chessuth,* or *Chasuth.*) Dodder. 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Digynia.*

2. The pharmacopœial name of dodder of thyme. See *Cuscuta epithymum.*

Cuscuta epithymum. The systematic name of dodder of thyme; called also, *Intestina diaboli, Epithymum. Cuscuta —foliis sessilibus, quinquifidis, bracteis obvallatis.* A parasitical plant, possessing a strong disagreeable smell, and a pungent taste, very durable in the mouth: recommended in melancholia, as cathartics. A large variety, common on heaths, on furze, and nettles, is sometimes called *hell-weed,* from the destruction it produces, and also *devil's-guts.*

Cuscuta europæa. The systematic name of a species of dodder of thyme. *Linangina. Cuscuta —floribus sessilibus,* of Linnæus.

CUSPA'RIA. (*a, æ.* f.) The name given by Messrs. Humboldt and Bonpland to a genus of plants, in which is the tree we obtain the Angustura bark from.

Cusparia febrifuga. This is the tree said to yield the bark called Angustura— *Cortex cuspariæ.* It was thought to be the bark of the *Brucea antidysenterica,* or *ferruginea.* Willdenow suspected it to be the *Magnalia plumieri;* but Humboldt and Bonpland, the celebrated travellers in South America, have ascertained it to belong to a tree not before known, and which they promise to describe by the name of *Cusparia febrifuga.* Cusparia bark is imported from South America, in flat and quilled pieces, breaking with a short and resinous fracture, covered with an ash-coloured epidermis, and internally smooth, and of a dull brownish yellow colour. A spurious and poisonous bark, probably that of one or more of the species of strychnos, is sometimes met with under the name of Angustura: this is more intensely bitter, and in shorter and less regular pieces, than the genuine; internally, it is nearly black, and externally covered with a rough rust-coloured epidermis.

Genuine cusparia, or Angustura bark, has a strong bitter flavour, accompanied by a peculiar and somewhat aromatic pungency. Its odour is rather nauseous and fishy. Its chemical nature has not been accurately determined. Mr. Brande failed in endeavouring to obtain from it a salifiable base, though it evidently contains a peculiar principle analogous, probably, to that existing in cinchona. It is a valuable tonic, especially in cases of dyspepsia with diarrhœa and loss of appetite. It may be given in powder, in doses of ten grains, twice or thrice a day, or in infusion, or decoction. In cases of flatulency of the stomach, attended by nausea, the same dose, with five grains of rhubarb, taken an hour before dinner, will often effectually restore the appetite and digestion. This remedy was first brought into notice by Mr. Brande, the father of the present professor, who published

an essay upon it in 1791, particularly pointing out its beneficial effects in the treatment of dysentery and of chronic diarrhœa, especially that form of the disease to which persons who have long resided in warm climates are more particularly subject, and which often assumes, even in this country, more or less of a dysenteric aspect: in these cases the powdered bark may be conjoined with some aromatic, if necessary; such as the pulvis cinnamoni compositus, or the pulvis cretæ compositus. In the cure of nervous and mixed fevers, it is a good tonic.

CUSPIDA'TUS. (From *cuspis*, a point.) Cuspidate. 1. Four of the teeth are called *cuspidati*, because they have the two sides of their edge sloped off to a point, and this point is very sharp or cuspidated. See *Teeth*.

2. Sharp-pointed: applied to leaves which are tipped with a spine, as in thistles. See *Leaf*.

CU'SPIS. (*is*, *idis*. f.; from *cuspa*, Chaldean, a shell, or bone, with which spears were formerly pointed.) 1. The glans penis was so called, from its likeness to the point of a spear.

2. The name of a bandage.

Cu'stos oculi. An instrument to fix the eye during an operation.

Cuta'mbulus. (From *cutis*, the skin, and *ambulo*, to walk.) 1. A cutaneous worm; most probably the *Gordius medinensis*.

2. Scorbutic itching.

CUTANEOUS. (*Cutaneus*; from *cutis*, the skin.) Belonging to the skin.

Cuta'neus musculus. See *Platysma myoides*.

CUTICLE. (*Cuticula*, *æ*. f.; a diminutive of *cutis*, the skin.) See *Epidermis*.

CU'TIS. (*is*, *is*. fœm.) The skin; called also, *Dermis*, *Pellis*, and *Cutis vera*.

The skin was given to man not only for feeling in a general sense, but for perspiration, absorption, and particularly for *touch*, in which he excels all other animals, and which resides principally in the *tips of the fingers*. He was intended for examining, reasoning, forming a judgment, and acting accordingly; he was fitted by this sense to examine accurately the properties of surrounding bodies, not capable of being examined by his other senses. This, among other reasons, was one why he was made erect, that the point of his fingers should not be made callous, or less sensible, *by walking on them*.

When carefully dissected off, and separated from all adventitious matter, in a middle-sized man, the skin weighs about four pounds and a half.

The skin of human bodies is always of a white colour, in the dead body, let the colour of the *rete mucosum* be what it may: it is extremely full of pores, and extremely vascular; a child in full vigour comes into the world, from this circumstance, *scarlet*: it is endowed with intense sensibility. Some parts of the skin have more feeling than others; the lips, for example, as Haller says, "*ad basia destinata*." The *glans clitoridis*, and the *glans penis*, with a similar intention; there, though the nerves are not so large as in some other parts, they are longer, more numerous, and endowed with more exquisite feeling; but where the common offices of life merely are intended, the marks of superior feeling or touch, in the skin, are the projections, above the common surface, or papillæ. The nerves are there not only also longer, but larger, as in the points of the fingers and toes.

The contractility of the skin is a property very like that of muscle: it contracts, relaxes, and even vibrates in some places, on certain occasions. It is extremely distensible: the skin of the *perinæum* has stretched in labour from a quarter of an inch to six inches. It is also extremely elastic, and instantly after labour has returned again to the original quarter of an inch: it is thickest on those parts intended by nature to bear weight or pressure; of course it is thickest on the back, on the soles of the feet, and palms of the hands. It is thinner on the fore part of the body, on the insides of the arms and legs, and where its surfaces touch opposite surfaces. It is extremely thin on the lips, and allows the colour of the blood to shine through it. It is also extremely thin on the *glans penis* in men, *glans clitoridis* in women, and on the inside of the *labia pudendi*. The skin of animals, dried and dressed, is extremely strong and durable, and therefore employed in making harness for horses, clothing for men, and a variety of other purposes.

The skin is composed of the *epidermis*, *rete mucosum*, and *cutis*, or true skin. See *Epidermis*, and *Rete mucosum*.

Cutis anserina. The rough state the skin is sometimes thrown into from the action of cold, or other cause, in which it looks like the skin of the goose.

Cutis vera. The true skin, or that which is under the cuticle.

CYANÆUS. Deep blue, like Prussian blue. In common use to designate colour of feathers, flowers, minerals, &c. See *Colour*.

CYANIC. (*Cyanicus*; from κυανος, blue: so called from its colour.) Of or belonging to the acid so called.

Cyanic acid. *Acidum cyanicum*. The acid which may be obtained from the cyanates of potash and silver, and which is in composition the same as the fulminic acid, although its properties are very different.

CYANITE. Kyanite. Disthene of Haüy. A mineral of a Berlin-blue colour, found in India and Europe.

CYANOGENE. (*Cyanogenium*, *ii*. n.; from κυανος, blue, and γινομαι, to form: production of blue.) See *Prussine*.

CYANOSIS. (*is*, *is*. m.; from κυανος, blue.) The blue disease. An unnatural or blue colour of the whole skin. This colour arises either from congenital malformations of the heart, which permit the venous and arterial blood to be mixed in the cavities of the heart, so that it is not wholly oxygenated; or it is produced by taking nitrate of silver for the cure of certain diseases, as epilepsy, &c.

CY'ANUS. (*us, i.* m. Κυανος, cærulean, or sky-blue: so called from its colour.) Blue-bottle. See *Centauria cyanus.*

CY'AR. (From κεω, to pour out.)

1. The lip of a vessel.

2. The eye of a needle.

3. The orifice of the internal ear, from its likeness to the eye of a needle.

Cya'sma. Spots on the skin of pregnant women.

CYATHIFORMIS. (From *cyathus*, a cup or glass, and *forma*, resemblance.) Glass-shaped. Applied, in *Botany*, to a corol which is tubular, but dilated towards the top like a drinking-glass; as in the cup of Jacob's ladder, &c.

Cyathi'scus. (*us, i.* m.; from κυαθος, a cup.) The hollow part of a probe, formed in the shape of a small spoon, as an ear-picker.

CYATHUS. (*us, i.* m. Κυαθος, a cup.) A cup. It was a common measure among the Greeks and Romans, both of the liquid and dry kind, equal to an ounce, or the twelfth part of a pint. The *sextans* was two ounces; the *triens,* three; the *quadrans,* four; and were named from the portion of a pint they contained. The *quincunx* was five ounces; the *semis,* six; the *septunx,* seven; the *bes,* eight; the *dorans,* nine; the *dextans,* ten; the *deunx,* eleven; the *as, sextarius,* or *cotula,* twelve.

The cyathus was made with a handle, like our punch-ladle. The Romans were used to drink as many cyathi as there were Muses; also as many as there were letters in their patrons' or their mistresses' names.

Pliny and Galen say that the cyathus of the Greeks weighed ten drachms.

The cyathus of the moderns is one fluid ounce and a half.

Cy'bitos. See *Cubitus.*

Cy'bitum. See *Cubitus.*

Cy'bitus. See *Cubitus.*

Cyboi'des. See *Cuboides.*

CYCAS. (Κυκας, of Theophrastus. The name of a palm said to grow in Ethiopia.) The name of a genus of plants, one of the *Palmæ pinnatifoliæ,* of Linnæus; but afterwards removed by him to the *felices.*

Cycas circinalis. The systematic name of a palm-tree, or meal-bark tree, which affords *Sago,* a dry fecula, obtained from the pith of this palm, in the islands of Java, Molucca, and the Philippines. The same substance is also brought from the West Indies, but it is inferior to that brought from the East. Sago becomes soft and transparent by boiling in water, and forms a light and agreeable liquid, much recommended in febrile, phthisical, and calculous disorders, &c. To make it palatable, it is customary to add to it, when boiled or softened with water, some lemon-juice, sugar, and wine.

Cy'ceum. (From κυκαω, to mix.) A mixture of the consistence of pap.

Cy'cima. (From κυκαω, to mix.) So called from the mixture of the ore with lead, by which litharge is made.

CY'CLAMEN. (*en, inis.* n.; from κυκλος, circular; either on account of the round form of the leaves, or of the roots.) *Cyclaminus. Cyclaminum.* Cyclamen.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the sow-bread. See *Cyclamen europæum.*

Cyclamen europæum. The systematic name of the sow-bread. *Arthanita* of the pharmacopœias. The root is a drastic purge and errhine; and by the common people it has been used to procure abortion.

Cycli'scus. (From κυκλος, a circle.) An instrument in the form of a half-moon, formerly used for scraping rotten bones.

Cycli'smus. (From κυκλος, a circle.) A lozenge.

Cyclopho'ria. (From κυκλος, a circle, and φερω, to bear.) The circulation of the blood, or other fluids.

Cyclo'pion. (From κυκλοω, to surround, and ωψ, the eye.) The white of the eye.

CY'CLOS. (*Cyclus, i.* m.) A circle. Hippocrates uses this word to signify the cheeks, and the orbits of the eyes.

Cyclus metasyncriticus. A long protracted course of remedies, persisted in with a view of restoring the particles of the body to such a state as is necessary to health.

CYDO'NIA. (*a, æ.* f.; from *Cydon,* a town in Crete, where the tree grows wild.) The quince-tree. See *Pyrus cydonia.*

CYDONITES. (From *cydonium,* the quince.) A confection of quinces.

CYDONIUM. See *Pyrus cydonia.*

Cydonium malum. See *Pyrus cydonia.*

CYE'MA. (From κυω, to bring forth.) Parturition.

CYGNUS. See *Anas.*

Cygnus mutus. The tame swan.

Cyli'chnis. (From κυλιξ, a cup.) A gallipot or vessel to hold medicines.

CYLINDRICAL. Round.

Cylindrical Leaf. See *Leaf.*

CYLI'NDRUS. (*us, i.* m.; from κυλιω, to roll round.) A cylinder. A tent for a wound, equal at the top and bottom.

Cyllo'sis. (From κυλλοω, to make lame.) A tibia or leg bending outwards.

CY'LUS. (From κυλλοω, to make lame.) In Hippocrates, it is one affected with a kind of luxation, which bends outwards, and is hollowed inward. Such a defect in the tibia is called *Cyllosis,* and the person to whom it belongs is called, by the Latins, *Varus,* which term is opposed to *Valgus.*

CYMA. (*a, æ.* f.; from the Greek κυμα, *i. e.* κυημα, *fœtus.*) I. A cyme, or tuft. A species of inflorescence of plants, consisting of several flower-stalks, all springing from one centre or point, but each stalk is variously subdivided; and in this last respect, a cyme differs essentially from an umbel, the subdivisions of the latter being formed, like its primary divisions, of several stalks springing from one point. This difference is of great

importance in nature. The mode of inflorescence agrees also with a corymbus in general aspect; but in the latter the primary stalks have no common centre, though the partial ones may sometimes be umbellate, which last case is precisely the reverse of a cyme.

From its division into primary stalks or branches, it is distinguished into,

1. *Trifid;* as in *Sedum acre.*
2. *Quadrifid;* as in *Crassula rubens.*
3. *Tripartite,* having three lesser cymes; as in *Sambucus ebulus.*
4. *Quinquipartite;* as in *Sambucus nigra.*
5. *Sessile,* or without stalk; as in *Gnaphalium frutescens.*
6. *Nude,* or naked; as in *Comus sanguinea* and *sericea.*

II. (*Cyma, atis.* n.) A sprout from a stalk.

Cymato'des. Is applied by Galen and others to an unequal fluctuating pulse.

CY'MBA. (*a, æ.* f.; from κυμβος, hollow.) A boat, pinnace, or skiff. A bone of the wrist is so called from its supposed likeness to a skiff. See *Naviculare os.*

CYMBIFORMIS. (From *cymba,* a boat or skiff, and *forma,* likeness.) Skiff or boat-like: applied to the seeds of the *Calendula officinalis.*

CY'MINUM. See *Cuminum.*

CYMOPHANE. See *Chrysoberyl.*

CYMOSUS. Having the character of a cyma: applied to aggregate flowers.

CYNA'NCHE. (*e, es.* f.; from κυων, a dog, and αγχω, to suffocate, or strangle: so called from dogs being said to be subject to it. "*Cynanche, synanche,* and *parasynanche* are terms met with in the Greek writers after Hippocrates, the common signification of all of which is strangulation or angina; while the prefixes cy, sy, and parasy, are of doubtful meaning. Ætius attempted to justify cynanche; but Cœlius Aurelianus and Paulus used synanche after Celsus. The Latins employed angina in the same extent as Hippocrates did paristhmia: quincy is used in a parallel latitude amongst ourselves."—*Good.*) Sore-throat. See *Tonsillitis, Pharyngitis,* and *Croup.*

Cynanche laryngea. See *Croup.*

Cynanche maligna. See *Tonsillitis.*

Cynanche parotidea. See *Parotitis.*

Cynanche pharyngea. See *Pharyngitis.*

Cynanche stridula. See *Croup.*

Cynanche suffocatica. See *Croup.*

Cynanche tonsillaris. See *Tonsillitis.*

Cynanche trachealis. See *Croup.*

CYNA'NCHICUS. (From κυναγχη, the quincy.) A medicine which relieves a quincy.

Cynanchum oleafolium. The leaves of this plant are mixed, in Egypt, with those of senna.

Cynanthro'pia. (From κυων, a dog, and ανθρωπος, a man.) It is used by Bellini, De Morbis Capitis, to express a particular kind of melancholy, when men fancy themselves changed into dogs, and imitate their actions.

Cy'nara. See *Cinara.*

Cynarocephalus. See *Cinarocephalus.*

Cy'nchnis. Κυγχνις. A vessel of any kind to hold medicines in.

CYNOCRA'MBE. (*e, es.* f.; from κυων, a dog, and κραμβη, cabbage: a herb of the cabbage tribe, with which dogs are said to physic themselves.) See *Mercurialis perennis.*

Cyno'ctanum. (*um, i.* n.; from κυων, a dog, and κτεινω, to kill.) A species of aconitum, said to destroy dogs. See *Aconitum napellus.*

Cynocy'tisis. (From κυων, a dog, and κυτισος, the cytisus: so named, because it was said to cure the distemper of dogs.) The dog-rose. See *Rosa canina.*

CYNODE'CTOS. (*us, i.* m.; from κυων, a dog, and δακνω, to bite.) So Dioscorides calls a person bit by a mad dog.

Cynode'smion. (From κυων, a dog, and δεω, to bind: so named, because in dogs it is very discernible and strong.) A ligature by which the prepuce is bound to the glands. See *Frænum.*

CYNODO'NTES. (*Cynodentes, tum.* pl.; from κυων, a dog, and οδους, a tooth.) Canine teeth. See *Teeth.*

CYNOGLO'SSUM. (*um, i.* n.: from κυων, a dog, and γλωσσα, a tongue; so named, from its supposed resemblance.) Hound's tongue. 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the hound's tongue. See *Cynoglossum officinale.*

Cynoglossum officinale. The systematic name for hound's tongue; called also, *Cynoglossum,* and *Lingua canina.*

Cynoglossum — staminibus corolla brevioribus; foliis lato lanceolatis, tomentosis, sessilibus, of Linnæus. It possesses narcotic powers, but is seldom employed medicinally. Acids are said to counteract the ill effects from an over-dose more speedily than any thing else, after clearing the stomach.

Cyno'lophus. (From κυων, a dog, and λοφος, a protuberance: so called, because in dogs they are peculiarly eminent.) The asperity and prominence of the vertebræ.

CYNOLY'SSA. (*a, æ.* f.; from κυων, a dog, and λυσση, madness.) Canine madness.

CYNOMO'RIUM. (*um, ii.* n.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monandria.*

Cynomorium coccineum. The systematic name of the *Fungus melitensis,* a small plant which grows only on a little rock adjoining Malta. A drachm of the powder is given for a dose in dysenteries and hæmorrhages, and with remarkable success.

CYNORE'XIA. (*a, æ.* f.; from κυων, a dog, and ορεξις, appetite.) A canine appetite. See *Bulimia.*

CYNO'SBATOS. See *Cynosbatus.*

CYNO'SBATUS. (*os* and *us, i.* f.; from κυων, a dog, and βατος, a thorn: so called, because dogs are said to be attracted by its smell.) The dog-rose. See *Rosa canina.*

Cynospa'stum. (From κυων, a dog, and σπαω, to attract.) See *Rosa canina.*

CYOPHO'RIA. (*a, æ.* f.; from *κυος*, a fœtus, and *φερω*, to bear.) Pregnancy.

Cypari'ssus. See *Cupressus.*

CY'PERUS. (*us, i.* m.; from *κυπαρος*, a little round vessel, which its roots are said to resemble.) Cyperus. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Monogynia.*

Cyperus esculentus. The rush-nut. This plant is a native of Italy, where the fruit is collected and eaten, and said to be a greater delicacy than the chestnut.

Cyperus longus. The systematic and pharmacopœial name of the English galangale. *Cyperus — culmo triquetro folioso, umbella foliosa supra-decomposita; pedunculis nudis, spicis alternis,* of Linnæus. The smell of the root of this plant is aromatic, and its taste warm, and sometimes bitter. It is now totally fallen into disuse.

Cyperus rotundus. This species, the round cyperus, *Cyperus — culmo triquetro subnudo, umbella decomposita; spicis alternis linearibus,* of Linnæus, is generally preferred to the former, being a more gratefully aromatic bitter. It is chiefly used as a stomachic.

CYPHELLA. (*a, æ.* f.) A peculiar sort of pit or pore, on the under side of the frond, in that section of lichens called *stricta.*

CYPHO'MA. (From *κυπ]ω*, to bend.) A gibbosity, or curvature of the spine.

CYPHO'SIS. A gibbosity, or curvature of the spine.

CYPRESS. See *Cyprus.*

Cypress spurge. See *Esula minor.*

Cy'prinum oleum. Flowers of cypress, calamus, cardamoms, &c. boiled in olive oil: now fallen into disuse.

Cy'prium. (From Κυπρος, Cyprus, an island where it is said formerly to have abounded. Copper.

CYPRINUS. The name of a genus of fishes. Of the many species belonging to this, the carp genus, the five following only are prepared as food.

Cyprinus alburnus. The bleak. A small fish, about four or five inches long, thought good by some; but more esteemed for its pearly scales than its flesh.

Cyprinus barbus. The barbel: so called, because it has four appendages, like a beard, hanging from the under jaw. It is likewise denominated *barbus*, and *barbo.* A coarse and very common fresh-water fish, eaten for want of better. The roe is a violent emetic. The young, or fry, of this fish is supposed by many to be the little fish known by the name of white bait, which is caught in the months of June and July, in great quantity, in the River Thames, between Deptford and Woolwich, and which the wealthy and epicureans resort to Greenwich and Blackwall to eat in perfection. White bait is a remarkably delicious fish, and might be called fish-marrow; for its flesh, and bone also, are so soft and delicate, as to fall into a pulp from the slightest movement of the mouth.

Cyprinus carpio. The carp. A fish that delights in stagnant waters, and is bred in our ponds and canals. The flesh is coarse, and has an earthy taste. It is esteemed by some when stewed in a rich and vinous sauce.

Cyprinus gobio. The gudgeon. A small fresh-water fish, of the size of a smelt. The flesh is white and soft, and of easy digestion.

Cyprinus leuciscus. The dace. This fish lives in still rivers, and seldom exceeds six or eight inches in length. Its flesh is white, and in some estimation.

CY'PRUS. (*us, i.* f.; so called, from the island of Cyprus, where it grew abundantly.) The cypress tree or eastern privet.

CY'PSELIS. (From *κυψελη*, a bee-hive.) The aperture of the ear; also the wax of the ear.

CYRCNE'SIS. (From *κυρκναω*, to mix.) A mixture, or composition.

Cyrto'ma. (*a, atis.* n.; from *κυρ]ος*, curved.) *Cyrtosis.* The same as gibbosity, or curvature.

Hippocrates applied the word *κυρτωματα* to swellings, or tumours of the hypochondria.

CYRTONO'SUS. (*us, i.* m.; from *κυρ]ος*, curved, and *νοσος*, a disease.)

1. The rickets.
2. Curved spine.

CYRTOSIS. (*is, is.* f.; from *κυρτος, curvus, incurvus, gibbosus,* and among the ancients particularly imputed recurvation of the spine, or posterior crookedness, as *λορδωσις*, imputed procurvation of the head and shoulders, or anterior crookedness.) Contortion: applied to the bones.

Cy'ssarus. (From *κυσος*, the anus.) The intestinum rectum was so called, because it reaches to the anus.

Cysso'tis. (From *κυσος*, the anus.) An inflammation of the anus.

CYSTEOLI'THUS. (*us, i.* m.; from *κυςις*, the bladder, and *λιθος*, a stone.) A stone in the bladder, either urinary or gall-bladder.

Cy'sthus. Κυσθος. The anus.

CYSTIC. (*Cysticus*; from *κυςις*, a bag.) Belonging to the urinary or gall-bladder; as cystic duct, cystic bile, &c.

Cystic duct. See *Ductus cysticus.*

Cystic oxide. A peculiar animal product, discovered by Dr. Wollaston. See *Calculus, urinary.*

CYSTICERCUS. (*us, i.* m.; from *κυστις*, a bladder, and *κερκος*, a tail.) The tailed bladder worm. A genus of worms of the hydatid tribe, consisting of a cylindrical body, terminated by a caudal vesicle, and having a head furnished at its base with four nipples or suckers. Those which have been found in the human subject, are,

1. *Cysticercus tenuicollis* of Rudolphi. Dr. Brera found these in great quantity in the choroid plexus of a man, fifty-five years of age, who died of apoplexy. It is about an inch long when full grown, and its head is very small.
2. *Cysticercus finnia* of Zeder. This has

been found by Werner. This species is always enclosed in a delicate cyst. The worm itself is ordinarily hidden within its caudal bladder, and is opake and yellowish. It is of the size of a linseed.

3. *Cysticercus Fischerianus*; so called, by Laennec, after Mons. Fischer, of Leipsic, who found twenty-three in the choroid plexus of a man, where they caused no inconvenience.

4. *Cysticercus dicystus*. Doctor Laennec found this, once only, in the ventricle of the brain of a subject that died of apoplexy. It presented two vesicles; the one the ordinary caudal bladder, the other embracing the body anteriorly.

5. *Cysticercus punctatus*. Dr. Treutler has described this species, which he found in the choroid plexus of a woman twenty-two years of age. Its caudal bladder is globular, and presents several white spots.

CYSTIPHLO'GIA. (*a, æ.* f.; from κυϛις, the bladder, and φλεγω, to burn.) An inflammation in the bladder. See *Cystitis*.

CYSTIRRHA'GIA. (*a, æ.* f.; from κυϛις, the bladder, and ρηγνυμι, to burst forth.) A discharge from the bladder.

CY'STIS. (*Cystis*. Κυϛις, a bag.)

1. Cyst or bladder.

2. The urinary bladder.

3. The membraneous bag surrounding or containing any morbid substance.

Cystis choledocha. See *Gall-bladder*.

Cystis fellea. See *Gall-bladder*.

Cystis urinaria. See *Urinary bladder*.

CYSTI'TIS. (*is, idis.* f.; from κυϛις, the bladder.) Inflammation of the bladder. A disease known by great pain in the region of the bladder, attended with fever and hard pulse, a frequent and painful discharge of urine, or a suppression, and generally tenesmus. If the lower part of the bladder be chiefly affected, the pain will extend to, and take the course of, the perinæum. If the seat be in the neck of the organ, there will be a retention of urine, with a constant urgency to evacuate; if in the fundus, the urine will flow stillatitiously and without ceasing, the bladder will give a feeling of being constantly full, and the patient will be perpetually and fruitlessly striving to empty it. If the disease be not soon subdued, the restlessness and anxiety increase, the extremities become cold, vomiting supervenes, and delirium and other marks of great general irritation: the disease runs its course with rapidity, and subsides, or destroys the patient, in a few days.

With respect to the causes, they are those which excite inflammation of the other viscera: but the bladder often contains calculous concretions, which frequently produce cystitis; besides, it is often irritated and inflamed by viscid substances that pass into the circulation, and particularly by cantharides, ardent spirits, and terebinthinate essences or balsams. The treatment is very similar to that of *Nephritis*.

CYSTITOME. (*Cystitomus, i.* m.; from κυϛις, a cyst, and τεμνω, to cut.) An instrument for cutting or opening the capsule of the crytalline lens.

CYSTOCE'LE. (*e, es.* f.; from κυϛις, the bladder, and κηλη, a tumour.) An hernia formed by the protrusion of the urinary bladder.

CYSTOLI'THICUS. From κυϛις, the bladder, and λιθος, a stone.) Having a stone in the bladder.

CYSTOPHLE'GICUS. (From κυϛις, the bladder, and φλεγω, to burn.) An inflammation of the bladder.

CYSTOPHLEGMA'TICUS. (From κυϛις, the bladder; and φλεγμα, phlegm.) Having matter or mucus in the bladder.

CYSTOPRO'CTICUS. (From κυϛις, the bladder, and πρωκτος, the anus, or rectum.) A disease of the bladder and rectum.

CYSTOPTO'SIS. (From κυϛις, the bladder, and πιπτω, to fall.) 1. A protrusion of the inner membrane of the bladder through the urethra.

2. A prolapse, or falling down of the bladder.

CYSTOSPA'STICUS. (From κυϛις, the bladder, and σπασμα, a spasm.) A spasm in the sphincter of the bladder.

CYSTOSPY'ICUS. (From κυϛις, the bladder, and πυον, pus.) Purulent matter in the bladder.

CYSTOTHROMBOI'DES. (From κυϛις, the bladder, and θρομβος, a coagulation of blood.) A concretion of grumous blood in the bladder.

CYSTOTO'MIA. (*a, æ.* f.; from κυϛις, the bladder, and τεμνω, to cut.) The operation of cutting or piercing the bladder.

Cy'thion. An eye-wash.

CY'TINUS. (*us, i.* m.; perhaps, as Martyn suggests, from κυτινος, a name given by Theophrastus to the blossoms of the pomegranate, the calyx of which the flower in question resembles in shape.) The name of a genus of plants. Class, *Gynandria*; Order, *Octandria*, of Linnæus.

Cytinus hypocistis. Rape of cystus. A fleshy pale-yellowish plant, parasitical on the roots of several species of cystus in the south of Europe, from which the *succus hypocistidis* is obtained.

Cytiso-genista. The common broom.

Cyzemer. A swelling of the wrists.

Cyzice'nus. A plaster for wounds of the nerves.

D.

D. This letter signifies vitriol in the old chemical alphabet. It also formerly, according to Galen, signified, symbolically, a quartan ague. It is an abbreviation of doctor, as M.D., *Doctor Medicinæ*.

DAB. See *Pleuronectes limanda*.

Daberlocks. See *Fucus esculentus*.

DACE. See *Cyprinus leuciscus*.

Daceton. (Δακετὸν, from δακνω, to bite.) Formerly applied to animals the bite of which was venomous.

DACNE'RUS. (From δακνω, to bite.) Biting; pungent. A sharp eye-wash, composed of burnt copper, pepper, cadmia, myrrh, and opium, formerly in use, was so called.

Dacnodes. (From δακνω, to bite.) Variously applied in the writings of the ancient physicians: to the aquiline wind, which bit, as it were, the eyes; to a cold air, acting pungently on ulcers; to the stinging heat of the skin in fever, πυρετός δακνωδες, &c.

DACRY'DIUM. (*um, ii.* n.; from δακρυ, a tear.) The inspissated juice of scammony, in small drops, and therefore called a tear.

Dacrygelo'sis. (*is, is.* m.; from δακρυω, to weep, and γελαω, to laugh.) A species of insanity, in which the patient weeps and laughs at the same time.

DACRYO'DES. (From δακρυω, to weep.) A weeping ulcer.

DACRYO'MA. (*a, atis.* n.; from δακρυω, to weep.) A closing of one or more of the puncta lachrymalia, causing an effusion of tears.

Dactyle'thra. (From δακ7υλος, a finger.) A species of bougie, shaped like a finger, to excite vomiting.

Dactyle'tus. (From δακ7υλος, the date.) See *Hermodactylus*.

DA'CTYLIUS. (From δακ7υλος, a finger.) A pastil, or lozenge, shaped like a finger.

DA'CTYLUS. (*us, i.* m.; from δακ7υλος, a finger: so called from the likeness of its fruit to a finger.) 1. A finger. See *Digitus*.

2. The date. See *Phœnix dactylifera*.

DÆ'DIUM. (*um, ii.* n.; from δαις, a torch.) A small torch or candle. A bougie.

DÆMONOMA'NIA. (*a, æ.* f.; from δαιμων, a dæmon, and μανια, madness.) That species of melancholy where the patient supposes himself to be possessed by devils.

Dagger-pointed. See *Mucronatus*.

DAISY. (Derived from day and eye, alluding to the eye-like form of the flower, and its expansion in the day.) See *Bellis perennis*.

Daisy, ox-eye. See *Chrysanthemum*.

DALE, Samuel, was born in 1659. In 1693 he published his "Pharmacologia," an Introduction to the Materia Medica, which he afterwards much enlarged and improved: it passed through many editions. He also gave a good account of the natural productions about Harwich and Dover Court.

DAMASK. A fine dark red. See *Colour*.

Damask rose. See *Rosa centifolia*.

Damna'tus. (From *damno*, to condemn.) The dry useless fæces, left in a vessel after the moisture has been distilled from it, is called terra damnata, or *caput mortuum*.

DAMSON. The fruit of a variety of the *Prunus domestica*.

DANDELION. See *Leontodon*.

DANDRIF. See *Pityriasis*.

DANEWORT. See *Sambucus ebulus*.

DAOURITE. A variety of red schorl.

DA'PHNE. (*e, es.* f. Δαφνη; from δαω, to burn, and φωνη, a noise: because of the noise it makes when burnt.) The name of a genus of plants in the Linnæan system. Class, *Octandria*; Order, *Monogynia*. The laurel, or bay-tree.

Daphne alpina. This species of dwarf olive-tree, called also *Chamælea*, and *Chamelæa*, is said to be purgative in the dose of ℨij., and is sometimes given by country people. The French chemists have lately examined it chemically. See *Daphnin*.

Daphne, flax-leaved. See *Daphne*.

Daphne gnidium. The systematic name of the tree which affords the Garou bark. Spurge-flax; Flax-leaved Daphne. *Thymelæa; Oneoron. Daphne gnidium—panicula terminali foliis lineari-lanceolatis acuminatis*, of Linnæus. This tree affords the Garou bark, which very much resembles that of our mezereum. It is to be immersed in vinegar for about an hour before it is wanted: a small piece, the size of a sixpence, thus steeped, is applied to the arm or any other part, and renewed once a day in winter and twice in summer. It produces a serous exudation from the skin, without irritating or blistering. It is recommended, and is in frequent use in France and Russia, against some diseases of the eyes.

Daphne laureola. The systematic name of the spurge-laurel. *Laureola daphnoides*. The bark of this plant is recommended to excite a discharge from the skin, in the same way as that of the *Daphne gnidium*.

Daphne mezereum. The systematic name of the mezereon. Spurge-olive; Widow-wail: called also *Ætolium*, and *Ætocion*. *Mezereum*. *Daphne mezerium—floribus sessilibus ternis caulinis, foliis lanceolatis deciduis*, of Linnæus. This plant is extremely acrid, especially when fresh, and, if retained in the mouth, excites great and long-continued heat and inflammation, particularly of the mouth and fauces; the berries, *grana cnidii* of old writers, also have the same effects, and, when swallowed, prove a powerful corrosive poison, not only to man, but to dogs, wolves, and

foxes. The bark of the root is the part employed medicinally in the *decoctum sarsaparillæ compositum*, intended to assist mercury in resolving nodes and other obstinate symptoms of syphilis. The antisyphilitic virtues of mezereum, however, have been by many writers very justly doubted. "The result of my own experience (says Mr. Pearson, of the Lock Hospital,) by no means accords with the representation given of this root by former writers. From all that I have been able to collect, in the course of many years' observation, I feel myself authorised to assert, unequivocally, that the mezereum has not the power of curing the venereal disease in any one stage, or under any one form. If a decoction of this root should ever reduce a venereal node, where no mercury has been previously given, yet the patient will by no means be exempted from the necessity of employing mercury for as long a space of time, and in as large a quantity, as if no mezereum had been taken. With respect to the power it is said to possess, of alleviating the pain, and diminishing the bulk of membraneous nodes, nothing peculiar and appropriate can be ascribed to the mezereum on these accounts, since we obtain the same good effects from sarsaparilla, guaiacum, volatile alkali, blistering plasters, &c. Nevertheless, venereal nodes, which have subsided under the use of any of these articles of the materia medica, will appear again, and often with additional symptoms, if a full and efficacious course of mercury be not submitted to. It has, indeed, been alleged, that mezereum always alleviates the pain occasioned by a venereal node, and generally reduces it, where the periosteum only is affected; and that it seldom fails of removing those enlargements of the periosteum which have not yielded during the administration of mercury.

That some instances of success, in cases like these, may have fallen to the share of those who made the assertion, it would not become me to deny; but I have met with few such agreeable evidences of the efficacy of this medicine. I have given the mezereum in the form of a simple decoction, and also as an ingredient in compound decoctions of the woods, in many cases, where no mercury had been previously employed, but never with advantage to a single patient. I have also tried it, in numerous instances, after the completion of a course of mercury; yet, with the exception of two cases, where the thickened state of the periosteum was removed during the exhibition of it, I never saw the least benefit derived from taking this medicine. In a few cases of anomalous pains, which I supposed were derived from irregularities during a mercurial course, the mezereum was of service, after I had tried the common decoction of the woods without success; but, even in this description of cases, I have always found it a very uncertain remedy. I have made trial of this vegetable in a great number of scrofulous cases, where the membranes covering the bones were in a diseased state, and I am not sure that one single patient obtained any evident and material benefit from it.

The late Dr. Cullen, whose reports may justly claim attention from all medical men, when treating of the mezereum, in his Materia Medica, says, "I have frequently employed it in several cutaneous affections, and sometimes with success." It were to have been wished, that the professor of medicine had specified what those diseases of the skin were, in which the mezereum was sometimes employed with success; for, if I except an instance or two of lepra, in which the decoction of this plant conferred a temporary benefit, I have very seldom found it possessed of medicinal virtue, either in syphilis, or in the sequelæ of that disease, in scrofula, or in cutaneous affections. Indeed the mezereum is of so acrimonious a nature, often producing heat and other disagreeable sensations in the fauces, and, on many occasions, disordering the primæ viæ, that I do not often subject my patients to the certain inconveniences which are connected with the primary effects of this medicine, as they are rarely compensated by any other important and useful qualities."

DAPHNELÆ'ON. (*on, i.* n.; from δαφνη, the laurel, and ελαιον, oil.) Laurel oil: applied to the oil of bay-berries.

DAPHNIN. The bitter principle of the *Daphne alpina*. From the alkoholic infusion of this bark, the resin was separated by its concentration. On diluting the tincture with water, filtering and adding acetate of lead, a yellow *daphnate of lead* fell, from which sulphuretted hydrogene separated the lead, and left the daphnin in small transparent crystals. They are hard, of a greyish colour, a bitter taste when heated, evaporate in acrid acid vapours, sparingly soluble in cold, but moderately in boiling water. It is stated, that its solution is not precipitated by acetate of lead; yet acetate of lead is employed in the first process to throw it down.

DAPHNI'TIS. (From δαφνη, the laurel.) A sort of cassia, resembling the laurel.

DAPHNOI'DES. (From δαφνη, the laurel, and ειδος, a likeness.) Daphne-like. The spurge laurel. See *Daphne laureola.*

DA'RSIN. (From *darzin*, Arabian.) The grosser sort of cinnamon.

DA'RSIS. (*is, is.* m.; from δερω, to excoriate.) An excoriation. When the skin is divided and separated by the scalpel from the parts underneath, and often when one part is separated from another, the phrase κατα δαρσιν is used.

DA'RTOS. (*os, i.* m.; and *on, i.* n.: from δερας, leather; and, according to some, from δερω, to excoriate: so called from its raw and excoriated appearance.) The part so named, under the skin of the scrotum, is by some anatomists considered as a muscle, although it appears to be no more than a condensation of the cellular membrane lining

the scrotum. It is by means of the dartos that the skin of the scrotum is corrugated and relaxed.

DARWIN, Erasmus, was born at Elton in Nottinghamshire, in 1731. After studying at Cambridge and Edinburgh, he began to practise at Litchfield, and removed to Derby, where he continued till his death in 1802. He distinguished himself more as a poet, than by professional improvements: though he certainly suggested some ingenious methods of practice; but, warned by preceding examples, he avoided publishing any material poem till his medical fame was thoroughly established. His *Botanic Garden*, and *Zoonomia*, are well known, but they have long ceased to be popular; and the philosophy of the latter work, which advocates materialism, is justly censured. He communicated to the College of Physicians an account of his successful *Use of Digitalis in Dropsy*, and some other diseases, which was published in their Transactions. His son *Charles*, who died while studying at Edinburgh, obtained a gold medal by an Essay on the distinction of Pus and Mucus.

Dasy'mma. (From δασυς, rough.) A scabby roughness of the eyelids.

Da'sys. (Δασυς, rough.) 1. Rough; dry and parched: applied, in old writings, to the tongue.

2. Difficult respiration.

DATE. See *Dactylus*.

Date plum, Indian. See *Dyospyrus lotus*.

DATOLYTE. Datholit of Werner. A species of silicious ore divided into common datolyte and botroidal datolyte.

DATU'RA. (*a, æ.* f. Blanchard says, it is derived from the Indian word *datiro*, of which he knows not the meaning.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

Datura stramonium. The systematic name of the thorn-apple; called also, *Stramonium*, *Dutray*, *Barryococcalon*, *Solanum maniacum* by Dioscorides, *Stramonium spinosum* by Gerard, *Solanum fœtidum* by Bauhin, and also *Strammonium majus album.*

Datura stramonium — pericarpiis spinosis erectis ovatis, foliis ovatis glabris, of Linnæus. This plant has been long known as a powerful narcotic poison. In its recent state it has a bitterish taste, and a smell somewhat resembling that of poppies, especially if the leaves be rubbed between the fingers. Instances of the deleterious effects of the plant are numerous, more particularly of the seed. An extract prepared from the seeds is recommended by Baron Stoerck in maniacal, epileptic, and convulsive affections; and is said by some to succeed, while, in the hands of others, it has failed. In this country, says Dr. Woodville, we are unacquainted with any practitioners whose experience tends to throw light on the medical character of this plant. It appears to us, continues Dr. Woodville, that its effects as a medicine are to be referred to no other power than that of a narcotic. And Dr. Cullen, speaking on this subject, says, "I have no doubt that narcotics may be a remedy in certain cases of mania and epilepsy; but I have not, and I doubt if any other person has, learned to distinguish the cases to which such remedies are properly adapted. It is therefore that we find the other narcotics, as well as the stramonium, to fail in the same hands in which they had in other cases seemed to succeed. It is this consideration that has occasioned my neglecting the use of stramonium; and, therefore, prevented me from speaking more precisely from my own experience on this subject."

The extract of this plant has been the preparation usually employed, from one to ten grains and upwards a day; but the powdered leaves, prepared after the manner of those of hemlock, would seem to be more certain and convenient. Greding found the strength of the extract to vary exceedingly; that which he obtained from Ludwig was much more powerful than that which he had of Stoerck. Externally, the leaves of stramonium have been applied to inflammatory tumours and burns, and it is said with success; and, of late, the dried leaves have been smoked as a remedy in asthma, and in some cases, decidedly spasmodic, they have been found beneficial as a preventative of the disease and to subdue it in the paroxysm: though in common, or the humoral species, it does not appear that they have been more efficacious than tobacco.

DAUBENTON, Lewis Mary, was born in Burgundy, 1716. He contributed materially to enrich the splendid work of that eminent naturalist, Buffon, by furnishing the anatomy both of man and animals.

Dauc'ites vinum. Wild carrot-seeds steeped in must.

DAU'CUS. (*us, i.* m. Απο του δαυειν, from its relieving the colic, and discussing flatulencies.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

2. The pharmacopœial name of the garden carrot. See *Daucus carota.*

Daucus alsaticus. See *Oreoselinum.*

Daucus annuus minor. See *Caucalis anthriscus.*

Daucus carota. The systematic name of the carrot plant; called also, *Daucus*, *Daucus sativus*, and *Pastinaca sylvestris tenuifolia officinarum.*

Daucus carota — seminibus hispidis, petiolis subtus nervosis, of Linnæus. The cultivated root, scraped and applied in the form of a poultice, is an useful application to phagedænic ulcers, and to cancers and putrid sores. The seeds, which obtain a place in the materia medica, have a light aromatic smell, and a warm acrid taste, and are esteemed for their diuretic qualities, and for their utility in calculous and nephritic complaints, in which an infusion of three spoonfuls of the seeds in a pint of boiling water has been recommended; or the seeds may be fermented in malt liquor,

which receives from them an agreeable flavour, resembling that of lemon-peel. The boiled root is said by many to be difficult of digestion; but this is the case only when the stomach is weak. It contains a considerable quantity of the saccharine principle, and is very nutritious.

Daucus creticus. See *Athamanta*.

Daucus mathedonius. See *Apium*.

Daucus montanus. See *Oreoselinum*.

Daucus peregrinus. A species of selinum.

Daucus sativus. See *Daucus carota*.

Daucus selenoides. See *Oreoselinum*.

Daucus seprinius. Most probably chervil. See *Scandix cerefolium*.

Daucus sylvestris. Wild carrot, or bird's nest. The seeds of this wild plant are said to be more efficacious than those of the garden carrot; they possess demulcent and aromatic qualities, and are given, in infusion or decoction, in calculous complaints.

Daucus vulgaris. See *Daucus sylvestris*.

DAY-MARE. See *Ephialtes*.

DAY-SIGHT. A morbid condition of the eye, in which the vision is dull and confused in the dark, but clear and powerful in broad day-light. It is said not to be uncommon in some parts of Russia and France. It is cured by rest and strengthening collyria.

DEAD-NETTLE. See *Lamium album*.

Deadly nightshade. See *Atropa*.

DEAFNESS. See *Dysecœa*.

Deaf-dumbness. See *Aphonia*.

Dearticula'tio. (From *de*, and *articulus*, a joint.) Articulation admitting evident motion.

Deascia'tio. (From *de*, and *ascio*, to chip, as with a hatchet.) A bone splintered on its side.

DECAGY'NIA. (*a, æ.* f.; from δεκα, ten, and γυνη, a woman.) The name of an order of the class *Decandria*, of the sexual system of plants.

Decamy'ron. (From δεκα, ten, and μυρον, an ointment.) An aromatic ointment, mentioned by Oribasius, containing ten ingredients.

DECA'NDRIA. (*a, æ.* f.; from δεκα, ten, and ανηρ, a man.) The name of a class, and also of an order, of plants in the sexual system.

DECAPHYLLOUS. (*Decaphyllus*; from δεκα, ten, and φυλλον, a leaf.) Ten leaved: applied to the perianth of flowers.

DECEMFIDUS. Ten-clepted: applied, in *Botany*, to perianths.

DECEMLOCULARIS. Ten-celled: applied, in *Botany*, to capsules.

Decidens. (From *decido*, to fall down.) An obsolete term, formerly applied to any change prolonging acute diseases.

DECI'DUOUS. (*Deciduus*, from *decido*, to fall off, or down: to die.) Falling off.

1. In *Botany*, applied to trees, shrubs, &c. which, in most European countries, lose their leaves as winter approaches. This term is expressive of the second stage of duration, and, like *caducous*, has a different application according to the particular part to which it refers: thus leaves are deciduous which drop off in the autumn, petals which fall off with the stamina and pistils; and calyces are *deciduous* which fall off after the expansion, and before the dropping of the flower.

2. In *Anatomy*, applied to a very thin and delicate membrane or tunic, *Membrana decidua*, which adheres to the gravid uterus, and is said to be a reflection of the chorion, and, on that account, is called *decidua reflexa*. The tunica decidua comes away after delivery, in small pieces, mixed with the *lochia*.

DECIMA'NUS. (From *decem*, ten, and *mane*, the morning.) Returning every tenth day: formerly applied to some erratic fevers.

DECLINING. (*Declinatus*, *Declivis*: from *declino*, to bend.) Applied, by botanical writers, to stems, pericarps, &c., when bent like a bow, with the arch downwards. Applied also, formerly, to a muscle of the abdomen, because of its posture. See *Obliquus descendens*.

DECLINATUS. See *Declining*.

DECLI'VIS. (From *de*, and *clivis*, a hill.) Declining: descending. See *Obliquus descendens*.

DECO'CTUM. (*um, i.* n.; from *decoquo*, to boil.) A decoction. Any medicine made by boiling in a watery fluid. In a chemical point of view, it is a continued ebullition with water, to separate such parts of bodies as are only soluble at that degree of heat. The following are among the most approved decoctions.

Decoctum album. See *Mistura cornu usti*.

Decoctum aloes compositum. Compound decoction of aloes. Take of extract of liquorice, half an ounce; subcarbonate of potash, two scruples; extract of spiked aloe powdered, myrrh powdered, saffron stigmata, of each a drachm; water, an octary. Boil down to twelve fluid ounces, and strain; then add compound tincture of cardamoms, four fluid ounces. This decoction, lately introduced into the London Pharmacopœia, is analogous to an article in very frequent use, invented by the late Dr. Devalingin, and sold under the name of *Beaume de vie*. By the proportion of tincture which is added, it will keep unchanged for any length of time.

Decoctum althææ. Decoction of marsh mallows. Take of dried marsh mallow roots, ℥iv.; raisins of the sun stoned, ℥ij.; water, Ovij. Boil to five pounds; place apart the strained liquor, till the fæces have subsided, then pour off the clear part. This preparation, directed in the Edinburgh Pharmacopœia, may be exhibited as a common drink in nephralgia, and many diseases of the urinary passages, with advantage.

Decoctum anthemidis. Chamomile decoction. Take of chamomile flowers, ℥j.; caraway seeds, ℥ss.; water, ℔v. Boil fifteen minutes, and strain. A very common and excellent vehicle for tonic powders, pills, &c. It is also in very frequent use for fomentation and clysters. See *Decoctum chamæmeli*.

Decoctum astragali. Take of the root of the astragalus escapus, ℥j.; distilled water, Oiij. These are to be boiled, till only a quart of fluid remain. The whole is to be taken, a little warmed, in the course of 24 hours. This remedy was tried very extensively in Germany, and said to evince very powerful effects, as an antisyphilitic.

Decoctum bardanæ. Take of bardana root, f.℥vj.; of distilled water, Ovj. These are to be boiled till only two quarts remain. From a pint to a quart in a day is given, in those cases where sarsaparilla, and other remedies that are called alterative, are supposed to be requisite.

Decoctum chamæmeli. See *Decoctum anthemidis.*

Decoctum cinchonæ. Decoction of cinchona, commonly called decoction of Peruvian bark. Take of lance-leaved cinchona bark bruised, an ounce; water, a pint. Boil for ten minutes, in a vessel slightly covered, and strain the decoction while hot. According to the option of the practitioner, the bark of either of the other species of cinchona, the cordifolia, or *yellow*, or the oblongifolia, or *red*, may be substituted for the lancifolia, or *quilled;* which is here directed. This way of administering the bark is very general, as all the other preparations may be mixed with it, as necessity requires. It is a very proper fomentation for prolapsus of the uterus and rectum.

Decoctum cornu. See *Mistura cornu usti.*

Decoctum cydoniæ. *Mucilago seminis cydonii malii. Mucilago seminum cydoniorum.* Decoction of quince seeds. Take of quince seeds, two drachms; water, a pint. Boil over a gentle fire for ten minutes, then strain. This decoction, in the new London Pharmacopœia, has been removed from among the mucilages, as being less dense than either of the others, and as being employed in larger doses, like other mucilaginous decoctions. In addition to gum, it contains other constituent parts of the seeds, and is, therefore, more apt to spoil than common mucilage, over which it possesses no other advantages, than that it is more grateful, and sufficiently thin, without further dilution, to form the bulk of any liquid medicine. Its virtues are demulcent. Joined with syrup of mulberry and a little borax, it is useful against aphthæ of the mouth and fauces.

Decoctum daphnes mezerei. Decoction of mezereon. Take of the bark of mezereon root, ℥ij.; liquorice root bruised, ℥ss.; water, Oiij. Boil it, with a gentle heat, down to two pounds, and strain it. From four to eight ounces of this decoction may be given four times a day, in some obstinate venereal and rheumatic affections. It operates chiefly by perspiration.

Decoctum dulcamaræ. Decoction of woody nightshade. Take of woody nightshade stalks, newly gathered, ℥j.; distilled water, Ojss. These are to be boiled away to a pint, and strained. The dose is half an ounce to two ounces, mixed with an equal quantity of milk. This remedy is employed in inveterate cases of scrophula; in cancer and phagedæna; in lepra and other cutaneous affections; and in anomalous local diseases, originating in venereal lues.

Decoctum geoffrææ inermis. Decoction of cabbage-tree plant. Take of bark of the cabbage-tree, powdered, ℥j.; water, Oij. Boil it, with a gentle fire, down to one pound, and strain. This is a powerful anthelmintic. It may be given in doses of one table-spoonful to children, and four to adults. If disagreeable symptoms should arise from an overdose, or from drinking cold water during its action, we must immediately purge with castor oil, and dilute with acidulated drinks.

Decoctum guaiaci officinalis compositum. *Decoctum lignorum.* Compound decoction of guaiacum, commonly called decoction of the woods. Take of guaiacum raspings, ℥iij.; raisins stoned, ℥ij.; sassafras root, liquorice, each ℥j.; water, Ox. Boil the guaiacum and raisins with the water, over a gentle fire, to the consumption of one half; adding, towards the end, the sassafras and liquorice. Strain the liquor, without expression. This decoction possesses stimulant and diaphoretic qualities, and is generally exhibited in rheumatic and cutaneous diseases, which are dependant on a vitiated state of the humours. It may be taken by itself, to the quantity of a quarter of a pint, twice or thrice a day, or used as an assistant in a course of mercurial or antimonial alteratives: the patient, in either case, keeping warm, in order to promote the operation of the medicine.

Decoctum hellebori albi. Decoction of white hellebore. Take of the root of white hellebore powdered, by weight, ℥j.; water, two pints; rectified spirits of wine, f.℥ij. by measure. Boil the water, with the root, to one pint; and the liquor being cold and strained, add to it the spirit. This decoction, in the last London Pharmacopœia, is called decoctum veratri. It is a very efficacious application, externally, as a wash, in tinea capitis, lepra, psora, &c. When the skin is very tender and irritable, it should be diluted with an equal quantity of water.

Decoctum hordei. *Decoctum hordei distichi. Aqua hordeata.* Take of pearl barley, ℥ij.; water, four pints and a half. First wash away any adhering extraneous substances with cold water; next, having poured upon the barley half a pint of water, boil for a few minutes. Let this water be thrown away, and add the remainder of the water boiling; then boil down to two pints, and strain. Barley-water is a nutritive and softening drink, and the most proper of all liquors in inflammatory diseases. It is an excellent gargle in inflammatory sore throats, mixed with a little nitre.

Decoctum hordei compositum. *Decoctum pectorale.* Compound decoction of barley. Take of decoction of barley, two pints; figs sliced, ℥ij.; liquorice root, sliced and

bruised, ℥ss.; raisins stoned, ℥ij.; water, a pint. Boil down to two pints, and strain. From the pectoral and demulcent qualities of this decoction, it may be administered as a common drink in fevers, and other acute disorders, in catarrh, and several affections of the chest.

Decoctum hordei cum gummi. Barley water, Oij.; gum arab. ℥j. The gum is to be dissolved in the barley decoction whilst warm. It then forms a suitable diluent in strangury, dysury, &c.

Decoctum lichenis. Decoction of Iceland moss or liverwort. Take of liverwort, one ounce; water, a pint and a half. Boil down to a pint, and strain. The dose is from ℥j. to ℥iv.

Decoctum lobeliæ. Take a handful of the roots of the *Lobelia syphilitica*; distilled water, Oxij. These are to be boiled in the usual way, till only four quarts remain. The very desirable property of curing the venereal disease has been attributed to this medicine; but it is not more to be depended on than guaiacum, or other vegetable substances, of which the same thing has been alleged. The effects of this decoction are purgative, and the manner of taking it, as described by Swediaur, is as follows:—The patient is to begin with half a pint twice a day. The same quantity is then to be taken four times a day, and continued so long as its purgative effect is not too considerable. When the case is otherwise, it is to be discontinued for three or four days, and then had recourse to again till the cure is completed. As this is a remedy on the old system, and not admitted into our pharmacopœias, little confidence ought to be placed in it.

Decoctum lusitanicum. Take of sliced sarsaparilla, lignum sassafras, lignum santalum rubrum, officinal lignum guaiacum, of each one ounce and a half; of the root of mezereon, coriander seed, of each half an ounce; distilled water, ten pounds. These are to be boiled till only half the fluid remains. The dose is a quart or more in a day.

Take of sliced sarsaparilla, lignum santalum rubrum, lignum santalum citrinum, of each ℥jss.; of the root of glycyrrhiza and mezereon, of each ʒij.; of lignum rhodii, officinal lignum guaiacum, and lignum sassafras, of each ℥ss.; of antimony; ℥j.; distilled water, Ov. These ingredients are to be macerated for twenty-four hours, and afterwards boiled till the fluid is reduced to half its original quantity. From one to four pints are given daily.

The late Mr. Hunter notices this, and also the following formula, in his Treatise on the Venereal Disease:—

Take of sliced sarsaparilla, of the root of China, of each ℥j.; walnut-peels, dried, xx.; antimony, ℥ij.; pumice-stone, powdered, ℥j.; distilled water, Ox. The powdered antimony and pumice-stone are to be tied in separate pieces of rag, and boiled, along with the other ingredients. This last decoction is reckoned to be the genuine Lisbon diet-drink, the qualities of which have been the subject of so much encomium.

Decoctum malvæ compositum. *Decoctum pro enemate. Decoctum commune pro clystere.* Compound decoction of mallows. Take of mallows, dried, an ounce; chamomile flowers, dried, half an ounce; water, a pint. Boil for a quarter of an hour, and strain. A very excellent form for an emollient clyster. A variety of medicines may be added to answer particular indications.

Decoctum mezerei. See *Decoctum daphnes mezerei.*

Decoctum papaveris. *Decoctum pro fomento. Fotus communis.* Decoction of poppy. Take of white poppy capsules, bruised, ℥iv.; water, four pints. Boil for a quarter of an hour, and strain. This preparation possesses sedative and antiseptic properties, and may be directed with advantage in sphacelus, &c.

Decoctum pro enemate. See *Decoctum malvæ compositum.*

Decoctum pro fomento. See *Decoctum papaveris.*

Decoctum quercus. Decoction of oak bark. Take of oak bark, ℥j.; water, two pints. Boil down to a pint, and strain. This astringent decoction has lately been added to the London Pharmacopœia, and is chiefly used for external purposes. It is a good remedy in prolapsus ani, and may be used also, in some cases, as an injection.

Decoctum sarsaparillæ. Decoction of sarsaparilla. Take of sarsaparilla root, sliced, ℥iv.; boiling water, four pints. Macerate for four hours, in a vessel lightly covered, near the fire; then take out the sarsaparilla, and bruise it. After it is bruised, put it again into the liquor, and macerate it in a similar manner for two hours more; then boil it down to two pints, and strain.

This decoction is much extolled by some practitioners, in phthisis, and to restore the strength after a long course of mercury.

Decoctum sarsaparillæ compositum. Compound decoction of sarsaparilla. Take of decoction of sarsaparilla, boiling, four pints; sassafras root sliced, guaiacum-wood shavings, liquorice root, bruised, of each an ounce; mezereon-root bark, ʒiij. Boil for a quarter of an hour, and strain. The alterative property of the compound is very great: it is generally given after a course of mercury, where there have been nodes and indolent ulcerations, and with great benefit. The dose is from half a pint to a pint in twenty-four hours.

Decoctum senegæ. Decoction of senega. Take of senega root, ℥j.; water, two pints. Boil down to a pint, and strain. This is now first introduced into the London Pharmacopœia, as being a useful medicine, especially in affections of the lungs, attended with debility and inordinate secretion.

Decoctum ulmi. Decoction of elm bark. Take of fresh elm bark, bruised, four ounces; water, four pints. Boil down to two pints,

and strain. This may be employed with great advantage as a collyrium in chronic ophthalmia. It is given internally in some cutaneous eruptions.

DECOCTUM VERATRI. See *Decoctum hellebori albi.*

DECOLLA'TIO. (*o, onis.* f.; from *decollo*, to behead.) The loss of a part of the skull.

DECOMPOSITÆ. The name of a class in Sauvage's Methodus Foliorum, consisting of such as have twice compounded leaves; that is, have a common footstalk supporting a number of lesser leaves, each of which is compounded; as in *Fumaria*, and many umbelliferous plants.

DECOMPOSITION. (*Decompositio, onis.* f.; from *de*, and *compono*, to discompose or alter the arrangement of.) The separation of the component parts or principles of bodies from each other. The decomposition of bodies forms a very large part of chemical science. It seems probable, from the operations we are acquainted with, that it seldom takes place but in consequence of some combinations or composition having been effected. It would be difficult to point out an instance of the separation of any of the principles of bodies which has been effected, unless in consequence of some new combination. The only exceptions seem to consist in those separations which are made by heat, and voltaic electricity.

DECOMPOSITUS. A term applied to leaves, and means doubly compound.

The decomposite, or doubly compound leaves, are of three different kinds:—

1. *Bigeminine*, or twinforked, when a forked leafstalk bears several leafits at the end of each division or fork.

2. *Biternate*, or doubly threefold, when a leafstalk with three divisions bears three leafits upon the end of each division.

3. *Duplicato-pinnate*, or *bipinnate*, doubly winged, when a leafstalk has lateral ribs, and each of these ribs forms a winged leaf; as in *Tanacetum vulgare*, *Achillea millefolium*, &c.

DECORTICATION. (*Decorticatio, onis.* f.; from *de*, from, and *cortex*, bark.) The stripping of any thing of its bark, husk, or shell: thus almonds, and the like, are decorticated; that is, deprived of their pellicle, when ordered for medicinal purposes.

DECREPITATION. (*Decrepitatio, onis.* f.; from *decrepo*, to crackle.) A kind of crackling noise, which takes place in some bodies when heated: it is peculiar to some kinds of salts; as muriate of soda, sulphate of barytes, &c.

DECUMBENS. (From *decumbo*, to lie down.) Lying down. Drooping: a term applied to flowers which incline to one side and downwards.

DECURRENT. (*Decurrens*; from *decurro*, to run down.) Applied to leaves which run down the stem or leafy border or wing; as in *Onopordium acanthium*, and many thistles, great mullein, and comfrey: and to leafstalks; as in *Pisum ochrus.*

DECURSIVE. (*Decursivus*; from *decurro*, to run down.) Decurrently: applied to leaflets that run down the stem; as in *Eryngium campestre.*

DECUSSATE. (*Decussatus*; from *decusso*, to cross after the manner of an X.) Applied to leaves and spines which are in pairs, alternately crossing each other; as in *Veronica decussata*, and *Genista lucitanica.*

DECUSSATION. (*Decussatio, onis.* f.; from *decutio*, to divide.) When nerves or muscular fibres cross one another, they are said to decussate each other.

DECUSSO'RIUM. (*um, ii.* n.; from *decusso*, to divide.) An instrument to depress the dura mater, after trepanning.

DEFECATION. The separating or freeing any thing from its fæces.

DEFENSIVE. (*Defensivus*; from *defendo*, to preserve.) Defensive: applied to plasters and dressings of wounds; and formerly to cordial medicines, or such as resist infection.

DE'FERENS. (From *defero*, to convey; because it conveys the semen to the vesiculæ seminales.) See *Vas deferens.*

DEFIXUS. (From *defigo*, to fasten; because it was supposed that every man thus defective was bewitched, or fastened by some charm.) Impotent with respect to venereal desires.

DEFLAGRATION. (*Deflagratio, onis.* f.; from *deflagro*, to burn.) The burning or setting fire to any substance; as nitre, sulphur, &c.

DEFLEXUS. (*us, ûs.* m.; from *de*, and *flecto*, to turn or bend.) Deflex: bending outwards in a small degree.

DEFLORATE. (*Defloratus*; from *defloresco*, to shed its blossoms.) 1. Applied, in *Botany*, to the anthers of flowers when they have shed their pollen; and also to plants which have discharged their flowers.

2. In *Anatomy*, to the loss of the hymen.

DEFLUVIUM. (*um, i.* n.; from *defluo*, to fall off.) A falling off: applied to the hair, the skin, &c.

DEFLUVIUM CAPILLORUM. See *Baldness.*

DEFLUXION. (*Defluxio, onis.* f.; from *defluo*, to run off.) A falling down of humours from a superior to an inferior part.

DEFOLIATION. (*Defoliatio, onis.* f.; from *de*, and *folium*, a leaf.) The fall of the leaf. A term opposed to *frondescentia*, or the renovation of the leaf.

DEFORMIS. *Deformatio.* A deformity of the body, or a disease which causes a deformity.

DEGLUTITION. (*Deglutitio, onis.* f.; from *deglutio*, to swallow down.) The act of swallowing, or the passage of a substance, either solid, liquid, or gaseous, from the mouth to the stomach. Though deglutition is very simple in appearance, it is, nevertheless, the most complicated of all the muscular actions that serve for digestion. It is produced by the contraction of a great number

of muscles, and requires the concurrence of many important organs.

All the muscles of the tongue, those of the *velum* of the palate, of the pharynx, of the larynx, and the muscular layer of the œsophagus, are employed in deglutition.

The *velum* is a sort of valve attached to the posterior edge of the roof of the palate; its form is nearly quadrilateral; its free or inferior edge is pointed, and forms the *uvula*. Like the valves of the intestinal canal, the *velum* is essentially formed by a duplicature of the digestive mucous membrane; there are many mucous follicles that enter into its composition, particularly in the uvula. Eight muscles move it: it is raised by the two internal *pterygoid*; the external *pterygoid* hold it transversely; the two *palato-pharyngei*, and the two *constrictores isthmi faucium* carry it downwards. These four are seen at the bottom of the throat, where they raise the mucous membrane, and form the pillars of the *velum* of the palate, between which are situated the *amygdalæ*, a mass of mucous follicles. The opening between the base of the tongue below, the *velum* of the palate above, and the pillars laterally, is called the isthmus of the throat. By means of its muscular apparatus, the *velum* of the palate may have many changes of position. In the most common state it is placed vertically; one of its faces is anterior, the other posterior: in certain cases it becomes horizontal: it has then a superior and inferior aspect, and its free edge corresponds to the concavity of the pharynx. This last position is determined by the contraction of the elevating muscles.

The *pharynx* is a vestibule into which open the nostrils, the Eustachian tubes, the mouth, the larynx, and the œsophagus, and which performs very important functions in the production of voice, in respiration, hearing, and digestion.

The pharynx extends from top to bottom, from the basilar process of the occipital bone, to which it is attached, to the level of the middle part of the neck.

Its transverse dimensions are determined by the os hyoides, the larynx, and the pterygo-maxillary aponeurosis, to which it is fixed. The mucous membrane which covers it interiorly is remarkable for the development of its veins, which form a very apparent plexus. Round this membrane is the muscular layer, the circular fibres of which form the three constrictor muscles of the pharynx, the longitudinal fibres of which are represented by the stylo-pharyngeus and constrictores isthmi faucium. The contractions of these different muscles are not generally subject to the will.

The *œsophagus* is the immediate continuation of the pharynx, and is prolonged as far as the stomach, where it terminates. Its form is cylindrical; it is united to the surrounding parts by a slack and extending cellular tissue, which gives way to its dilatation and its motions. To penetrate into the abdomen, the œsophagus passes between the pillars of the diaphragm, with which it is closely united. The mucous membrane of the œsophagus is white, thin, and smooth; it forms longitudinal folds, very proper for favouring the dilatation of the canal. Above, it is confounded with that of the pharynx.

There are found in it a great number of mucous follicles, and at its surface there are perceived the orifices of many excretive canals of the mucous glands.

The muscular layer of the œsophagus is thick, its tissue is denser than that of the pharynx; the longitudinal fibres are the most external and the least numerous; the circular are placed in the interior, and are very numerous.

Round the pectoral and inferior portion of the œsophagus, the two nerves of the eighth pair form a plexus which embraces the canal, and sends many filaments into it.

The contraction of the œsophagus takes place without the participation of the will.

Mechanism of Deglutition.—Deglutition is divided into three periods. In the first, the food passes from the mouth to the pharynx; in the second, it passes the opening of the glottis, that of the nasal canals, and arrives at the œsophagus; in the third, it passes through this tube and enters the stomach.

Let us suppose the most common case, that in which we swallow at several times the food which is in the mouth, and according as mastication takes place.

As soon as a certain quantity of food is sufficiently chewed, it is placed, by the effects of the motions of mastication, in part upon the superior face of the tongue, without the necessity, as some think, of its being collected by the point of the tongue from the different parts of the mouth. Mastication then stops: the tongue is raised and applied to the roof of the palate, in succession, from the point towards the base. The portion of food, or the alimentary bolus placed upon its superior surface, having no other way to escape from the force that presses, is directed towards the pharynx: it soon meets the velum of the palate applied to the base of the tongue, and raises it; the velum becomes horizontal, so as to make a continuation of the palate. The tongue, continuing to press the food, would carry it towards the nasal canals, if the velum did not prevent this by the tension that it receives from the external peristaphyline muscles, and particularly by the contraction of its pillars; it thus becomes capable of resisting the action of the tongue, and of contributing to the direction of the food towards the pharynx.

The muscles which determine more particularly the application of the tongue to the top of the palate, and to the velum of the palate, are the proper muscles of the organ, aided by the mylo-hyoideus. Here the first time of deglutition terminates.—Its motions are voluntary, except those of the velum of the palate. The phænomena happen slowly and in succession: they are few and easily noticed.

The second period is not the same; in it

the phænomena are simultaneous, multiplied, and are produced with such promptitude, that Boerhaave considered them as a sort of convulsion.

The space that the alimentary bolus passes through in this time is very short, for it passes only from the middle to the inferior part of the pharynx; but it was necessary to avoid the opening of the glottis and that of the nasal canals, where its presence would be injurious. Besides, its passage ought to be sufficiently rapid, in order that the communication between the larynx and the external air may not be interrupted, except for an instant.

Let us see how nature has arrived at this important result. The alimentary bole no sooner touches the pharynx than every thing is in motion. First, the pharynx contracts, embraces and retains the bole; the velum of the palate, drawn down by its pillars, acts in the same way. On the other hand, and in the same instant, the base of the tongue, the os hyoides, the larynx, are raised and carried forward to meet the bole, in order to render its passage more rapid over the opening of the glottis. Whilst the os hyoides and the larynx are raised, they approach each other, that is, the superior edge of the thyroid cartilage engages itself behind the body of the os hyoides; the epiglottic gland is pushed back; the epiglottis descends, inclines downwards and backwards, so as to cover the entrance of the larynx. The crycoid cartilage makes a motion of rotation upon the inferior horns of the thyroid, whence it results that the entrance of the larynx becomes oblique downwards and backwards. The bole slides along its surface, and being always pressed by the contraction of the pharynx and of the velum of the palate, it arrives at the œsophagus.

It is not long since the position that the epiglottis takes in this case was considered as the only obstacle opposed to the entrance of the food into the larynx, at the instant of deglutition; but it has been shown, by a series of experiments, that this cause ought to be considered as only accessary. In fact, the epiglottis may be entirely taken away from an animal, without deglutition suffering any injury from it. What is the reason, then, that no part of the food is introduced into the larynx the instant that we swallow? The reason is this. In the instant that the larynx is raised and engaged behind the os hyoides, the glottis shuts with the greatest closeness. This motion is produced by the same muscles that press the glottis in the production of the voice; so that if an animal has the recurrents and nerves of the larynx divided, whilst the epiglottis is untouched, its deglutition is rendered very difficult, because the principal cause is removed which opposes the introduction of food into the glottis.

Immediately after the the alimentary bole has passed the glottis, the larynx descends, the epiglottis is raised, and the glottis is opened to give passage to the air.

After what has been said, it is easy to conceive why the food reaches the œsophagus without entering any of the openings which end in the pharynx. The velum of the palate, which, in contracting, embraces the pharynx, protects the posterior nostrils and the orifices of the Eustachian tubes; the epiglottis, and particularly the motion by which the glottis shuts, preserves the larynx.

Thus, the second period of deglutition is accomplished; by the effects of which the alimentary bole passes the pharynx, and is engaged in the superior part of the œsophagus. All the phænomena which concur in it take place simultaneously, and with great promptitude: they are not subject to the will; they are then different in many respects from the phænomena that belong to the first period.

The third period of deglutition is that which has been studied with the least care, probably on account of the situation of the œsophagus, which is difficult to be observed except in its cervical portion. The phænomena which are connected with it are not complicated. The pharynx, by its contraction, presses the alimentary bole into the œsophagus with sufficient force to give a suitable dilatation to the superior part of this organ. Excited by the presence of the bole, its superior circular fibres very soon contract, and press the food towards the stomach, thereby producing the distension of those more inferior. These contract in their turn, and the same thing continues in succession until the bole arrives at the stomach. In the upper two thirds of the œsophagus, the relaxation of the circular fibres follows immediately the contraction by which they displaced the alimentary bole. It is not the same with the inferior third: this remains some moments contracted after the introduction of food into the stomach.

All the extent of the mucous surface that the alimentary bole passes, in the three periods of deglutition, is lubricated by an abundant mucosity. In the way that the bolus passes, it presses more or less the follicles that it meets in its passage, it empties them of the fluid that they contain, and slides more easily upon the mucous membrane. We remark that in those places where the bole passes more rapidly, and is pressed with greater force, the organs for secreting mucus are much more abundant. For example, in the narrow space where the second period of deglutition takes place, there are found the tonsils, the fungous papillæ of the base of the tongue, the follicles of the velum of the palate, and the uvula, those of the epiglottis, and the arytenoid glands. In this case the saliva and the mucosity fulfil uses analogous to those of the synovia.

The mechanism by which we swallow the succeeding mouthfuls of food does not differ from that which we have explained.

Nothing is more easy than the performance of deglutition, and, nevertheless, all the acts of which it is composed are beyond the in-

fluence of the will and of instinct. We cannot make an empty motion of deglutition. If the substance contained in the mouth is not sufficiently chewed, if it has not the form, the consistence, and the dimensions of the alimentary bole, if the motions of mastication which immediately precede deglutition have not been made, we will frequently find it impossible to swallow it, whatever efforts we make.' How many people do we not find who cannot swallow a pill, and who are obliged to fall upon other methods to introduce it into the œsophagus?—*Magendie.*

DE'GMUS. (*us, i.* m.; from δακνω, to bite.) A biting pain in the stomach.

DEHISCENS. (From *dehisco,* to gape.) Gaping. See *Dehiscentia.*

DEHISCENTIA. (*a, æ.* f.; from *dehisco,* to gape wide.) A splitting, or bursting open: applied to capsules, anthers, &c. of plants.

DEIDIER, Anthony, born at Montpelier, about the year 1675. He published, among many other works on different branches of medicine, "*Experiments on the Bile, and the Bodies of those who died of the Plague,*" which occurred while he was at Marseilles.

Deino'sis. (From δεινοω, to exaggerate.) Exaggeration: applied by Hippocrates to an enlargement of the supercilia.

DEJECTION. (*Dejectio, onis.* f.; from *dejicio,* to go to stool.) A discharge of any excrementitious matter; generally applied to the fæces: hence *dejectio alvina.*

DEJECTO'RIUS. (From *dejicio,* to cast out.) Purging.

DELACHRYMATI'VUS. (From *de,* and *lachryma,* a tear.) Having the property of keeping the eyes dry from tears.

DELA'PSIO. (*o, onis.* f.; from *delabor,* to slip down.) A falling down of any part; as the anus, uterus, or intestines.

DELETERIOUS. (*Deleterius;* from δηλεω, to hurt or injure.) Of a poisonous nature; as opium, hemlock, henbane, &c.

DELIGATIO. (From *de,* and *ligo,* to tie.) A bandage.

DELIQUESCENCE. (*Deliquescentia, æ.* f.; from *deliquesco,* to melt down.) Deliquation, or the spontaneous assumption of the fluid state of certain saline bodies, when left exposed to the air, in consequence of their attracting water from it.

DELI'QUIUM. (*um, i.* n.; from *delinquo,* to leave.) 1. A fainting. See *Syncope.*

2. In *Chemistry,* and *Pharmacy,* the same as deliquescence.

DELI'RIUM. (*um, i.* n.; from *deliro,* to rave.) A symptom, consisting in the person's acting or talking unreasonably.

DELIVERY. See *Parturition.*

DELOCA'TIO. (From *de,* from, and *locus,* a place.) See *Dislocation.*

Deloticos. (From δηλον, manifest.) Indicative: used by Hippocrates in his aphorisms.

DELPHIA. See *Delphinia.*

DELPHINE. See *Delphinia.*

DELPHINIA. (*a, æ.* f.; so called because obtained from the plant called *delphinium.*) Delphine: a new vegetable alkali, recently discovered by Lassaigne and Fenuelle, in stavesacre. See *Delphinium staphysagria.*

DELPHINIC. (*Delphinicus:* so called because obtained from the fish called *delphinus.*) Of or belonging to the fish delphinus.

Delphinic acid. *Acidum delphinicum.* The name of an acid, extracted from the oil of the dolphin. It resembles a volatile oil; has a light lemon colour, and a strong aromatic odour, analogous to that of rancid butter. Its taste is pungent, and its vapour has a sweetened taste of æther. It is slightly soluble in water, and very soluble in alkohol.

DELPHINITE. See *Epidote.*

DELPHI'NIUM. (*um, ii.* n.; from δελφινος, the dolphin: so called from the likeness of the flower of the larkspur to the dolphin's head.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Trigynia.*

Delphinium consolida. The systematic name of the *Consolida regalis;* called also, *Calcatrippa.*

Delphinium—nectariis monophyllis, caule subdiviso, of Linnæus. Many virtues have been attributed to this plant. The flowers are bitter, and a water distilled from them is recommended in ophthalmia. The herb has been administered in calculous cases, obstructed menses, and visceral diseases.

Delphinium staphisagria. The systematic name of stavesacre; called also, *Staphisagria, Staphis,* and *Pedicularia.*

Delphinium staphisagria—nectariis tetraphyllis petalo brevioribus, foliis palmatis, lobis obtusis, of Linnæus. The seeds, which are the only parts directed for medicinal use, are usually imported here from Italy; they are large, rough, of an irregular triangular figure, and of a blackish colour on the outside, but yellowish within; their smell is disagreeable, and somewhat fœtid; to the taste they are very bitter, acrid, and nauseous. It was formerly employed as a masticatory, but is now confined to external use, in some kinds of cutaneous eruptions, but more especially for destroying lice and other insects: hence, by the vulgar, it is called louse-wort.

An alkali was discovered in this plant by Lassaigne and Fenuelle, which is called *Delphinia,* or *Delphine;* it is obtained in the following way:—The seeds, deprived of their husks, and ground, are to be boiled in a small quantity of distilled water, and then pressed in a cloth. The decoction is to be filtered, and boiled for a few minutes with pure magnesia. It must then be re-filtered, and the residuum left on the filter is to be well washed, and then boiled with highly rectified alkohol, which dissolves out the alkali. By evaporation, a white pulverulent substance, presenting a few crystalline points, is obtained.

It may also be procured by the action of dilute sulphuric acid on the bruised but un-

shelled seeds. The sòlution of sulphate, thus formed, is precipitated by subcarbonate of potash. Alkohol separates from this precipitate the alkali in an impure state.

Pure delphinia obtained by the first process is crystalline while wet, but becomes opake on exposure to air. Its taste is bitter and acrid. Its action on animals, in an overdose, is that of producing great agitation, convulsions, and death.

DELPHINUS. The dolphin.

DE'LPHYS. (*ys, uos.* f. Δελφυς.) The uterus, or pudendum muliebre.

DE'LTA. (The Greek letter, Δ.) The external pudendum muliebre is so called, from the triangular shape of its hair.

DELTOI'DES. (*Deltoides* and *deltoideus;* from δελτα, the Greek letter Δ, and ειδος, a likeness: shaped like the Greek delta.)

DELTOIDE'US. See *Deltoides.*

1. A muscle of the superior extremity, situated on the shoulder. It arises exactly opposite to the trapezius, from one-third part of the clavicle, from the acromion and spine of the scapula, and is inserted, tendinous, into the middle of the os humeri, which bone it lifts up directly; and it assists with the supra-spinatus and coraco-brachialis in all the actions of the humerus, except the depression; it being convenient that the arm should be raised and sustained, in order to its moving on any side.

2. A leaf is called *folium deltoides,* or *deltoideum,* which is trowel-shaped, or like the letter delta, having three angles, of which the terminal one is much further from the base than the lateral ones; as in *Chenopodium bonus-henricus.*

De Lugo. In the year 1653, Cardinal De Lugo administered the then newly discovered Peruvian bark very generally in the cure of fevers, above one thousand of which were cured in that year. It was in consequence long called *Cortex Cardinalis de Lugo.*

DEME'NTIA. (*a, æ.* f.; from *de,* and *mens,* without mind.) Absence of intellect; madness; fatuity.

DEMERSUS. A leaf which is naturally under water, and different from those above, is so called. *Folia immersa,* and *submersa,* are the same as *demersa.* See *Natans.*

Democratis theriaca. See *Mithridatum.*

DEMULCENT. (*Demulcens;* from *demulceo,* to soften.) A medicine suited to obviate and prevent the action of acrid and stimulant matters; and that not by correcting or changing their acrimony, but by involving it in a mild and viscid matter, which prevents them from acting upon the sensible parts of our bodies, or by covering the surface exposed to their action.

Where these substances are directly applied to the parts affected, it is easy to perceive how benefit may be derived from their application. But where they are received by the medium of the stomach, into the circulating system, it has been supposed that they can be of no utility, as they must lose that viscidity on which their lubricating quality depends. Hence it has been concluded that they can be of no service in gonorrhœa, and some similar affections. It is certain, however, says J. Murray, in his Elements of Materia Medica and Pharmacy, that many substances which undergo the process of digestion are afterwards separated, in their entire state, from the blood, by particular secreting organs, especially by the kidneys; and it is possible, that mucilaginous substances, which are the principal demulcents, may be separated in this manner. There can be no doubt, however, but that a great share of the relief demulcents afford, in irritation or inflammation of the urinary passages, is owing to the large quantities of water in which they are diffused, by which the urine is rendered less stimulating from dilution. In general, demulcents may be considered merely as substances less stimulating than the fluids usually applied.

Catarrh, diarrhœa, dysentery, calculus, and gonorrhœa, are the diseases in which demulcents are employed. As they are medicines of no great power, they may be taken in as large quantities as the stomach can bear.

The particular demulcents may be reduced to the two divisions of mucilages and expressed oils. The principal demulcents are, the acacia vera, astragalus, tragacanthe, linum usitatissimum, althæa officinalis, malva, sylvestris, glycyrrhiza, glabra, cycas circinalis, orchis mascula, maranta arundinacea, triticum hybernum, ichthyocolla, olea europæa, amygdalus communis, cetaceum, and cera.

DENDROI'DES. (From δενδρον, a tree or shrub, and ειδος, resemblance.) Shrub-like.

DENDROLI'BANUS. (*us, i.* m.; from δενδρον, a tree, and ολιβανος, frankincense.) See *Rosmarinus officinalis.*

DENS. (*s, tis.* m.; *quasi edens;* from *edo,* to eat, or from οδους, οδοντος.) 1. A Tooth. See *Teeth.*

2. Many herbs have this specific name, from their fancied resemblance to the tooth of some animal; as *Dens leonis,* the dandelion; *Dens canis,* dog's tooth, &c.

Dens bicuspis. See *Teeth.*

Dens caballinus. See *Hyosciamus.*

Dens canis. See *Erythronium.*

Dens caninus. See *Teeth.*

Dens cuspidatus. See *Teeth.*

Dens incisor. See *Teeth.*

Dens lacteus. See *Teeth,* and *Dentition.*

Dens leonis. See *Leontodon taraxacum,* and *Hypochæris.*

Dens molaris. See *Teeth.*

DENTA'GRA. (*a, æ.* f. From *dens,* a tooth, and αγρα, a seizure.)

1. The toothach. See *Odontalgia.*

2. An instrument for drawing the teeth.

DENTAL. (*Dentalis;* from *dens,* a tooth.) Appertaining to the teeth.

Dentalis lapis. The crust, or tartar, as it is called, which forms round the teeth.

DENTA'RIA. (*a, æ.* f.; from *dens,*

a tooth: so called because its root is denticulated.) See *Plumbago europæa.*

DENTARPA'GA. (*a, æ.* f.; from οδους, a tooth, and αρπαζω, to fasten upon.) An instrument for drawing of teeth.

DENTATA. (From *dens*, a tooth: so called from its tooth-like process.) The second vertebræ of the neck; called also, *Epistropheus.* It differs from the other cervical vertebræ in having a tooth-like process at the upper part of the body. See *Vertebræ.*

DENTATE. (*Dentatus;* from *dens*, a tooth.) Toothed: applied to roots, leaves, petals, &c. which are beset with projecting, horizontal, rather distant teeth of its own substance; as in the leaf of *Atriplex lacinata,* and the perianth of the *Marrubium vulgare,* and *Erica denticulata,* and the petals of the *Silene lucitanica.* The *Ophris corallorhiza* has a toothed root.

DENTATUS PROCESSUS. See *Vertebræ.*

DENTED. See *Retusus.*

DENTICULA'TUS. Denticulate, or set with little teeth.

DENTELLA'RIA. (From *dentella*, a little tooth: so called because its root is denticulated.) Tooth-wort. See *Plumbago europæa.*

DENTIDU'CUM. (*um, i.* n.; from *dens*, a tooth, and *duco*, to draw.) An instrument for drawing of teeth.

DENTIFRICE. (*Dentifricus, i.* m.; from *dens*, a tooth, and *frigo*, to rub.) A medicine to clean the teeth.

DENTISCA'LPIUM. (*um, i.* n.; from *dens*, a tooth, and *scalpo*, to scrape.) An instrument for scaling teeth.

DENTITION. (*Dentitio, onis.* f.; from *dentio*, to breed teeth.) The breeding or cutting of the teeth. See *Teeth.*

DENTITION, DIFFICULT. *Dentitio difficilis.* Dr. Cullen did not allow dentition to enter into the list of diseases, which is to suppose that that natural process always goes on with perfect ease. In many instances, however, it is otherwise, and disease of an alarming and fatal character takes place.

The most violent symptoms of dentition are those produced during the growth and cutting of the milk teeth, for the system is then in its tenderest state of infancy. The immediate cause of the difficulty is the pressure of the teeth in the gum, and the degree of irritation depends on the particular temperament of the child. As the teeth push forward, the superincumbent gum wastes from absorption, and is at last cut through, and the tooth makes its appearance. This pressure is not, however, uniformly exerted through the whole course of teething, but is divided into distinct periods or stages: —

1. The first active stage of teething is usually about the third or fourth month of infancy, and constitutes what is called *breeding the teeth,* or the conversion of the pulpy rudiment, buried in the gum, and formed during fœtal life, into a solid material, which at the same time shoots downwards, and gives to every tooth a neck or fang. The first and most usual symptom of this change, is the looseness with which the infant grasps the nipple, and the frequency with which it lets go its hold, accompanied with fretfulness and crying, and succeeded by a copious discharge of saliva, the salivary glands sympathising with the gums. Next, the uneasiness of the gums is found to be relieved by the pressure of any hard substance upon them, which benumbs their excited irritability. If the irritation becomes very considerable, the gums swell, the child grows still more fretful, and starts in its sleep; or, on awaking suddenly, there is heat, thirst, and other concomitants of fever, with perhaps dulness or drowsiness; the bowels are affected, and a rash appears on the skin, usually the *red gum;* and if the irritation extends to the muscles of the chest, there is a dry and troublesome cough. In about ten days or a fortnight these symptoms subside; and though the infant may occasionally be teazed with uneasiness, it generally passes on without much inconvenience till the arrival of the second stage.

2. The period of cutting the teeth. This usually takes place between the seventh and the close of the ninth month. This is the usual progress: but here, as in many other organs of the system, there is in some cases a precocity, and in others a backwardness of action: hence a child is occasionally born with teeth; many cut their teeth soon after birth; while, with some, no tooth appears until a very late period. At this time the gum is often extremely sensible, and, instead of being eased by the pressure of a hard substance, cannot endure the slightest touch. At the base it is florid and distended, but paler and whiter at the edge or upper part; and when the tooth is on the point of protrusion, seems covered with a flat and whitish blister. The other symptoms are a repetition of those just described, with a scabby eruption about the lips or head, inflammation about the ears, and occasionally spasmodic movements of the mouth and jaws, and convulsions.

The grand point is here to moderate the local irritation. A diarrhœa, or full discharge of saliva, does this naturally, and hence these are favourable symptoms; and if the former be too violent, or accompanied with griping, it should be merely corrected by the subcarbonate of magnesia, or carbonate of lime. If the bowels be confined, cooling laxatives are to be employed; and the discharge of a small quantity of blood from the gums, in the first stage, by lancing them, will often afford effectual relief. If the symptoms of oppression or spasmodic action be severe, as drowsiness, difficulty of breathing, stertor, or irregular motions of the jaws, leeches should be resorted to; after which, a blister will be found useful behind the ears or on the back. When the bowels have been thoroughly emptied, anodynes will be very serviceable, though they should be employed with great judgment, and never trusted to nurses. In the second stage, or when the teeth are on the point of

protrusion, the lancet will often afford immediate relief,—not by the discharge of blood, for the upper part of the gum is now become so thin or wasted that little or none will flow,—but by giving a direct opening to the tooth, which will frequently make its appearance in the course of a few hours.

In cutting the *second*, or *permanent set of teeth*, and the wise teeth, there is very seldom any difficulty. When so, there is painful swelling of the gums, and fever, and all that is wanted is to subdue inflammation by the usual means.

Dentodu'cum. See *Dentiducum.*

DENUDA'TIO. (From *denudo*, to make bare.) The laying bare any part: usually applied to a bone.

DENUDATUS. (From *denudo*, to strip naked.) Denude: naked. An order of Linnæus's Fragments of a Natural Method, embracing those plants the flowers of which are naked, or without a flower-cup, are called *denudatæ*.

DEOBSTRUENT. (*Deobstruens;* from *de*, and *obstruo*, to obstruct.) Having the power of removing any obstruction.

DEOPPILA'NS. (From *de*, and *oppilo*, to stop.) *Deoppilativus.* Having the property of removing obstructions.

DEPARTI'TIO. (From *de*, and *partior*, to divide.) The separating of metals.

DEPASCENS. (From *depasco*, to eat down.) Eating away; corroding: applied formerly to phagedænic ulcers.

DEPENDENS. Dependent: hanging down.

Deperdi'tio. (From *deperdo*, to lose.) Abortion, or the undue loss of the fœtus.

Depeti'go. (From *de*, and *petigo*, a running scab.) A ring-worm, tetter, scurf, or itch, where the skin is rough.

DEPHLEGMA'TION. (*Dephlegmatio, onis.* f.; from *de*, and *phlegma*, phlegm.) The operation of rectifying or freeing spirits from their watery parts, or any method by which bodies are deprived of their water.

DEPHLOGISTICATED. (*Dephlogisticatus;* from *de*, and *phlogiston*, a particular principle so called.) A term of the old chemistry, implying deprived of phlogiston or the inflammable principle.

Dephlogisticated air. See *Oxygene gas.*

Dephlogisticated muriatic acid. See *Chlorium.*

DEPILATORY. (*Depilatorius;* from *de*, of, and *pilus*, the hair.) Any application which removes the hairs from any part of the body; thus, a pitch cap pulls the hairs of the head out by the roots.

DEPI'SCENS. Depiscent: opening, or standing open.

DEPLU'MATIO. (From *de*, and *pluma*, a feather.) A disease of the eyelids, which causes the hair to fall off.

DEPREHE'NSIO. (*o, onis.* f.; from *deprehendo*, to catch unawares: so called, from the suddenness with which persons are seized with it.) The epilepsy.

DEPRESSION. (*Depressio, onis.* f.; from *deprimo*, to press down.) The state of a part that has fallen down: thus we say, the depression of the lower jaw, of the palate. The term is also applied to one of the operations for the cataract.

DEPRE'SSOR. (*or, oris.* m.; from *deprimo*, to press down.) A muscle, which depresses the part on which it acts.

Depressor alæ nasi. See *Depressor labii superioris alæque nasi.*

Depressor anguli oris. A muscle of the mouth and lip, situated below the under lip. *Triangularis*, of Winslow. *Depressor labiorum communis*, of Douglas. *Depressor labiorum*, of Cowper. It arises broad and fleshy, from the lower edge of the lower jaw, near the chin; and is inserted into the angle of the mouth, which it pulls downwards.

Depressor labii inferioris. A muscle of the mouth and lip. *Quadratus*, of Winslow. *Depressor labii inferioris proprius*, of Douglas and Cowper. It pulls the under lip and skin of the side of the chin downwards, and a little outwards.

Depressor labii superioris alæque nasi. A muscle of the mouth and lip. *Depressor alæ nasi*, of Albinus. *Incisivus medius*, of Winslow. *Depressor labii superioris proprius*, of Douglas. *Constrictores alarum nasi, ac depressores labii superioris*, of Cowper. It is situated above the mouth, draws the upper lip and ala nasi downwards and backwards. It arises, thin and fleshy, from the superior maxillary bone, immediately above the joining of the gums, with the two incisor teeth and cuspidatus; from thence it runs upwards, and is inserted into the upper lip and root of the ala of the nose.

Depressor labii superioris proprius. See *Depressor labii superioris alæque nasi.*

Depressor labiorum communis. See *Depressor anguli oris.*

Depressor oculi. See *Rectus inferior oculi.*

DEPRE'SSUS. Depressed: applied to the surface of a leaf when in a small degree concave, pressed down, flatted.

Folia depressa are radical leaves which are pressed close to the ground, as is seen in *Plantago media;* but when applied to stem leaves, it regards their shape only, as being vertically flattened, in opposition to *compressa.*

DE'PRIMENS. See *Rectus inferior oculi.*

DEPU'RANS. (From *depuro*, to make clean.) A medicine, or plan of diet which evacuates impurities.

DEPURA'TION. (*Depuratio, onis.* f.; from *depuro*, to make clean.) The freeing a liquor or solid from its foulness.

DEPURATO'RIUS. (From *de*, and *purus*, pure.) Depuritory: applied to fevers which terminate in perspiration.

DE'RAS. (*Deris, is.* f. Δερας; from δερω, to excoriate.) The skin.

DERBYSHIRE-SPAR. A mineral formed of lime and fluoric acid.

DERIVATION. (*Derivatio, onis.* f.; from *derivo*, to drain off.) The drawing away any disease from its original seat to another

part. The doctrines of derivation and revulsion, talked of by the ancients, are now, in their sense of the terms, wholly exploded.

DE'RMA. (Δερμα, the skin.) See *Cutis*.

DERMATO'DES. (From δερμα, skin, and ειδος, a likeness.) Resembling skin, or leather: applied to the dura mater.

DERMATO'LOGY. (*Dermatologia, æ.* f.; from δερμα, the skin, and λογος, a discourse.) A discourse or treatise on the skin.

DEROSNE. See *Narcotine.*

DE'RTRON. (From δερας, skin: so named from their skin-like consistence.) The omentum, and peritonæum.

DESAULT, PETER JOSEPH, chief surgeon to the Hôtel-Dieu at Paris. He published several numbers of a surgical journal in 1791, &c.; also jointly with Chopart, in 1794, "*A Treatise on Chirurgical Diseases, and the Operations required in their Cure;*" which is allowed to have considerable merit. He attended the young King of France, Lewis XVII., in the Temple; and died under suspicious circumstances, shortly before his royal patient, in 1795.

Descending aorta. See *Aorta, descending.*

DESCENSO'RIUM. (*um, ii.* n.; from *descendo*, to move downwards.) A vessel in which the distillation by descent is performed.

DESCE'NSUS. (From *descendo*, to move downwards.) Chemists call it a distillation *per descensum*, by descent, when the fire is applied at the top and round the vessel, the orifice of which is at the bottom.

DESICCATION. (*Desiccatio*, from *desicco*, to dry up.) Drying.

DESI'CCATIVE. (*Desiccativus;* from *desicco*, to dry up.) An application to dry up the humours and moisture running from a wound or ulcer.

DESIPIE'NTIA. (*a, æ.* f.; from *desipio*, to dote.) A defect of reason.

DESIRE. Will is that modification of the faculty of perception by which we form desires. It is generally the effect of our judgment; but, what is remarkable, our happiness or our misery are necessarily connected with it. When we satisfy our desires, we are happy; but we are miserable if our desires be not fulfilled: it is then necessary to give such a direction to our desires that we may be enabled to obtain happiness. We ought not to desire things which cannot be obtained: we ought to avoid, even with greater care, those things which are hurtful; for in such cases we must be unhappy whether our desires are satisfied or not. Morality is a science which tends to give the best possible direction to our desires.

DE'SME. (From δεω, to bind up.) A faggot, a bandage or ligature.

DESMI'DION. (From δεσμη, a handful.) A small bundle, or little bandage.

DE'SMOS. (From δεω, to bind up.) 1. A bandage.

2. An inflammatory stricture of a joint, after luxation.

DESPAIR. See *Pathemata animi.*

DESPONDENCY. See *Pathemata animi.*

DE'SPUMATION. (*Despumatio, onis.* f.; from *despumo*, to clarify.) The clarifying a fluid, or separating its foul parts from it.

DESQUAMATION. (*Desquamatio, onis.* f.; from *desquamo*, to scale off.) The separating of laminæ, or scales, from the skin or bones.

DESQUAMATO'RIUM. (From *desquamo*, to scale off.) A trepan, or instrument, to take a piece out of the skull.

DESTILLATION. See *Distillation.*

DESUDA'TIO. (*o, onis.* f.; from *desudo*, to sweat much.) An unnatural and morbid sweating.

DETE'NTIO. (From *detineo*, to stop, or hinder: so called, from the suddenness with which the patient is seised.) Epilepsy.

DETERGENT. (*Detergens;* from *detergo*, to wipe away.) 1. A medicine which cleanses and removes such viscid humours as adhere to and obstruct the vessels.

2. An application that clears away foulness from ulcers.

DETERMINATE. *Determinatus.* Applied by botanists to branches and stems: *determinatè ramosus* is abruptly branched, when each branch, after terminating in flowers, produces a number of fresh shoots in a circular order from just below the origin of those flowers. The term occurs frequently in the latter publication of Linnæus, particularly the second *Mantissa;* but he does not appear to have any where explained its meaning. — *Smith.*

DETONATION. (*Detonatio, onis.* f.; from *detono*, to make a noise.) A sudden explosion. See *Combustion.*

DETRA'CTOR. (*or, oris.* m.; from *detraho*, to draw.) Applied to a muscle, the office of which is to draw the part to which it is attached.

DE'TRAHENS. (From *detraho*, to draw.) A muscle, the office of which is to draw the part it is attached to.

DETRAHENS QUADRATUS. See *Platysma myoides.*

DETRU'SOR. (*or, oris.* m.; from *detrudo*, to thrust out.) A squeezer or propeller of any thing: applied to the urinary bladder.

DETRUSOR URINÆ. The muscular coat of the bladder, the office of which is to send the urine from the bladder.

DEURENS. (From *deuro*, to burn.) Burning: applied to fever.

DEUSTIO. (From *deuro*, to burn.) Burning.

DEU'TERI. (From δευτερος, second; because it is discharged next after the fœtus.) The secundines, or after-birth.

DEUTERIA. (From δευτερος, second.) *Deuterinas. Deuterion.*

1. A second kind of wine.

2. An adhesion of the placenta.

DEUTEROPATHIC. (*Deuteropathi-*

cus, from δευτερος, second, and παθος, a suffering.) An affection or suffering by consent, where a second part suffers, from consent, with the part originally affected; as where the stomach is disturbed through a wound in the head.

DEUTOXIDE. See *Oxide*.

Deutoxide of azote. See *Nitrogene*.

Devil's dung. See *Ferula assafœtida*.

DEVALGATUS. (From *de*, and *valgus*, bow-legged.) Bandy-legged.

DEX'AMENE. (From δεχομαι, to receive.) A receptacle of any kind, as a basin, &c.

DEXTUM. (From δεχομαι, to receive.) A cup or the like.

DIA. Δια. Many terms in medicine, surgery, and pharmacy commence with this word, when they signify composition and mixture; as *Diacassia*, *Diacastoreum*, &c.

DIABACAMI. (From δια, and βακανον, a principal ingredient in it.) An hepatic remedy mentioned by Trallian.

DIABE'BUS. (From διαβεβαιοω, to strengthen: so called, as affording the chief support to the foot.) The ankle-bone.

DIABESASA. (From δια, and βησασα, wild rue.) A preparation in which rue is a part.

DIABE'TES. (*es, is*. m.; from δια, through, and βαινω, to pass.) An immoderate flow of urine.

There are two species in this complaint:

1. *Diabetes insipidus*, in which there is a superabundant discharge of limpid urine, of its usual urinary taste.

2. *Diabetes mellitus*, in which the urine is very sweet, and contains a great quantity of sugar.

Great thirst, with a voracious appetite, gradual emaciation of the whole body, and a frequent discharge of urine, containing a large proportion of saccharine and other matter, which is voided in a quantity even exceeding that of the aliment or fluid introduced, are the characteristics of this disease. Those of a shattered constitution, and those who are in the decline of life, are most subject to its attacks. It not unfrequently attends on hysteria, hypochondriasis, dyspepsia, and asthma; but it is always much milder when symptomatic, than when it appears as a primary affection.

Diabetes may be occasioned by the use of strong diuretic medicines, intemperance of life, and hard drinking; excess in venery, severe evacuations, or by any thing that tends to produce an impoverished state of the blood, or general debility. It has, however, taken place, in many instances, without any obvious cause.

Diabetes sometimes comes on slowly and imperceptibly, without any previous disorder; and it now and then arises to a considerable degree, and subsists long without being accompanied with evident disorder in any particular part of the system; the great thirst which always, and the voracious appetite which frequently, occur in it, being often the only remarkable symptoms; but it more generally happens, that a considerable affection of the stomach precedes the coming on of the disease; and that, in its progress, besides the symptoms already mentioned, there is a great dryness in the skin, with a sense of weight in the kidneys, and a pain in the ureters, and the other urinary passages.

Under a long continuance of the disease, the body becomes much emaciated, the feet œdematous, great debility arises, the pulse is frequent and small, and an obscure fever, with all the appearance of hectic, prevails.

The urine in diabetes mellitus, from being at first insipid, clear, and colourless, soon acquires a sweetish or saccharine taste, its leading characteristic: and, when subjected to experiment, a considerable quantity of saccharine matter is to be extracted from it. Sometimes it is so loaded with sugar, as to be capable of being fermented into a vinous liquor. Upwards of one twelfth of its weight of sugar was extracted from some diabetic urine, by Cruickshank, which was at the rate of twenty-nine ounces troy a day, from one patient.

In some instances, the quantity of urine in diabetes is much greater than can be accounted for from all the sources united. Cases are recorded, in which 25 to 30 pints were discharged in the space of a natural day, for many successive weeks, and even months; and in which the whole ingesta, as was said, did not amount to half the weight of the urine. To account for this overplus, it has been alleged that water is absorbed from the air by the surface of the body; as also that a quantity of water is compounded in the lungs themselves.

Dissections of diabetes have often shown the kidneys to be much affected. In some instances, they have been found in a loose flabby state, much enlarged in size, and of a pale ash colour; in others, they have been discovered much more vascular than in a healthy state, approaching a good deal to what takes place in inflammation, and containing, in their infundibula, a quantity of whitish fluid, somewhat resembling pus, but without any sign of ulceration whatever. At the same time that these appearances have been observed in their interior, the veins on their surface were found to be much fuller of blood than usual, forming a most beautiful network of vessels, the larger branches of which exhibited an absorbent appearance. In many cases of dissection, the whole of the mesentery has been discovered to be much diseased, and its glands remarkably enlarged; some of them being very hard, and of an irregular texture; others softer, and of an uniform spherical shape. Many of the lacteals have likewise been seen considerably enlarged. The liver, pancreas, spleen, and stomach, are in general perceived to be in a natural state: when they are not so, the occurrence is to be considered as accidental. The bladder, in many cases, is found to contain a considerable quantity of muddy urine.

With respect to the proximate cause of diabetes mellitus, many hypotheses have been advanced concerning it. The following are the principal:—That the disease depends upon,

1. A morbid action of the stomach and chylopoietic viscera.

2. A morbid crasis of the blood, produced by a diseased action of the assimilating powers.

3. A retrograde motion of the lacteals.

4. A morbid condition of the kidneys.

The first of these opinions, though not the most ancient, originated with Dr. Mead, and has been lately supported by Drs. Dobson and Rollo, who fixed the seat of the disease in the stomach, and confined it to this organ, conceiving it to consist "in an increased action and secretion, with a vitiation of the gastric fluid, and probably too active a state of the lacteal absorbents: while the kidneys, and other parts of the system, as the head and skin, are only affected secondarily." According to this hypothesis, the blood is formed imperfectly from the first, and the sugar is formed in the stomach, or its auxiliary organs. The experiments, however, of Drs. Wollaston and Marcet, and since of Nicholas, Sory, Thénard, and Bostock, all prove that "there is no trace whatever of sugar in the blood."

The second hypothesis was started by Dr. Willis, who says, "Diabetes is rather an immediate affection of the blood than of the kidneys, and thence derives its origin; for the mass of blood becomes, so to speak, melted down, and is too copiously dissolved into a state of serosity; which is sufficiently manifest from the prodigious increase of the quantity of urine, which cannot arise from any other cause than from this solution and waste of blood." Of this opinion was also Sydenham, and Place of Göttingen, and, of later date, Dr. Latham, who contends that the sugar, in respect to its elements, may exist in the blood, though the substance itself be not discoverable in it, being "so weakly and loosely oxygenated as to be again readily evolved by the secretory action of the kidneys, not from any fault in the kidneys themselves, but from the regular and natural exercise of their function, in separating from the imperfect blood such matters as are not properly combined with it."

Dr. Charles Darwin, a very acute and ingenious physiologist, brought forward the third hypothesis, which never had any support but from his father, the author of Zoonomia.

The fourth opinion places the disease in the kidneys, which were supposed, by the Greek writers, to be in a state of great relaxation and debility, and hence also of great irritability. To this irritability was ascribed their morbid activity, and the accumulation of blood with which they were overloaded; while their weakened and relaxed condition allowed the serous or more liquid parts of the blood to pass off through the patulous mouths of the excretories without restraint or change, and, consequently, in a crude and inelaborated form. Such was the explanation of Galen; and, of all the hypotheses, there is no one that seems to be so fully confirmed. It has been adopted by Bonet, Ruysch, Cullen, Cruickshank, Richter, Nicholas, Gueudeville, Dupuytren, Thénard, Satterly, &c.; several of whom, however, conceive the stomach or some other chylifactive organ to be affected at the same time, secondarily or sympathetically. Some of these writers regard the irritation of the kidneys as connected with inflammation, though several of them ascribe it to a spasm.

The formation of the saccharine matter, concerning which there has been much unsatisfactory discussion, is very generally believed to depend on a process in the stomach and bowels, somewhat analogous to fermentation, on materials which contain the principles of sugar, which are separated from their hidden form in the blood, by a peculiar action of the kidneys, very different from all those which constitute the other forms of diabetes.

In the treatment of diabetes, we are led to that of the insipid species first, and then that of the mellitic.

1. Of the *insipid species*. This is mostly cured by tonics, stimulants, and mineral acids. The Peruvian bark, cascarilla, cortex quercûs, and the like, with sulphuric acid, taking care to invigorate the system by proper air, exercise, and diet. When symptomatic of any other disease, its remedies must also be conjoined. As a sympathetic affection, it very commonly attends hysteric and nervous diseases, against which the practitioner's attention must also be directed.

2. Of the *mellitic diabetes*. This is one of those affections in which almost every medicine and every plan has been resorted to for its removal, from which it is natural to conclude that it is not always under the control of any. The indication of cure is,

To destroy that condition of the stomach and chylopoietic bowels, which permits the arrangement of the elements of sugar into those combinations that are received into the blood, and separated from it by the mellitic action of the kidneys.

To effect this, the following variety of plans and medicines have been followed:—

1. To invigorate the debilitated organs, and give firmness and coagulability to the blood. The Greek physicians, and after them our countrymen Willis and Sydenham, held this always in view, and gave agglutinants and astringents, with a diet easy of digestion, and consisting of animal and vegetable substances, with wine; and this plan was generally adopted until very lately. The warm gums and resins, bitters, and astringents, especially alum and alum whey, were then selected, and the cantharis; but these, like the former, mostly disappointed both patients and physicians.

2. The next mode of endeavouring to fulfil the leading indication, was directing remedies, and a diet which the least permitted the saccharine process; and these were most of the medicines recommended for the cure of

dyspepsia, and confining the patient to an animal diet, and enforcing an entire abstinence from every species of vegetable matter. To assist this, hepatised ammonia was given internally by Dr. Rollo, and phosphoric acid by Dr. Latham. The first was exhibited with a view of adding to the animal salts, which he thought were deficient; and the latter, because in many cases there was an evident deficiency in the supply of phosphate of lime to the body.

3. To destroy the irritable, and, as some imagined, the chronic inflammatory state of the kidneys, recourse has been had to copious and repeated bleedings. This practice is only justifiable in young persons with constitutions unimpaired, where there are no evidences of even a tendency to dropsy, much less when that disease is established in any part. In a few instances, under such circumstances, this plan was successful.

4. Powerful narcotics, repeated in quick succession. Dover's powder has generally been given in preference to others; but the nauseating or sudorific power, in the doses which are resorted to, have induced those who selected narcotics to prefer pure opium, a grain two and three times a day, gradually and cautiously increased to three and four, twice a day. This plan, like the rest, has often failed.

It appears, from what has been said, that, as the disease exists in different constitutions, it also requires different treatment.

Diaboli intestina. See *Cuscuta*.

DIABOLUS. (*Diabolus, i.* m. Διαβολος, an evil spirit or calumniator.) The devil. Formerly applied to designate things of evil tendency, destruction, and the like; as *morsus diaboli, intestina diaboli, diabolus metallorum*, devil's bit, &c.

Dia'bolus metallorum. Tin.

DIABO'TANUM. (*um, i.* n.; from δια, and βοτανη, a herb.) A plaster made of herbs.

Diaca'dmias. (From δια, and καδμια, cadmia.) A plaster, the basis of which is cadmia.

Diacalami'nthes. (From δια, and καλαμινθη, calamint.) An antidote, the chief ingredient in which is calamint.

Diaca'rcinum. (From δια, and καρκινος, a crab.) An antidote prepared from the flesh of crabs and cray-fish.

Diaca'ryon. (From δια, and καρυον, a nut.) Rob of nuts, or walnuts.

Diaca'ssia. (From δια, and κασσια, cassia.) Electuary of cassia.

Diacasto'rium. (From δια, and καςωρ, castor.) A compound medicine, the basis of which is castor.

Diacatho'licon. (From δια, and καθολικος, universal.) A purge, so called from its general usefulness.

Diacentau'rium. (From δια, and κενταυριον, centaury.) The Duke of Portland's powder was so called, because its chief ingredient is centaury.

Diacentro'tum. (From δια, and κεντροω, to prick; so called, from its pungency and stimulating qualities.) An eye-water which was very pungent.

Diachalci'tis. (From δια, and χαλκιτις, chalcitis.) A plaster, the chief ingredient in which is chalcitis.

Diacha'lsis. (From διαχαλω, to be relaxed.) 1. A relaxation.

2. The opening of the sutures of the head.

Diachari'stus. (From δια, and χριω, to anoint.) A medicine to anoint parts.

Diacheiri'smus. (From δια, and χειρ, the hand.) An operation performed by the hand.

Diachelido'nium. (From δια, and χελιδωνιον, celandine.) A plaster, the chief ingredient in which was the herb celandine.

Diachore'ma. (From διαχωρεω, to separate from.) *Diachoresis.* Any excretion, or excrement, but chiefly that by stool.

Diachore'sis. See *Diachorema.*

Diachry'sum. (From δια, and χρυσος, gold.) A plaster for fractured limbs; so named from its yellow colour.

Diachylon simplex. See *Emplastrum plumbi.*

DIA'CHYLUM. (*um, i.* n.; from δια, and χυλος, juice.) A plaster made of certain juices was formerly so called. The term is seldom used; and the composition sold for it is the *emplastrum plumbi.*

Dia'chysis. (From δια, and χυω, to pour out.) Fusion or melting.

Diachy'ticus. (From διαχυω, to dissolve.) A medicine which discusses tumours.

Diacine'ma. (From δια, and κινεω, to move.) A slight dislocation.

Diaci'ssum. (From δια, and κισσος, ivy.) An application composed of ivy leaves.

Dia'clasis. (From δια, and χλαω, to break.) A small fracture.

Diacly'sma. (From διακλυζω, to wash out.) A gargle or wash for the mouth.

Diacoccyme'lon. (From δια, and κοκκυμηλον, a plum.) An electuary made of prunes.

DIACO'DIUM. (From δια, and κωδια, a poppy head.) A composition made of the heads of poppies.

Diacolocy'nthis. (From δια, and κολοκυνθις, the colocynth.) A preparation, the chief ingredient of which is colocynth.

Diaco'mma. (From διακοπτω, to cut through.) *Diacope.* A deep cut or wound.

Dia'cope. See *Diacomma.*

Diacopræ'gia. (From δια, κοπρος, dung, and αιξ, a goat.) A preparation with goat's dung.

Diacora'llum. (From δια, and κοραλλιον, coral.) A preparation in which coral is a chief ingredient.

DIA'CRISIS. (*is, is.* f.; from διακρινω, to distinguish.) The distinguishing diseases one from another by their symptoms. See *Diagnosis.*

Diacro'cium. (From δια, and κροκος, saffron.) A collyrium in which is saffron.

Diacurcu'ma. (From δια, and κυρκουμα, turmeric.) An antidote in which is turmeric or saffron.

Diacydo'nium. (From δια, and κυδωνια, a quince.) Marmalade of quinces.

Diadaphni'dion. (From δια, and δαφνις, the laurel tree.) A drawing plaster, in which were bay-berries.

DIADE'LPHIA. (*a, æ.* f.; from δις, twice, and αδελφις, a brotherhood: two brotherhoods.) The name of a class in the sexual system of plants, embracing those the flowers of which are hermaphrodites, and have the male organs united below into two sets of cylindrical filaments.

DIADE'MA. (*a, atis.* n.; from διαδεω, to surround.) 1. A diadem or crown.

2. A bandage to put round the head.

Diade'xis. (From διαδεχομαι, to transfer.) *Diadoche.* A transposition of humours from one place to another.

Dia'doche. See *Diadexis.*

Dia'dosis. (From διαδιδωμι, to distribute.) The remission of a disorder.

DIÆ'RESIS. (*is, is,* f.; from διαιρεω, to divide or separate.) A separation of parts; as a wound, ulcer, rupture of skin.

Diære'ticus. (From διαιρεω, to divide.) A corrosive medicine.

DIÆ'TA. (*a, æ.* f.; from διαιτaω, to nourish.) Diet; food. See *Diet,* and *Aliment.*

DIÆTETIC. See *Dietetic.*

Diaglau'cium. (From δια, and γλαυκιον, the blue juice of a herb.) An eye-water made of the purging thistle.

DIAGNO'SIS. (*is, is.* f.; from διαγινωσκω, to discern or distinguish.) *Diacrisis. Diaphora.* The science which delivers the signs by which a disease may be distinguished from another disease. See *Semiotice.*

Diagry'dium. See *Dacrydium.*

Diahermoda'ctylum. (From δια, and ερμοδακτυλος, the hermodactyl.) A purging medicine, the basis of which is the hermodactyl.

Diai'reon. (From δια, and ιρις, the lily.) An antidote in which is the root of the lily.

Diai'um. (From δια, and ιον, a violet.) A medicine or pastil, the chief ingredient of which is violets.

Diala'cca. (From δια, and λακκα.) An antidote in which is the lacca.

Dialago'um. (From δια, and γαλως, a hare.) A medicine in which is the dung of a hare.

Diale'mma. (From διαλαμβανω, to interrupt.) The remission of a disease.

Diale'psis. (From διαλαμβανω, to interrupt.) 1. An intermission.

2. A space left between a bandage.

Diali'banum. (From δια, and λιβανον, frankincense.) A medicine in which frankincense is a chief ingredient.

DIALLAGE. A mineral of a greenish colour, a species of the genus Schiller spar.

Dia'loes. (From δια, and αλοη, the aloe.) A medicine chiefly composed of aloes.

Dialthæ'a. (From δια, and αλθαια, the mallow.) An ointment composed chiefly of marsh-mallows.

DIA'LYSIS. (*is, is.* f.; from διαλυω, to dissolve.) 1. A solution of continuity, or a destruction of parts.

2. The cause of weakness.

3. A weakness of the limbs, or dissolution of strength.

Dia'lyses. (The plural of *dialysis.*) The name of an order in the class *Locales* of Cullen's Nosology.

Dialy'ticus. (From διαλυω, to dissolve.) Appertaining to wounds and fractures.

Diamargari'ton. (From δια, and μαργαριτις, pearl.) An antidote in which pearls are the chief ingredient.

DIAMASSE'MA. (*a, æ.* f.; from δια, and μασσομαι, to chew.) *Diamastema.* A masticatory, or substance put into the mouth, and chewed to excite a discharge of the saliva.

Dia'mbra. (From δια, and αμβρα, amber.) An aromatic composition in which was ambergris.

Diame'lon. (From δια, and μηλον, a quince.) A composition of quinces.

Diami'syos. (From δια, and μισυ, misy.) A composition in which misy is an ingredient.

DIAMNES. See *Diapne.*

DIAMOND. See *Adamas,* and *Carbon.*

Diamond-shaped. Applied to leaves which resemble the figure of a diamond as painted on cards. See *Leaf.*

Diamo'ron. (From δια, and μωρον, a mulberry.) A preparation of mulberries.

Diamo'schum. (From δια, and μοσχος, musk.) An antidote in which musk is a chief ingredient.

Diamoto'sis. (From δια, and μοτος, lint.) The introduction of lint into an ulcer or wound.

DIA'NA. (*a, æ.* f.) 1. The moon.

2. The chemical name for silver, from its white shining appearance.

Diananca'smus. (From δια, and αναγκαζω, to force.) 1. The forcible restoration of a luxated part into its proper place.

2. An instrument for a distorted spine.

DIA'NDRIA. (*a, æ.* f.; from δις, twice; and ανηρ, a man.) The name of a class in the sexual system, consisting of hermaphrodite plants which have flowers with two staminæ.

DIA'NTHUS. (*us, i.* m.; from Δις, διος, Jove, and ανθος, a flower: so called, from the elegance and fragrance of its flower.) The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Digynia.*

Dianthus caryophyllus. The systematic name of the clove-pink. Clove gilliflower. Clove July flower. *Caryophyllum rubrum, Tunica, Vetonica, Betonica, Coronaria, Caryophyllus hortensis.* This fragrant plant, *Dianthus—floribus solitariis, squamis calycinis subovatis, brevissimis, corollis crenatis,* of Linnæus, grows wild in several parts of England; but the flowers, which are pharmaceutically employed, are usually produced in gardens: they have a pleasant aromatic smell, somewhat allied to that of clove-spice; their taste is bitterish and sub-astringent. These flowers were formerly in extensive use, but are now

merely employed in form of syrup, as a useful and pleasant vehicle for other medicines.

DIAPA'SMA. (*a, atis.* n.; from διαπασσω, to sprinkle.) A medicine reduced to powder, and sprinkled over the body, or any part.

DIAPEDE'SIS. (*is, is.* f.; from διαπηδαω, to leap through.) The transudation or escape of blood through the coats of an artery.

DIAPE'GMA. (From διαπηγνυω, to close together.) A surgical instrument for closing together broken bones.

DIAPE'NTE. (From δια, and πεντε, five.) A medicine composed of five ingredients.

DIAPHANOUS. (*Diaphanosus:* from δια, through, and φαινω, to shine.) Transparent: applied to any substance which is transparent; as the hyaloid membrane covering the vitreous humour of the eye, which is as transparent as glass.

DIAPHŒ'NICUM. (From δια, and φοινιξ, a date.) A medicine made of dates.

DIA'PHORA. (*a, æ.* f.; from διαφερω, to distinguish.) 1. The distinction of diseases by their characteristic marks and symptoms. 2. A corruption of food in the stomach.

DIAPHORE'SIS. (*is, is.* f.; from διαφορεω, to carry through.) A perspiration.

DIAPHORETIC. (*Diaphoreticus;* from διαφορεω, to carry through.) That which, from being taken internally, increases the discharge by the skin. When this is carried so far as to be condensed on the surface, it forms sweat: and the medicine producing it is named sudorific. Between diaphoretic and sudorific there is no distinction; the operation is in both cases the same, and differs only in degree from augmentation of dose, or employment of assistant means. This class of medicines comprehends five orders:—

1. *Pungent diaphoretics;* as the *volatile salts,* and *essential oils,* which are well adapted for the aged; those in whose system there is little sensibility; those who are difficultly affected by other diaphoretics; and those whose stomachs will not bear large doses of medicines.

2. *Calefacient diaphoretics;* such as *serpentaria contrayerva,* and *guaiacum:* these are given in cases where the circulation is low and languid.

3. *Stimulant diaphoretics;* as antimonial and mercurial preparations, which are best fitted for the vigorous and plethoric.

4. *Antispasmodic diaphoretics;* as *opium, musk,* and *camphire,* which are given to produce a diaphoresis, when the momentum of the blood is increased.

5. *Diluent diaphoretics;* as water, whey, &c. which are best calculated for that habit in which a predisposition to sweating is wanted, and in which no diaphoresis takes place, although there be evident causes to produce it.

DIAPHRA'GM. (*Diaphragma, matis.* n.; from δια, and φραττω, to divide.) *Phrenes. Septum transversum.* The midriff, or diaphragm. A muscle that divides the thorax from the abdomen. It is composed of two muscles: the first and superior of these arises from the sternum, and the ends of the last ribs on each side. Its fibres, from this semicircular origination, tend towards their centre, and terminate in a tendon, or aponeurosis, which is termed the *centrum tendinosum;* and was called by the old anatomists, *centrum nerveum.* The second and inferior muscle comes from the vertebræ of the loins by two productions, of which that on the right side comes from the first, second, and third vertebræ of the loins; that on the left side is somewhat shorter; and both these portions join and make the lower part of the diaphragm, which joins its tendons with the tendon of the other, so that they make but one muscular partition. It is covered by the pleura on its upper side. and by the peritonæum on the lower side. It is pierced in the middle for the passage of the vena cava; in its lower part for the œsophagus, and the nerves, which go to the upper orifice of the stomach, and betwixt the productions of the inferior muscle, passes the aorta, the thoracic duct, and the vena azygos. It receives arteries and veins called phrenic or diaphragmatic, from the cava and aorta; and sometimes on its lower part two branches from the vena adiposa, and two arteries from the lumbares. It has two nerves which come from the third vertebra of the neck, which pass through the cavity of the thorax, and are lost in its substance. In its natural situation, the diaphragm is convex on the upper side towards the breast, and concave on its lower side towards the belly; therefore, when its fibres swell and contract, it must become plain on each side, and consequently the cavity of the breast is enlarged to give liberty to the lungs to receive air in inspiration; and the stomach and intestines are pressed for the distribution of their contents: hence the use of this muscle is very considerable: it is the principal agent in respiration, particularly in inspiration; for when it is in action, the cavity of the thorax is enlarged, particularly at the sides, where the lungs are chiefly situated; and as the lungs must always be contiguous to the inside of the thorax, and upper side of the diaphragm, the air rushes into them, in order to fill up the increased space. In expiration, it is relaxed and pushed up by the pressure of the abdominal muscles upon the viscera of the abdomen; and at the same time that they press it upwards, they pull down the ribs, by which the cavity of the thorax is diminished, and the air suddenly pushed out of the lungs.

DIAPHRAGMATI'TIS. (From διαφραγμα, the diaphragm.) Inflammation of the diaphragm, which being formed of a large, flat, and strong muscle, covered above by the pleura, and below by the peritonæum, must be subject to inflammation of its upper and under membranes, and also inflammation of its muscular structure, the same with muscles in other parts. Inflammation beginning in, or being communicated to, the pleural cover-

ing, must come under pleuritis; and so inflammation commencing in, or being communicated to, the peritonæum, belongs to peritonitis; and in both these cases, the inflammation dips into the cellular connecting tissue, and perhaps into the muscular or tendinous structure, and causes the same train of symptoms with those which result from an idiopathic inflammation of its muscular structure, which may, in like manner, extend into the investing membranes. I do not recollect ever to have dissected a case of diaphragmatitis, in which the muscular structure was evidently confined to, or that I thought began primarily in it: whereas the *post mortem* dissections of those who died under diaphragmatitis, discovered extensive and great degree of inflammation of either the pleura or peritonæum.

When the disease begins in the pleura over the diaphragm, or is communicated to it from the pleura near to it, the symptoms are very like to those of pleurisy, except that the pain is felt deep seated between the sides, back, and stomach. There is a degree of fever commensurate with the extent of the inflammation and the state of the system. It is mostly violent; more so than when caused by inflammation of the costal pleura; the exacerbations are stronger. Some cases have cough, and there is a delirium of the low, muttering kind. The breathing is always interrupted, the inspiration short of its natural depth, and, as the fever increases, the delirium becomes more violent; more like to that which inflammation of the brain produces: and hence the disease has been often called *para-phrenitis*. The cough, difficult respiration, and delirium, continue as long as the inflammation exists purely as such; and the symptoms change as it may be resolved, or end in the formation and collection of a fluid, in the cavity of the pleura, or by the fever being so violent as to kill.

When the peritonæum of the diaphragm is the seat of the inflammation, whether it commences there, or is communicated to it from other parts, the symptoms are nearly the same; for the diaphragm being the principal organ of respiration, the same interruption to its functions takes place, whether the disease is on its upper or lower surface: the fever is more violent than that from peritonitis elsewhere: there is difficult respiration, perhaps cough, and delirium takes place, as in diaphragmatitis, from inflammation of the pleura. This delirium, which I mentioned as being at first of the low, muttering kind, and becoming more violent, so as to simulate phrenitis, is supposed to be caused by the irritation that takes place of the phrenic nerve. The symptoms of inflammation of the diaphragm from the peritonæum, like those of the pleural disease, may depart, under a resolution of the inflammation; or they may vary from adhesions forming, or from the effusion of a fluid, or from the violence of the fever destroying life.

The treatment is the same with that of pleuritis and peritonitis; but the disease existing in a part the office of which is so directly connected with an important and vital function, calls for the more prompt exhibition of the most active remedies. The lancet must be called for immediately, and large quantities of blood abstracted. After having cleared the bowels by a mercurial and saline purgative, full doses of antimonials, with submuriate of mercury, warm bath, and blisters, are the best remedies. As a symptomatic affection, diaphragmatitis results from pneumonia, carditis, hepatitis, and splenitis, and requires the same remedies with the first disease.

Inflammation in the muscular structure of the diaphragm, or the true diaphragmatitis, produces the same symptoms, with the exception of the nature and seat of the pain. It mostly exists as a secondary disease: it often is produced by rheumatism and gout moving to it and vanishing from the limbs, and is a most frightful, a most alarming disease, and often kills in a short time.

DIA'PHTHORA. (From διαφθειρω, to corrupt.) An abortion where the fœtus is corrupted in the womb.

DIAPHYLA'CTICUS. (From διαφυλασσω, to preserve.) Having the power to resist putrefaction or prevent infection.

DIA'PHYSIS. (From διαφυω, to divide.) 1. An interstice or partition.

2. The interarticular cartilages of the knee joint.—*Galen.*

3. A cavity for the reception of any thing.

DIAPISSELÆ'UM. (From δια, and πισσελαιον, the oil of pitch, or liquid pitch.) A composition in which is liquid pitch.

DIA'PLASIS. (From διαπλασσω, to put together.) The replacing a luxated or fractured bone in its proper situation.

DIAPLA'SMA. (*a*, *atis*. n.; from διαπλασσω, to anoint.) An unction or fomentation applied to the whole body or any part.

DIA'PNE. (From διαπνεω, to blow through, or pass gently as the breath does.) *Diamnes.* An insensible discharge of the urine.—*J. Anglicus.*

DIA'PNOE. (From διαπνεω, to breathe through.) The transpiration of vapour through the pores of the skin.

DIAPNO'IC. (*Diapnoicus*, from διαπνεω, to transpire.) That which promotes perspiration.

DIAPORE'MA. (From διαπορεω, to be in doubt.) Nervous anxiety.

DIAPORON. (From δια, and οπωρα, autumnal fruits.) A composition, in which are several autumnal fruits; as quinces, medlars. and services.

DIAPRA'SSIUM. (From δια, and πρασσιον, horehound.) A composition in which horehound is the principal ingredient.

DIAPRU'NUM. (From δια, and προυνη, a prune.) An electuary of prunes.

DIAPSO'RICUM. (From δια, and ψωρα, the

itch or scurvy.) A medicine for the itch or scurvy.

Diapte'rnes. (From δια, and πτερνα, the heel.) A composition of cow-heel, &c.

Diaptero'sis. (From δια, and πτερον, a feather.) The cleaning the ears with a feather.

Diapye'ma. (From δια, and πυον, pus.) 1. A suppuration or abscess.

2. A suppurating medicine.

Diapye'ticus. (From διαπυημα, a suppuration.) A suppurating application.

Diarho'cha. (From δια, and ρηχος, a space.) The space between the foldings of a bandage.

DIA'RIUS. (From *dies*, a day.) One day: applied to fevers which last but one day.

Diaroma'ticum. (From δια, and αρωματικον, an aromatic.) A composition of spices.

Dia'rrhage. (From διαρρηγνυμι, to break asunder.) A fracture.

Diarrhodo'meli. (From δια, ροδον, a rose, and μελι, honey.) A composition of scammony, agaric, pepper, and honey.

Dia'rrhodon. (From δια, and ροδον, a rose.) A composition of roses.

DIARRHŒ'A. (*a, æ*. f.; from διαρρεω, to flow through.) A purging.

A diarrhœa, purging, or looseness, consists in the too frequently passing the fæces, or contents of the great intestines; preceded generally by a murmuring noise, and a little pain; that little a griping, and without any fever. It is not, like dysentery, a contagious disease. The proximate cause is an increased peristaltic action throughout the whole, or a great part, of the intestinal canal; and, as this may be produced by various means, and under different circumstances, it must often stamp a peculiarity in the character of the disorder, and lay a foundation for numerous species.

The peristaltic motion of the intestines may be increased, and, consequently, looseness or diarrhœa occasioned,

1. By irritating materials thrown into them by the mouth.

2. By a morbid change in the fluids which are naturally secreted into the intestinal canal.

3. By an irritable state of the intestines themselves, or the membrane that lines their inner surface.

4. By the irritation of worms.

Independently of these causes, the peristaltic motion may be increased by the irritation of other diseases in the neighbourhood; as abscesses: by the readiness with which the intestines associate in the action of remote parts; as sudden passion or commotion of mind; the expulsion of rashes from the skin, &c.; in which, and many other like instances, the diarrhœa is not idiopathic, but sympathetic, or symptomatic.

The most common of all the species of diarrhœa, is that in which the fæces pass of common quality, but immoderately loose and copious. Dr. Cullen calls it *diarrhœa crapulosa*, because it mostly takes place from overloading the stomach: Dr. Good, *diarrhœa fusa*. It generally effects its own cure, without any medicine; for its common causes are food eaten to excess, or intermixed with an undue proportion of irritating materials, saline, saccharine, or vinous, in consequence of which they pass rapidly, and not thoroughly digested, from the stomach, and urge the motion of the intestines to an undue activity: hence often, antecedently to the looseness, there is a sense of sickness, and perhaps a few slight pains; but, if the disorder do not prove its own remedy, it is easily removed by any common purgative. In weak stomachs, or where the intestines are sluggish, this kind of looseness is also occasionally produced by a retardation of the aliment, till it irritates from acescency, putrescency, or superabundant accumulation; and where it is not checked in due time, it will occasionally, like several of its cognate species, run into a chronic form, and prove extremely troublesome and obstinate. This species is also produced occasionally by sudden exposure to cold, and especially by cold bathing; by great agitation of mind, and particularly that of fright or anger.

Almost as frequent as the former species, is the *bilious diarrhœa*, in which the fæces are loose, copious, and of a bright yellow colour. From the very bilious state of the dejections, there can be no doubt that the bile, in this species, is secreted in a greater quantity than usual, and perhaps with an unusual degree of pungency. The most common remote cause of this species of diarrhœa, is a great and sudden increase in the temperature of the atmosphere, or a less than mean degree of heat operating for some time. Dr. Lind has remarked, that a rapid change of climate, whether from a colder to a hotter, or from a hotter to a colder state, is equally apt to excite diarrhœa. But the complaints hereby produced are of very different characters. That occasioned by sudden cold, consists of an acrid mucous discharge. The diarrhœa excited by passingly rapidly from a cold into a hot climate, depends upon an increased secretion of bile, in many cases worked up to a higher degree of acrimony. The calorific rays of the sun exercise a peculiar influence upon the liver, and soon stimulate it to an augmented action. In the intertropical regions, the quantity of bile hereby secerned is even more than the bile ducts can conveniently carry off; whence some portion of it retrogrades, and is carried by absorption into the system, and is one of the causes, though not the only cause, of the darker hue of the skin in those quarters. In our own country, this species of purging is, therefore, found most commonly in the earlier part of the summer, when suddenly and vehemently bursting upon a cold spring; or in the autumn, when the liver has for many weeks been exposed to the effects of a very vigorous sun, and the whole system has become relaxed and debilitated. If at this time the atmosphere be pure, the disease is simple, and may be subdued without

much difficulty; a few doses of the submuriate of mercury, with a view of emulging the bilious pores of the liver, correcting the irritation of the organ, and subduing its increased action, with the assistance of mild diluents and demulcents, as infusions of linseed, quince seeds, tragacanth, and acacia, with mild bitter infusions. If the diarrhœa do not give way under these, and light glutinous broths, with arrow-root and the like for the diet, opiates may be employed with advantage.

Another species of diarrhœa consists in the dejections containing a quantity of mucus. It bears a striking resemblance to the defluxion from the nostrils in catarrh, and has been denominated *catarrhus intestinorum*, and *diarrhœa catarrhalis*. It has hitherto been described as a species of diarrhœa, though it more properly belongs to dysentery. Its common cause is cold, particularly in the feet, acting upon the mucous follicles of the bowels, which are predisposed to take on a peculiar morbid action. Purging here is highly injurious. The best plan is warmth to the surface of the body, by the occasional use of a warm bath, pediluvium, and fomentations to the bowels; the internal administration of saline medicines, with Dover's powders, and afterwards astringents, with light bitters. Opiates at bed-time are very serviceable. The diet should consist of glutinous broths, arrow-root, dilute brandy, and light animal food.

A looseness consists sometimes of white, milky, or what have been called chylous stools. The colour of the dejections in this species, affords evident proof that the bile, which gives the usual tinge to the fæces, is either not secreted, or impeded in its flow into the intestines; and also that the food, after being converted into chyle, is not absorbed and carried into the system. This singular and not common disease has been described as the *affectio* or *passio cœliaca*, and *diarrhœa cœliaca*. On the presumption that the white discharge was owing to the presence of chyle, and that none was absorbed, it has been concluded that the disease was the consequence of some cause preventing the absorption of chyle, especially an inertness or torpitude of the absorbents, or some disease of the mesenteric glands: but it is very likely that we are not yet in possession of the real cause, and that the disease is symptomatic of some other.

There is another kind of looseness, in which the food passes rapidly through the primæ viæ, without having been digested, and in the same state nearly as it was received into the stomach. It is described in ancient writings by the name of *lienteria*, or lubricity of the intestines. The causes of this disease, besides the increased peristaltic movement, are to be sought after in the stomach also, the digestive power of which is not brought into action, owing either to a deficiency of gastric juice, or a want of power to retain the food which it receives. The bile also, as in the cœliac species, is either deficient, or secreted of such a quality as not to impart a proper colour to the contents of the bowels, nor to perfect the separation of the chyle from the chyme, if chymification had taken place. This *diarrhœa lienteria* is far from common, and is mostly a symptomatic affection of gout, scirrhus, or some organic disease. As a genuine diarrhœa, its cure is to be attempted by tonics, bitters, and the remedies recommended against indigestion, to which disease it is nearly allied.

The *diarrhœa serosa*, which is also called *diarrhœa aquosa*, is that species in which the dejections are watery, almost entirely liquid, and limpid. In some cases, the serous discharge resembles the washings of flesh, and it has been supposed to proceed from the liver; on which account it has been called a hepatirrhæa, or hepatic flux. The purging is here dependant upon a very irritable and relaxed state of the excretory vessels of the intestines. The disease occurs mostly to the leucophlegmatic and weak. Its cure is to be attempted by warm cordials, with astringents and tonics, as gentian, calomba, simarouba, aurantium, with the peppers, and warm tinctures.

When a loose state of the bowels is caused by worms, *diarrhœa verminosa*, which is sometimes the case with ascarides, their presence and irritation in the rectum establish the species; and the cure is to be effected by vermifuges.

From what has been advanced, it is evident that, in conducting the cure of a diarrhœa, the objects are to obviate the several causes, to lessen the inordinate peristaltic motion, and to give tone to the intestines. To fulfil these, it has been a custom to exhibit emetics and purgatives occasionally, and to give astringents universally. Emetics are very seldom serviceable, only in strong subjects, with loaded stomachs; in which case an emetic may at first be useful in speedily removing its contents: it may also assist in emulging the ducts of the liver, and determining to the skin; but its secondary operation is that of weakening, and ought, therefore, to be resorted to with great caution. Cathartics are serviceable in expelling worms, or indurated or acrimonious fæces; but any acrimony in the intestine generally causes its own discharge, and where there is much irritability, they aggravate the disease: however, in protracted cases, the alvine contents speedily become vitiated, and renew the irritation; which may be best obviated by an occasional mild aperient, particularly rhubarb. If the liver do not perform its office, the intestine will hardly recover its healthy condition: and that may most probably be effected by the cautious use of mercury. Likewise articles which determine the fluids to other outlets, diuretics, and particularly diaphoretics, in many cases contribute materially to recovery; the latter, perhaps, assisted by bathing, warm clothing, gentle exercise, &c. Diluent, demulcent, antacid, and other chemical reme-

dies, are employed to correct acrimony, according to its particular nature. In children teething, the gums should be lanced; and if the bowels have been attacked on the repulsion of some other disease, it may often be proper to endeavour to restore this. But a matter of the greatest importance is the due regulation of the diet, carefully avoiding those articles which are likely to disagree or irritate the bowels, and preferring such as have a mild astringent effect. Food the least acescent, as rice, arrow-root, tapioca, sago, bread, &c., are best; and, for the drink, madeira, or brandy, sufficiently diluted, rather than malt liquors.

Some of the means already noticed will help to moderate the excessive peristaltic movement, as a wholesome diet, exercise, diaphoretics, &c.: but there are others of more power, which must be resorted to. At the head of these is opium, a full dose of which frequently at once effects a cure; but where there is some more fixed cause, and the complaint of any standing, moderate quantities, repeated at proper intervals, will answer better, and other subsidiary means ought not to be neglected: aromatics may prevent its disordering the stomach, rhubarb obviate its causing permanent constipation, &c. Tonics are generally proper, the discharge itself inducing debility; and, where there is a deficiency of bile particularly, the lighter forms of the aromatic bitters will materially assist. In protracted cases, mild chalybeates are sometimes serviceable; astringents come in aid of the general plan, and, where opium disagrees, they may be more necessary; but the milder ones should be employed at first, the more powerful only where the patient appears sinking. Chalk and lime water answer best where there is acidity; otherwise the pomegranate, logwood, catechu, kino, tormentil, &c. may be given: where these fail, alum, sulphate of zinc, galls, or acetate of lead.

Diarrhœa carnosa. A form of dysentery, in which flesh-like portions are eliminated.

Diarrhœa cholerica. A purging, in which a quantity of bile passes.

Diarrhœa urinosa. See *Diabetes.*

DIARTHRO'SIS. (*is, is.* f.; from διαρθροω, to articulate.) A moveable connection of bones. This genus has five species, viz. enarthrosis, arthrodia, ginglymus, trochoides, and amphiarthrosis.

Diasapo'nium. (From δια, and σαπων, soap.) An ointment of soap.

Diasaty'rium. (From δια, and σατυριον, the orchis.) An ointment made principally of the orchis root.

Diasci'llium. (From δια, and σκιλλα, the squill.) Oxymel and vinegar of squills.

Diasci'ncus. (From δια, and σκιγκος, the crocodile.) A name for the mithridate, in the composition of which there was a part of the crocodile.

Diasco'rdium. (From δια, and σκορδιον, the water germander.) Electuary of scordium.

Diase'na. (From δια, and *sena.*) A medicine in which is senna.

Diasmy'rnum. (From δια, and σμυρνη, myrrh.) *Diasmyrnes.* A wash for the eyes, composed of myrrh.

Diaso'sticus. (From διασωζω, to preserve.) That which preserves health.

Diaspe'rmatum. (From δια, and σπερμα, seed.) A medicine composed chiefly of seeds.

Dia'sphage. (From διασφαζω, to separate.) *Diasphaxis.* The interstice between two veins.

Diasphy'xis. (From δια, and σφυζω, to strike.) The pulsation of an artery.

DIA'STASIS. (*is, eos.* f.; from διαστημι, to separate.) *Diastema.* A separation: applied to the ends of bones; as that which occasionally happens to the bones of the cranium, in some cases of hydrocephalus.

Diaste'aton. (From δια, and ϛεαρ, fat.) An ointment of the fat of animals.

Diaste'ma. (*a, atis,* n.) See *Diastasis.*

DIA'STOLE. (*e, es.* f.; from δια, and στελλω, to stretch.) The dilatation of the heart and arteries. See *Circulation.*

Diastomo'sis. (From διαϛομοω, to dilate.) Any dilatation, or dilating instrument.

DIASTRE'MMA. (From διαϛρεφω, to turn aside.) *Diastrophe.* A distortion of any limb or part.

Dia'strophe. See *Diastremma.*

Dia'tasis. (From διατεινω, to distend.) The extension of a fractured limb, in order to reduce it.

Diatecoli'thum. (From δια, and τηκολιθος, the Jew's stone.) An antidote containing lapis judiacus.

DIATERE'SIS. (*is, is.* f.; from δια, and τερεω, to perforate.) A perforation or aperture.

Diatere'ticus. (From δια, and τερεω, to preserve.) A medicine which preserves health and prevents disease.

Diate'ssaron. (From δια, and τεσσαρες, four.) A medicine compounded of four simple ingredients.

Diate'ttigum. (From δια, and τεττιγων, a grasshopper.) A medicine in the composition of which were grasshoppers, given as an antidote to some nephritic complaints by Paulus Ægineta.

DIA'THESIS. (*is, is.* f.; from διατιθημι, to dispose.) A particular state of the body: thus, in inflammatory fever, there is an inflammatory diathesis, and, during putrid fever, a putrid diathesis.

Diathe'smus. (From διαθεω, to run through.) A rupture through which some fluid escapes.

Diatragaca'nthum. (From δια, and τραγακανθα, tragacanth.) A medicine composed of gum-tragacanth.

Diatritos. (From δια, and τρεις, three.) An abstinence during three days was first recommended by the methodic physicians. This period, not the abstinence, was called *diatritos;*

and, from this circumstance, the methodics had the name of *diatritarii.* On the third day they gave such medicines as they thought of importance. Cœlius Aurelianus gives this name, not only to the period, but to the third day in particular.

DIA'TRIUM. (From δια, and τρεις, three.) A medicine composed of three simple ingredients.

DIAULOS. (From δις, twice, and αυλη, a station.) A kind of exercise in which the person runs a straight course forward and back again.

DIAXYLA'LOES. (From δια, and ξυλαλοη, the lignum aloes.) A medicine in which is lignum aloes.

DIAZO'MA. (From διαζωννυμι, to surround; because it surrounds the cavity of the thorax.) The diaphragm.

DIAZO'STER. (From διαζωννυμι, to surround; because when the body is girded, the belt usually lies upon it.) The twelfth vertebra of the back.

DICENTE'TUM. (From δια, and κεντεω, to stimulate.) A pungent wash for the eyes.

DICHASTE'RES. (From διχαζω, to divide, because they divide the food.) The incisores, or foreteeth.

DICHOPHY'IA. (From διχα, double, and φυω, to grow.) A distemper of the hairs, in which they split and grow forked.

DICHO'TOMOUS. (*Dichotomus;* from δις, twice, and τεμνω, to cut: that is, cut into two.) Bifurcate; forked. Applied to stems, styles, &c. which are forked or divided into two.

DICHOTOPHYLLUM. (From διχα, double, and φυλλον, a leaf.) Double leaved.

DICHROITE. A species of iolite.

DICOC'CUS. (*us, i.* m.; from δις, and κοκκος, a berry.) Dicoccous: having two capsules united, each with one cell.

DICOTYLEDONES. Having two cotyledons. See *Cotyledon.*

DICRÆUS. (From δις, twice, and κρινω, to distinguish.) Bifid: cloven.

DICROTIC. (*Dicroticus,* from δις, twice, and κρουω, to strike.) Dicrotic, or double beat: applied to a pulse in which the artery rebounds after striking, so as to convey the sensation of a double pulsation.

DICTAMNI'TES. (From δικταμνος, dittany.) A wine medicated with dittany.

DICTA'MNUS. (*us, i.* m.; from *Dictamnus,* a city in Crete, on whose mountains it grows.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.* Dittany.

DICTAMNUS ALBUS. White fraxinella, or bastard dittany. *Fraxinella* of the shops. *Dictamnus albus—foliis pinnatis, caule simplici,* of Linnæus. The root of this plant is the part directed for medicinal use; when fresh, it has a moderately strong, not disagreeable smell. Formerly it was much used as a stomachic, tonic, and alexipharmic, and was supposed to be a medicine of much efficacy in removing uterine obstructions and destroying worms; but its medicinal powers became so little regarded by modern physicians, that it had fallen almost entirely into disuse, till Baron Stoerck brought it into notice, by publishing several cases of its success, viz. in tertian intermittents, worms (lumbrici), and menstrual suppressions. In all these cases, he employed the powdered root to the extent of a scruple twice a day. He also made use of a tincture, prepared of two ounces of the fresh root digested in 14 ounces of spirit of wine; of this 20 to 50 drops, two or three times a day, were successfully employed in epilepsies; and, when joined with steel, this root, we are told, was of great service to chlorotic patients. The dictamnus undoubtedly, says Dr. Woodville, is a medicine of considerable power; but notwithstanding the account of it given by Stoerck, who seems to have paid little attention to its modus operandi, we may still say with Haller, "*nondum autem vires pro dignitate exploratus est,*" and it is now fallen again into disuse.

DICTAMNUS CRETICUS. See *Origanum dictamnus.*

DICTYOIDES. (From δικτυον, a net, and ειδος, resemblance.) Netlike.

DIDYMÆ'A. (From διδυμος, double: so called by Galen, from the double use to which he puts it.) A cataplasm.

DI'DYMUS. (*us, i.* m.; from διδυμος, double.) Didymous: double. 1. Twins.

2. An old name of the testicles, and of two eminences of the brain, from their double protuberance.

3. Applied, in *Botany,* to the anthers and germens, &c. of flowers, when, upon one filament, there are two anthers united, like a double nut; as in *Ranunculus, Anemone, Galium,* &c.

DIDYNAMIA. (*a, æ.* f.; from δις, twice, and δυναμις, power.: two powers.) The name of a class in the sexual system of plants, consisting of those with hermaphrodite flowers, which have four stamina, two of which are long and two short.

DIECBO'LIUM. (From δια, and εκβαλλω, to cast out.) A medicine causing an abortion.

DIELE'CTRON. (From δια, and ελεκτρον, amber.) A name of a troch, in which amber is an ingredient.

DIEMERBROECK, ISBRAND, was born near Utrecht, in 1609. He published, *On the Plague;* and *A System of Anatomy;* and several other works in medicine and surgery; part of which were published after his death by his son, especially his Treatise on the Measles and Small-pox.

DIERVI'LLA. (*a, æ.* f.; named in honour of Mr. Dierville, who first brought it from Arcadia.) See *Lonicera diervilla.*

DIET. *Diæta.* The dietetic part of medicine is no inconsiderable branch, and seems to require a much greater share of regard than it commonly meets with. A great variety of diseases might be removed by the observance of a proper diet and regimen, without the assistance of medicine, were it

not for the impatience of the sufferers. However, it may on all occasions come in as a proper assistant to the cure, which sometimes cannot be performed without a due observance of the non-naturals. That food is, in general, thought the best and most conducive to long life, which is most simple, pure, and free from irritating qualities, and such as approaches nearest to the nature of our own bodies in a healthy state, or is capable of being easiest converted into their substance by the vis vitæ, after it has been duly prepared by the art of cookery; but the nature, composition, virtues, and uses of particular aliments can never be learned to satisfaction, without the assistance of practical chemistry. See *Aliment*.

Diet drink. An alterative decoction employed daily in considerable quantities, at least from a pint to a quart. The decoction of sarsaparilla and mezereon, the Lisbon diet drink, is the most common and most useful.

DIETE'TIC. (*Dieteticus;* from διαιτaω, to nourish.) Relating to diet. That which considers the way of living with relation to food, or diet, suitable to any particular case.

Die'xodos. (From δια, and εξοδος, a way to pass out.) *Diodos.* In Hippocrates it means evacuation by stool.

Diffla'tio. (From *difflo*, to blow away.) Perspiration.

DIFFORMIS. Irregular in shape; of different shapes.

DIFFUSE. *Diffusus.* Applied to panicles and stems. *Panicula diffusa*, that is, lax and spreading; as in *Saxifraga umbrosa*, the London pride, so common in our gardens; and many grasses, especially the common cultivated oat. The *Bunias kakile,* or sea-rocket, has the *caulis diffusus.*

DIGA'STRICUS. (From δις, twice, and γαστηρ, a belly: so called from its having two bellies.) *Biventer maxillæ,* of Albinus. A muscle situated externally between the lower jaw and *os hyoides*. It arises, by a fleshy belly, from the upper part of the processus mastoideus, and descending, it contracts into a round tendon, which passes through the stylohyoideus, and an annular ligament which is fastened to the os hyoides: then it grows fleshy again, and ascends towards the middle of the edge of the lower jaw, where it is inserted. Its use is to open the mouth by pulling the lower jaw downwards and backwards; and when the jaws are shut, to raise the larynx, and consequently the pharynx, upwards, as in deglutition.

Digere'ns. (From *digero*, to digest.) That which promotes the secretion of proper pus in wounds and ulcers.

DIGESTER. A strong and tight iron kettle or copper, furnished with a valve of safety, in which bodies may be subjected to the vapour of water, alkohol, or æther, at a pressure above that of the atmosphere.

DIGESTION. (*Digestio, onis.* f.; from *digero*, to dissolve.)

I. An operation in *Chemistry*, and *Pharmacy*, in which such matters as are intended to act slowly on each other are exposed to a heat, continued for some time.

II. In *Physiology*, the change that the food undergoes in the stomach, by which it is converted into chyme.

The immediate object of digestion is the formation of chyle, a matter destined for the reparation of the continual waste of the animal economy. The digestive organs contribute also in many other ways to nutrition.

If we judge of the importance of a function by the number and variety of its organs, digestion ought to be placed in the first rank; no other function of the animal economy presents such a complicated apparatus.

There always exists an evident relation between the sort of aliment proper for an animal, and the disposition of its digestive organs. If, by their nature, the aliments are very different from the elements which compose the animal: if, for example, it is graminivorous, the dimensions of the apparatus will be more complicated, and more considerable; if, on the contrary, the animal feeds on flesh, the digestive organs will be fewer and more simple, as is seen in the carnivorous animals. Man, called to use equally animal and vegetable aliments, keeps a mean between the graminivorous and carnivorous animals, as to the disposition and complication of his digestive apparatus, without deserving, on that account, to be called omnivorous.

We may represent the digestive apparatus as a long canal, differently twisted upon itself, wide in certain points, narrow in others, susceptible of contracting or enlarging its dimensions, and into which a great quantity of fluids are poured by means of different ducts. The canal is divided into many parts by anatomists:—

1. The mouth.
2. The pharynx.
3. The œsophagus.
4. The stomach.
5. The small intestines.
6. The great intestines.
7. The anus.

Two membraneous layers form the sides of the digestive canal in its whole length. The inner layer, which is intended to be in contact with the aliments, consists of a mucous membrane, the appearance and structure of which vary in every one of the portions of the canal, so that it is not the same in the pharynx as in the mouth, nor is it in the stomach like what it is in the œsophagus, &c. In the lips and the anus this membrane becomes confounded with the skin. The second layer of the sides of the digestive canal is muscular; it is composed of two layers of fibres, one longitudinal, the other circular. The arrangement, the thickness, the nature of the fibres which enter into the composition of these strata, are different, according as they are observed in the mouth, in the œsophagus, or in the large intestine, &c. A great number of blood-vessels go to, or come from, the digestive canal; but the abdominal portion of this canal receives a quantity incomparably greater than the superior parts. This presents only what are necessary for its nutrition,

and the inconsiderable secretion, of which it is the seat; whilst the number and the volume of the vessels that belong to the abdominal portion show that it must be the agent of a considerable secretion. The chyliferous vessels arise exclusively from the small intestine.

As to the nerves, they are distributed to the digestive canal in an order inverse to that of the vessels; that is, the cephalic parts, *cervical* and *pectoral*, receive a great deal more than the abdominal portion, the stomach excepted, where the two nerves of the eighth pair terminate. The other parts of the canal scarcely receive any branch of the cerebral nerves. The only nerves that are observed, proceed from the *subdiaphragmatic* ganglions of the great sympathetic. We will see, farther on, the relation that exists between the modes of distribution of the nerves, and the functions of the superior and inferior portions of the digestive canal.

The bodies that pour fluids into the digestive canal, are,—

1. The *digestive mucous membrane*.
2. *Isolated follicles* that are spread in great number in the whole length of this membrane.
3. The *agglomerated follicles* which are found at the isthmus of the throat, between the *pillars* of the *velum* of the palate, and sometimes at the junction of the œsophagus and the stomach.
4. The *mucous glands*, which exist in a greater or less number in the sides of the cheeks, in the roof of the palate, around the œsophagus.
5. The *parotid*, the *submaxillary*, and *sublingual glands*, which secrete the saliva of the mouth, the liver, and the pancreas; the first of which pours the bile, the second the pancreatic juice, by distinct canals, into the superior part of the small intestine, called duodenum.

All the digestive organs contained in the abdominal cavity are immediately covered, more or less completely, by the serous membrane called the peritonæum. This membrane, by the manner in which it is disposed, and by its physical and vital properties, is very useful in the act of digestion, by preserving to the organs their respective relations, by favouring their changes of volume, by rendering easy the sliding motions which they perform upon each other, and upon the adjoining parts.

The surface of the mucous digestive membrane is always lubrified by a glutinous adhesive matter, more or less abundant, that is seen in greatest quantity where there exist no follicles,—a circumstance which seems to indicate that these are not the only secreting organs. A part of this matter, to which is given generally the name of *mucus*, continually evaporates, so that there exists habitually a certain quantity of vapours in all the points of the digestive canal. The chemical nature of this substance, as taken at the intestinal surface, is still very little known. It is transparent, with a light grey tint; it adheres to the membrane which forms it; its taste is salt, and its acidity is shown by the re-agents: its formation still continues some time after death. That which is formed in the mouth, in the pharynx, and in the œsophagus, goes into the stomach mixed with the saliva, and the fluids of the mucous glands, by movements of deglutition, which succeed each other at near intervals. According to this detail, it would appear that the stomach ought to contain, after it has been some time empty of aliments, a considerable quantity of a mixture of mucus, of saliva, and follicular fluid. This observation is not proved, at least in the greatest number of individuals. However, in a number of persons, who are evidently in a particular state, there exist, in the morning, in the stomach, many ounces of this mixture. In certain cases it is foamy, slightly troubled, very little viscous, holding suspended some flakes of mucus: its taste is quite acid, not disagreeable, very sensible in the throat, acting upon the teeth, so as to diminish the polish of their surface, and rendering their motion upon each other more difficult. This liquid reddens paper stained with turnsole.

In the same individual, in other circumstances, and with the same appearances as to colour, transparency, and consistency, the liquid of the stomach had no savour, nor any acid property; it is a little salt: the solution of potash, as well as the nitric and sulphuric acids, produced in it no apparent change.

When we examine the dead bodies of persons killed by accident, the stomach not having received any aliments or drink for some time, this organ contains only a very few acid mucosities adhering to the coats of the stomach, part of which, in the pyloric portion of that viscus, appears reduced to chyme. It is, then, very probable, that the liquid which ought to be in the stomach is digested by this viscus, as an alimentary substance, and that this is the reason why it does not accumulate there.

In animals, the organisation of which approaches to that of man, such as dogs and cats, there is no liquid found in the stomach after one, or many days of complete abstinence; there is seen only a small quantity of viscous mucosity adhering to the sides of the organ, towards its *splenic* extremity. This matter has the greatest analogy, both chemical and physical, with that which is found in the stomach of man. But, if we make these animals swallow a body which is not susceptible of being digested, as a pebble, for example, there forms, after some time, in the cavity of the stomach, a certain quantity of an acid liquid mucus, of a greyish colour, sensibly salt, which, in its composition, is nearly the same as that found sometimes in man.

This liquid, resulting from the mixture of the mucosities of the mouth, of the pharynx, of the œsophagus, and the stomach, with the liquid secreted by the follicles of the same parts and with the saliva, has been called the *gastric juice*, and to which particular properties have been attributed.

In the small intestine there is also formed

a great quantity of mucous matter, which rests habitually attached to the sides of the intestine; it differs little from that of which we have spoken above; it is viscid, tough, and has a salt and acid savour; it is renewed with great rapidity. If the mucous membrane of this intestine is laid bare, in a dog, and the layer of mucus absorbed by a sponge, it will appear again in a minute. This observation may be repeated as often as we please, until the intestine becomes inflamed by the contact of the air, and foreign bodies.

The mucus of the stomach penetrates into the cavity of the small intestine only under the form of a pulpous matter, greyish and opake, which has all the appearance of a particular chyme.

It is at the surface of this same portion of the digestive canal that the bile is delivered as well as the liquid secreted by the pancreas. In animals, such as dogs, the flowing of these liquids takes place at intervals; that is, about twice in a minute, there is seen to spring from the orifice of the ductus choledochus, or biliary canal, a drop of bile, which immediately spreads itself uniformly in a sheet upon the surrounding parts, which are already impregnated with it; there is, also, constantly found a certain quantity of bile in the small intestine.

The flowing of the liquid formed by the pancreas takes place much in the same manner, but it is much slower: sometimes a quarter of an hour passes before a drop of this fluid springs from the orifice of the canal which pours it into the intestine.

The different fluids deposited in the small intestine, which are, the chymous matter that comes from the stomach, the mucus, the follicular fluid, the bile, and the pancreatic liquid, all mix together; but, on account of its properties, and, perhaps, of its proportions, the bile predominates, and gives to the mixture its proper taste and colour. A great part of this mixture descends towards the large intestine, and passes into it; in this passage, it becomes more consistent, and the clear yellow colour which it had before becomes dark, and afterwards greenish. There are, however, in this respect, strong individual differences.

In the large intestine, the mucous and follicular secretion appears less active than in the small intestine; the mixture of fluids which comes from the small intestine acquires in it more consistence; it contracts a fœtid odour, analogous to that of ordinary excrements: it has, besides, the appearance of it, by its colour, odour, &c.

The knowledge of these facts enables us to understand how a person who uses no aliments can continue to produce excrements, and how, in certain diseases, their quantity is very considerable, though the sick person has been long deprived of every alimentary substance, even of a liquid kind. Round the anus exist follicles, which secrete a fatty matter of a singularly powerful odour.

We find gas almost always in the intestinal canal; the stomach contains only very little. The chemical nature of these gases has not yet been examined with care; but as the saliva that we swallow is always more or less impregnated with atmospheric air, it is probably the atmospheric air, more or less changed, which is found in the stomach: at least, it contains carbonic acid. The small intestine contains only a small quantity of gas; it is a mixture of carbonic acid, of azote, and hydrogene. The large intestine contains carbonic acid, azote, and hydrogene, sometimes carburetted, sometimes sulphuretted. Twenty-three per cent. of this gas was found in the rectum of an individual, whose large intestine contained no excrement.

The muscular layer of the digestive canal deserves to be remarked, in respect to the different modes of contraction it presents. The lips, the jaws, in most cases the tongue, and the cheeks are moved by a contraction, entirely like that of the muscles of locomotion. The roof of the palate, the pharynx, the œsophagus, and the tongue in certain particular circumstances, offer many motions which have a manifest analogy with muscular contraction, but which are very different from it, because they take place without the participation of the will.

This does not imply that the motions of the parts just named are beyond the influence of the nerves; experience proves directly the contrary. If, for example, the nerves that come to the œsophagus are cut, this tube is deprived of its contractile faculty.

The muscles of the velum of the palate, those of the pharynx, the superior two-thirds of the œsophagus, scarcely contract like digestive organs, but when they act in permitting substances to pass from the mouth into the stomach. The inferior third of the œsophagus presents a phænomenon which is important to be known: this is an alternate motion of contraction and relaxation, which exists in a constant manner. The contraction commences at the union of the *superior two-thirds* of the canal with the *inferior third*; it is continued, with a certain rapidity, to the insertion of the œsophagus into the stomach: when it is once produced, it continues for a time, which is variable; its mean duration is, at least, thirty seconds. Being so contracted in its inferior third, the œsophagus is hard and elastic, like a cord strongly stretched. The relaxation which succeeds the contraction happens all at once, and simultaneously in all the contracted fibres; in certain cases, however, it seems to take place from the superior to the inferior fibres. In the state of relaxation, the œsophagus presents a remarkable flaccidity, which makes a singular contrast with its state of contraction.

This motion of the œsophagus depends on the nerves of the eighth pair. When these nerves of an animal are cut, the œsophagus no longer contracts, but neither is it in the relaxed state that we have described; its

fibres being separated from nervous influence, shorten themselves with a certain force, and the canal is found in an intermediate state between contraction and relaxation. The vacuity, or distension of the stomach, has an influence upon the duration and intensity of the contraction of the œsophagus.

From the inferior extremity of the stomach to the end of the intestine rectum, the intestinal canal presents a mode of contraction which differs, in almost every respect, from the contraction of the sub-diaphragmatic portion of the canal. This contraction always takes place slowly, and in an irregular manner: sometimes an hour passes before any trace of it can be perceived; at other times many intestinal portions contract at once. It appears to be very little influenced by the nervous system: for example; it continues in the stomach after the section of the nerves of the eighth pair; it becomes more active by the weakness of animals, and even by their death; in some, by this cause, it becomes considerably accelerated; it continues though the intestinal canal is entirely separated from the body. The pyloric portion of the stomach, the small intestine, are the points of the intestinal canal where it is presented oftenest, and most constantly. This motion, which arises from the successive or simultaneous contraction of the longitudinal or circular fibres of the intestinal canal, has been differently denominated by authors: some have named it *vermicular*, others *peristaltic*, others again, *sensible organic contractility*, &c. Whatever it is, the will appears to exert no sensible influence upon it.

The muscles of the anus contract voluntarily.

The supra-diaphragmatic portion of the digestive canal is not susceptible of undergoing any considerable dilatation: we may easily see, by its structure, and the mode of contraction of its muscular coat, that it is not intended to allow the aliments to remain in its cavity, but that it is rather formed to carry these substances from the mouth into the stomach; this last organ, and the large intestine, are evidently prepared to undergo a very great distension; substances, also, which are introduced into the alimentary canal, accumulate, and remain for a time, more or less, in their interior.

The diaphragm, and the abdominal muscles, produce a sort of perpetual agitation of the digestive organs contained in the abdominal cavity; they exert, upon them, a continual pressure, which becomes sometimes very considerable.

The digestive actions which by their union constitute digestion, are, —

1. The apprehension of aliments.
2. Mastification.
3. Insalivation.
4. Deglutition.
5. The action of the stomach.
6. The action of the small intestines.
7. The action of the large intestines.
8. The expulsion of the fæcal matter.

All the digestive actions do not equally contribute to the production of chyle: the action of the stomach and that of the small intestines, are alone absolutely necessary.

The digestion of solid food requires generally the eight digestive actions; that of drinks is much more simple; it comprehends only apprehension, deglutition, the action of the stomach, and that of the small intestine.

The mastication and deglutition of the food being effected, we have now to notice the action of the stomach on the aliment: chemical alterations will now present themselves to our examination. In the stomach, the food is transformed into a matter proper to animals, which is named *chyme*.

Before showing the changes that the food undergoes in the stomach, it is necessary to know the phænomena of their accumulation in this viscus, as well as the local and general effects that result from it.

The first mouthfuls of food swallowed are easily lodged in the stomach. This organ is not much compressed by the surrounding viscera; its sides separate easily, and give way to the force which presses the alimentary bole; but its distension becomes more difficult in proportion as new food arrives, for this is accompanied by the pressing together of the abdominal viscera, and the extension of the sides of the abdomen. This accumulation takes place particularly towards the right extremity and the middle part: the pyloric half gives way with more difficulty.

Whilst the stomach is distended, its form, its relations, and even its positions, undergo alterations: in place of being flattened on its aspects, of occupying only the episgastrium and a part of the left *hypochondrium*, it assumes a round form; its great *cul de sac* is thrust into this *hypochondrium*, and fills it almost completely; the greater *curvature* descends towards the umbilicus, particularly on the left side; the pylorus alone, fixed by a fold of the *peritonæum*, preserves its motion and its relations with the surrounding parts. On account of the resistance that the vertebral column presents behind, the posterior surface of the stomach cannot distend itself on that side: for that reason this viscus is wholly carried forward; and as the pylorus and the œsophagus cannot be displaced in this direction, it makes a motion of rotation, by which its great curve is directed a little forward; its posterior aspect inclines downwards, and its superior upwards.

Though it undergoes these changes of position and relation, it nevertheless preserves the recurved conoid form which is proper to it. This effect depends on the manner in which the three tunics contribute to its dilatation. The two plates of the serous membrane separate and give place to the stomach. The muscular layer suffers a real distension; its fibres are prolonged, but so as to preserve the particular form of the stomach. Lastly, the mucous membrane gives way, particularly

in the points where the folds are multiplied. It will be noticed that these are found particularly along the larger curve, as well as at the splenic extremity.

The dilatation of the stomach alone produces very important changes in the abdomen. The total volume of this cavity augments; the belly juts out; the abdominal viscera are compressed with greater force; often the necessity of passing urine, or fæces, is felt. The diaphragm is pressed towards the breast, it descends with some difficulty; thence the motions of respiration, and the phænomena which depend on it, are more incommoded, such as speech, singing, &c.

In certain cases, the dilatation of the stomach may be carried so far that the sides of the abdomen are painfully distended, and respiration becomes difficult.

To produce such effects, the contraction of the œsophagus, which presses the food in the stomach, must be very energetic. We have remarked above the considerable thickness of the muscular layer of this canal, and the great number of nerves which go to it: nothing less than this disposition is necessary to account for the force with which the food distends the stomach. For more certainty, the finger has only to be introduced into the œsophagus of an animal by the cardiac orifice, and the force of the contraction will be found striking.

But if the food exerts so marked an influence upon the sides of the stomach and the abdomen, they ought themselves to suffer a proportionate re-action, and tend to escape by the two openings of the stomach. Why does this effect not take place? It is generally said that the cardia and pylorus shut; but this phænomenon has not been submitted to any particular researches.

The alternate motion of the œsophagus prevents the return of the food into this cavity. The more the stomach is distended, contraction becomes the more intense and prolonged, and the relaxation of shorter duration. Its contraction generally coincides with the instant of inspiration, when the stomach is most forcibly compressed. Its relaxation ordinarily happens at the instant of expiration.

We may have an idea of this mechanism by laying bare the stomach of a dog, and endeavouring to make the food pass into the œsophagus by compressing the stomach with both hands. It will be nearly impossible to succeed, whatever force is used, if it is done at the instant when the œsophagus is contracted: but the passage will take place, in a certain degree, of itself, if the stomach is compressed at the instant of relaxation.

The resistance that the pylorus presents to the passage of the aliments is of another kind. In living animals, whether the stomach is empty or full, this opening is habitually shut, by the constriction of its fibrous ring, and the contraction of its circular fibres. There is frequently seen another constriction in the stomach, at the distance of one or two inches, which appears intended to prevent the food from reaching the pylorus; we perceive, also, irregular and peristaltic contractions, which commence at the duodenum, and are continued into the pyloric portion of the stomach, the effect of which is to press the food towards the splenic part. Besides, should the pylorus not be naturally shut, the food would have little tendency to enter it, for it only endeavours to escape into a place where the pressure is less; and this would be equally great in the small intestine as in the stomach, since it is nearly equally distributed over all the abdominal cavity.

Amongst the number of phænomena produced by the food in the stomach, there are several, the existence of which, though generally admitted, do not appear sufficiently demonstrated: such is the diminution of the volume of the spleen, and that of the blood-vessels of the liver, or the *omenta*, &c.; such is also a motion of the stomach, which should preside over the reception of the food, distribute it equally by exerting upon it a gentle pressure, so that its dilatation, far from being a passive phænomenon, must be essentially active. Dr. Magendie has frequently opened animals, the stomachs of which were filled with food; he has examined the bodies of executed persons, a short time after death, and has seen nothing favourable to these assertions.

The accumulation of food in the stomach is accompanied by many sensations, of which it is necessary to take account:—at first it is an agreeable feeling, or the pleasure of a want satisfied. Hunger is appeased by degrees; the general weakness that accompanied it is replaced by an active state, and a feeling of new force. If the introduction of food is continued, we experience a sensation of fulness and satiety, which indicates that the stomach is sufficiently replenished; and if, contrary to this instinctive information, we still persist to make use of food, disgust and nausea soon arrive, and they are very soon followed by vomiting. These different impressions must not be attributed to the volume of the aliments alone. Every thing being equal in other respects, food very nutritive occasions, more promptly, the feeling of satiety. A substance which is not very nourishing does not easily calm hunger, though it is taken in great quantity.

The mucous membrane of the stomach, then, is endowed with considerable sensibility, since it distinguishes the nature of substances which come in contact with it. This property is very strongly marked if an irritating poisonous substance is swallowed: intolerable pain is then felt. We also know that the stomach is sensible to the temperature of food.

We cannot doubt that the presence of the aliments of the stomach causes a great excitement, from the redness of the mucous membrane, from the quantity of fluid it secretes, and the volume of vessels directed there; but

this is favourable to chymification. This excitement of the stomach influences the general state of the functions.

The time that the aliments remain in the stomach is considerable, generally several hours: it is during this stay that they are transformed into chyme.

Changes of the aliments in the stomach.—It is more than an hour before the food suffers any apparent change in the stomach, more than what results from the perspiratory and mucous fluids with which they are mixed, and which are continually renewed.

The stomach is uniformly distended during this time; but the whole extent of the pyloric portion afterwards contracts, particularly that nearest the splenic portion, into which the food is pressed. Afterwards, there is nothing found in the pyloric portion but chyme, mixed with a small quantity of unchanged food.

The best authors have agreed to consider the chyme as a homogeneous substance, pultaceous, greyish, of a sweetish taste, insipid, slightly acid, and preserving some of the properties of the food. This description leaves much to be explained.

The result of Dr. Magendie's experiments are as follows:—

A. There are as many sorts of chyme as there are different sorts of food, if we judge by the colour, consistence, appearance, &c.; as we may easily ascertain, by giving different simple alimentary substances to dogs to eat, and killing them during the operation of digestion. He frequently found the same result in man, in the dead bodies of criminals, or persons dead by accident.

B. Animal substances are generally more easily and completely changed than vegetable substances. It frequently happens that these last traverse the whole intestinal canal without changing their apparent properties. He has frequently seen in the rectum, and in the small intestine, the vegetables which are used in soup, spinach, sorrel, &c., which had preserved the most part of their properties: their colour alone appeared sensibly changed by the contact of the bile.

Chyme is formed particularly in the pyloric portion. The food appears to be introduced slowly into it, and during the time they remain they undergo transformation. The Doctor believes, however, that he has observed frequently chymous matter at the surface of the mass of aliments which fill the splenic portion; but the aliments in general preserve their properties in this part of the stomach.

It would be difficult to tell why the pyloric portion is better adapted to the formation of chyme than the rest of the stomach; perhaps the great number of follicles that are seen in it modify the quantity or the nature of the fluid that is there secreted. The transformation of alimentary substances into chyme takes place generally from the superficies to the centre. On the surface of portions of food swallowed, there is formed a soft layer easy to be detached. The substances seem to be attacked and corroded by a re-agent capable of dissolving them. The white of a hard egg, for instance, becomes in a little time as if plunged in vinegar, or in a solution of potash.

C. Whatever is the alimentary substance employed, the chyme has always a sharp odour and taste, and reddens paper coloured with turnsole.

D. There is only a small quantity of gas found in the stomach during the formation of chyme; sometimes there exists none. Generally it forms a small bubble at the superior part of the splenic portion. Once only in the body of a criminal a short time after death, he gathered with proper precautions a quantity sufficient to be analysed. Chevreuil found it composed of, oxygene, 11·00; carbonic acid, 14·00; pure hydrogene, 3·15; azote, 71·45:—total, 100·00. There is rarely any gas found in the stomach of a dog. We cannot then believe, with Professor Chaussier, that we swallow a bubble of air at every motion of deglutition, which is pressed into the stomach by the alimentary bole. Were it so, there ought to be found a considerable quantity of air in this organ after a meal: now the contrary is to be seen.

E. There is never a great quantity of chyme accumulated in the pyloric portion: the most that the Doctor ever saw in it was scarcely equal in volume to two or three ounces of water. The contraction of the stomach appears to have an influence upon the production of chyme. The following is what he observed in this respect:—After having been some time immoveable, the extremity of the duodenum contracts, the pylorus and the pyloric portion contract also; this motion presses the chyme towards the splenic portion; but it afterwards presses it in a contrary direction, that is, after being distended, and having permitted the chyme to enter again into its cavity, the pyloric portion contracts from left to right, and directs the chyme towards the duodenum, which immediately passes the pylorus and enters the intestine.

The same phænomenon is repeated a certain number of times, but it stops to begin again, after a certain time. When the stomach contains much food, this motion is limited to the parts of the organ nearest the pylorus; but in proportion as it becomes empty, the motion extends farther, and is seen even in the splenic portion when the stomach is almost entirely empty. It becomes generally more strong about the end of chymification. Some persons have a distinct feeling of it at this moment.

The pylorus has been made to play a very important part in the passage of the chyme from the stomach to the intestine. It judges, they say, of the chymification of the food; it opens to those that have the required qualities, and shuts against those that have not. However, as we daily observe substances not digestible traverse it easily, such as stones of

cherries, it is added, that becoming accustomed to a substance not chymified, which presents itself repeatedly, it at last opens a passage. These considerations, consecrated in a certain degree by the word *pylorus, a porter*, may please the fancy, but they are purely hypothetical.

F. All the alimentary substances are not transformed into chyme with the same promptitude.

Generally the fat substances, the tendons, the cartilages, the concrete albumen, the mucilaginous and sweet vegetables, resist more the action of the stomach than the caseous, fibrinous, and glutinous substances. Even some substances appear refractory; such as the bones, the epidermis of fruits, their stones, and whole seeds, &c.

In determining the digestibility of food, the volume of the portions swallowed ought to be taken into account. The largest pieces, of whatever nature, remain longest in the stomach; on the contrary, a substance which is not digestible, if it is very small, such as grape-stones, does not rest in the stomach, but passes quickly with the chyme into the intestine.

In respect of the facility and quickness of the formation of chyme, it is different in every different individual. It is evident, after what has been said, that to fix the necessary time for the chymification of all the food contained in the stomach, we ought to take into account their quantity, their chemical nature, the manner in which the mastication acts upon them, and the individual disposition. However, in four or five hours after an ordinary meal, the transformation of the whole of the food into chyme is generally effected.

The nature of the chemical changes that the food undergoes in the stomach is unknown. It is not because there have been no attempts at different periods to give explanations of them more or less plausible. The ancient philosophers said that the food became putrified in the stomach; Hippocrates attributed the digestive process to coction; Galen assigned the stomach attractive, retentive, concoctive, expulsive faculties, and by their help he attempted to explain digestion. The doctrine of Galen reigned in the schools until the middle of the seventeenth century, when it was attacked and overturned, by the *fermenting chemists*, who established in the stomach an *effervescence*, a particular fermentation, by means of which the food was *macerated, dissolved, precipitated*, &c. This system was not long in repute, and digestion was next supposed to be only a trituration, a bruising performed by the stomach; an innumerable quantity of little worms was supposed to attack and divide the food. Boerhaave thought he had found the truth by combining the different opinions that had reigned before him. Haller did not follow the ideas of his master: he considered digestion a simple *maceration*. He knew that vegetable and animal matters plunged into water are soon covered with a soft homogeneous layer; he believed that the food underwent a like change, by macerating in the saliva and fluids secreted by the stomach.

Réaumur and Spallanzani made experiments on animals, and demonstrated the falsity of the ancient systems: they showed that food, contained in hollow metallic balls pierced with small holes, was digested the same as if it was free in the cavity of the stomach. They proved that the stomach contains a particular fluid which they call *gastric juice*, and that this fluid was the principal agent of digestion; but they much exaggerated its properties, and they were mistaken when they thought to have explained digestion in considering it as a *solution*: because, in not explaining this solution, they did not explain the changes of food in the stomach.

In the formation of chyme, it is necessary to consider, 1st, The circumstances in which the food is found in the stomach. 2dly, The chemical nature of it.

The circumstances affecting the food in the stomach, during its stay there, are not numerous: 1st, it suffers a pressure more or less strong either from the sides of the abdomen, or from those of the stomach; 2dly, the whole is entirely moved by the motions of respiration; 3dly, it is exposed to a temperature of thirty to thirty-two degrees of Réaumur; 4thly, it is exposed to the action of the saliva, of the mucosities proceeding from the mouth and the œsophagus, as well as the fluid secreted by the mucous membrane of the stomach.

It will be remembered that this fluid is slightly viscous, that it contains much water, mucus, salts, with a base of soda and ammonia, and lactic acid of Berzelius.

With regard to the nature of the food, we have already seen how variable it is, since all the immediate principles, animal or vegetable, may be carried into the stomach in different forms and proportions, and serve usefully in the formation of chyme. Now, making allowance for the nature of the food, and the circumstances in which it is placed in the stomach, shall we be able to account for the known phænomena of the formation of chyme? The temperature of thirty to thirty-two degrees, R. = 100 to 104 F.; the pressure, and the tossing that the food sustains, cannot be considered as the principal cause of its transformation into chyme: it is probable that they only co-operate in this; the action of the saliva and that of the fluid secreted in the stomach remain; but after the known composition of the saliva, it is hardly possible that it can attack and change the nature of the food; at most, it can only serve to divide, to imbibe it in such a manner as to separate its particles: it must then be the action of the fluid formed by the internal membrane of the stomach. It appears certain that this fluid, in acting chemically upon the alimentary sub-

stances, dissolves them from the surface towards the centre. To produce a proof of it, with this fluid of which we speak, there have been attempts made to produce what is called in physiology *artificial digestions*, that is, after having macerated food, it is mixed with gastric juice, and then exposed in a tube or any other vase to a temperature equal to that of the stomach. Spallanzani advanced that these digestions succeeded, and that the food was reduced to chyme; but, according to the researches of de Montègre, it appears that they are not; and that, on the contrary, the substances employed undergo no alteration analogous to chymification: this is agreeable to experiments made by Réaumur. But because the gastric juice does not dissolve the food when put with it into a tube, we ought not to conclude that the same fluid cannot dissolve the food when it is introduced into the stomach; the circumstances are indeed far from being the same: in the stomach, the temperature is constant, the food is pressed and agitated, and the saliva and gastric juice are constantly renewed; as soon as the chyme is formed, it is carried away and pressed in the duodenum. Nothing of this takes place in the tube or vase which contains the food mixed with gastric juice; therefore, the want of success in artificial digestions, proves nothing which tends to explain the formation of chyme.

But how does it happen that the same fluid can act in a manner similar upon the great variety of alimentary substances, animal and vegetable? The acidity which characterises it, though fit to dissolve certain matters, as albumen, for example, would not be suitable for dissolving fat.

To this it may be answered, that nothing proves the gastric juice to continue always the same; the small number of analyses that have been made of it demonstrate, on the contrary, that it presents considerable varieties in its properties. The contact of different sorts of food upon the mucous membrane of the stomach may possibly influence its composition; it is at least certain, that this varies in the different animals. For example, that of man is incapable of acting on bones: and it is well known that the dog digests these substances perfectly.

Generally speaking, the action by which the chyme is formed prevents the re-action of the constituent elements of the food upon each other: but this effort takes place only in good digestions; in bad digestion, fermentation, and even putrefaction, may take place: this may be suspected by the great quantity of inodorous gases that are developed in certain cases, and the sulphuretted hydrogene which is disengaged in others.

The nerves of the eighth pair have long been considered to direct the act of chymification: in fact, if these nerves are cut, or tied in the neck, the matters introduced into the stomach undergo no alteration. But the consequence, says Dr. Magendie (from whose physiology this article is taken), that is deduced from this fact does not appear to me to be rigorous. Is not the effect produced upon the stomach by the injury done to respiration, confounded here with the direct influence of the section of the nerves of the eighth pair upon this organ? I am inclined to believe it; for, as I have many times done, if the two eighth pairs be cut in the breast *below* the branches which go to the lungs, the food which is introduced afterwards into the stomach is transformed into chyme, and ultimately furnishes an abundant chyle.

Some persons imagine that electricity may have an influence in the production of chyme, and that the nerves we mention may be the conductors: there is no established fact to justify this conjecture. The most probable use of the nerves of the eighth pair is, to establish intimate relations between the stomach and the brain, to give notice whether any noxious substances have entered along with the food, and whether they are capable of being digested.

In a strong person, the operation of the formation of chyme takes place without his knowledge: it is merely perceived that the sensation of fulness, and the difficulty of respiration, produced by the distension of the stomach, disappear by degrees: but frequently, with people of a delicate temperament, digestion is accompanied with feebleness in the action of the senses, with a general coldness, and slight shiverings; the activity of the mind diminishes, and seems to become drowsy, and there is a disposition to sleep. The vital powers are then said to be concentrated in the organ that acts, and to abandon for an instant the others. To those general effects are joined the production of the gas that escapes by the mouth, a feeling of weight, of heat, of giddiness, and sometimes of burning, followed by an analogous sensation along the œsophagus, &c. These effects are felt particularly towards the end of the chymification. It does not appear, however, that these laborious digestions are much less beneficial than the others.

From the stomach the food is received into the *small intestine*, which is the longest portion of the digestive canal; it establishes a communication between the stomach and the large intestine. Not being susceptible of much distension, it is twisted a great many times upon itself, being much longer than the place in which it is contained. It is fixed to the vertebral column by a fold of the peritonæum, which limits, yet aids its motions; its longitudinal and circular fibres are not separated as in the stomach; its mucous membrane, which presents many villi, and a great number of mucous follicles, forms irregular circular folds, the number of which are greater in proportion as the intestine is examined nearer the pyloric orifice: these folds are called *valvulæ conniventes*.

The small intestine receives many blood-

vessels: its nerves come from the *ganglions* of the *great sympathetic*. At its internal surface the numerous orifices of the chyliferous vessels open.

This intestine is divided into three parts: called the *duodenum*, *jejunum*, and *ileum*. The mucous membrane of the small intestine, like that of the stomach, secretes abundance of mucus; viscous, thready, of a salt taste, and reddens strongly turnsole paper; all which properties are also in the liquid secreted by the stomach. Haller gave this fluid the name of *intestinal juice*: the quantity that is formed in twenty-four hours he estimated at eight pounds.

Not far from the gastric extremity of this intestine is the common orifice of the biliary and pancreatic canals, by which the fluid secreted by the liver and the pancreas flow into the intestinal cavity. If the formation of the chyme is still a mystery, the nature of the phænomena that take place in the small intestine is little better known.

In the experiments which have been made on dogs and rabbits, the chyme is seen to pass from the stomach into the duodenum. The phænomena are these. At intervals, more or less distant, a contractile motion commences towards the middle of the duodenum; it is propagated rapidly to the site of the pylorus: this ring contracts itself, as also the pyloric part of the stomach; by this motion, the matters contained in the duodenum are pressed back towards the pylorus, where they are stopped by the valve, and those that are found in the *pyloric* part, are partly pressed towards the *splenic* part; but this motion, directed from the intestine towards the stomach, is very soon replaced by another in a contrary direction, that is, which propagates itself from the stomach towards the duodenum, the result of which is to make a considerable quantity of chyme pass the pylorus.

This fact seems to indicate that the valve of the pylorus serves as much to prevent the matters contained in the small intestine from flowing back into the stomach, as to retain the chyme and the food in the cavity of this organ.

The motion that has been described, is generally repeated many times following, and modified as to the rapidity, the intensity of the contraction, &c.; it then ceases to begin again after some time. It is not very marked in the first moments of the formation of the chyme; the extremity only of the pyloric part participates in it. It augments in proportion as the stomach becomes empty; and, towards the end of chymification, it often takes place over the whole stomach. It is not suspended by the section of the nerves of the eighth pair.

Thus the entrance of chyme into the small intestine is not perpetual. According as it is repeated, the chyme accumulates in the first portion of the intestine, it distends its sides a little, and presses into the intervals of the valves; its presence very soon excites the organ to contract, and by this means one part advances into the intestine: the other remains attached to the surface of its membrane, and afterwards takes the same direction. The same phænomenon continues down to the large intestine, but, as the duodenum receives new portions of the chyme, it happens at last that the small intestine is filled in its whole length with this matter. It is observed only to be much less abundant near the *cæcum* than at the pyloric extremity.

The motion that determines the progress of the chyme through the small intestine, has a great analogy with that of the pylorus: it is irregular, returns at periods which are variable, is sometimes in one direction, sometimes in another, takes place sometimes in many parts at once; it is always slow, more or less; it causes relative changes amongst the intestinal circumvolutions. It is beyond the influence of the will.

We should form a false idea of it were we merely to examine the intestine of an animal recently dead: it has then a much greater activity than during life. Nevertheless, in weak digestions it appears to acquire more than ordinary energy and velocity.

In whatever manner this motion takes place, the chyme appears to move very slowly in the small intestine: the numerous valves that it contains, the multitude of asperities that cover the mucous membrane, the many bendings of the canal, are so many circumstances that ought to contribute to retard its progress, but which ought to favour its mixture with the fluids contained in the intestine, and the production of the chyle which results from it.

Changes that the chyme undergoes in the small intestine.—It is only about the height of the orifice of the choledochus and pancreatic canal that the chyme begins to change its properties. Before this, it preserves its colour, its semi-fluid consistence, its sharp odour, its slightly acid savour; but, in mixing with the bile and the pancreatic juice, it assumes new qualities: its colour becomes yellowish, its taste bitter, and its sharp odour diminishes much. If it proceeds from animal or vegetable matters, which contained grease or oil, irregular filaments are seen to form here and there upon its surface; they are sometimes flat, at other times rounded, attach themselves quickly to the surface of the valve, and appear to consist of crude chyle. This matter is not seen when the chyme proceeds from matter that contained no fat; it is a greyish layer, more or less thick, which adheres to the mucous membrane, and appears to contain the elements of chyle. The same phænomena are observed in the *two superior thirds* of the small intestine: but in the *inferior third*, the chymous matter is more consistent; its yellow colour becomes more deep; it ends sometimes by becoming of a greenish brown, which pierces through the intestinal parietes, and gives an appearance to the *ileum*, distinct from that of the *duodenum* and *jejunum*. When it is examined near the *cæcum*, there

are few or no whitish chylous striæ seen; it seems, in this place, to be only the remainder of the matter which has served in the formation of the chyle.

After what has been said above, upon the varieties that the chyme presents, we may understand that the changes it undergoes in the small intestine are variable according to its properties; in fact, the phænomena of digestion in the small intestine vary according to the nature of the food. The chyme, however, preserves its acid property; and if it contains small quantities of food or other bodies, that have resisted the action of the stomach, they traverse the small intestine without undergoing any alteration. The same phænomena appear when the same substances have been used. Dr. Magendie has ascertained this fact upon the bodies of two criminals who, two hours before death, had taken an ordinary meal, in which they had eaten the same food nearly in equal quantity: the matters contained in the stomach, the chyme in the pyloric portion and in the small intestine, appeared to him exactly the same as to consistence, colour, taste, odour, &c.

There is generally gas found in the small intestine during the formation of chyle. Drs. Magendie and Chevreuil have made experiments upon the bodies of criminals opened shortly after death, and who, being young and vigorous, presented the most favourable conditions for such researches. In a subject of twenty-four years, who had eaten, two hours before his death, bread, and some Swiss cheese, and drank water reddened with wine, they found in the small intestine:—oxygene, 0·00; carbonic acid, 24·39; pure hydrogene, 55·53; azote, 20·08: total, 100·00.

In a second subject, aged twenty-three years, who had eaten of the same food at the same hour, and whose punishment took place at the same time:—oxygene, 0·00; carbonic acid, 40 00; pure hydrogene, 51·15; azote, 8·85: total, 100·00.

In a third experiment, made upon a young man of twenty-eight years, who, four hours before death, had eaten bread, beef, lentiles, and drank red wine, they found in the same intestine:—oxygene, 0·00; carbonic acid, 25·00; pure hydrogene, 8·40; azote, 66·60: total, 100·00.

They never observed any other gases in the small intestine. These gases might have different origins. They might possibly come from the stomach with the chyme; or they were, perhaps, secreted by the intestinal mucous membrane; they might arise from the reciprocal action of the matters contained in the intestine; or perhaps they might come from all these sources at once.

However, the stomach contains oxygene, and very little hydrogene, whilst they have almost always found much hydrogene in the small intestine, and never any oxygene. Besides, it is a daily observation, that the little gas that the stomach contains is generally passed by the mouth towards the end of chymification, probably because, at this instant, it can more easily advance into the œsophagus.

The probability of the formation of gases by the secretion of the mucous membrane could not be at all admissible, except for carbonic acid, which seems to be formed in this manner in respiration. With regard to the action of matters contained in the intestine, Dr. Magendie says he has many times seen the chymous matter let bubbles of gas escape very rapidly. This took place from the orifice of the ductus choledochus to the commencement of the *ileum*; there was no trace of it perceived in this last intestine, nor in the superior part of the duodenum, nor the stomach. He made this observation again upon the body of a criminal four hours after death: it presented no traces of putrefaction.

The alteration which chyme undergoes in the small intestine is unknown; it is easily seen to be the result of the action of the bile, of the pancreatic juice, and of the fluid secreted by the mucous membrane, upon the chyme. But what is the play of the affinities in this real chemical operation, and why is the chyle precipitated against the surface of the *valvulæ conniventes*, whilst the rest remains in the intestine to be afterwards expelled? This is completely unknown.

We have learned something more of the time that is necessary for this alteration of the chyme. The phænomenon does not take place quickly: in animals, it often happens that we do not find any chyle formed three or four hours after the meal.

After what has been said, we see that in the small intestine, the chyme is divided into two parts: the one which attaches itself to the sides, and which is the chyle still impure; the other the true refuse, which is destined to be thrown into the large intestine, and afterwards entirely carried out of the body.

The manner in which drinks accumulate in the stomach differs little from that of the aliments: it is generally quicker, more equal, and more easy; probably because the liquids spread, and distend the stomach more uniformly. In the same manner as the food, they occupy more particularly its left and middle portion: the pyloric, or right extremity, contains always much less.

The distension of the stomach must not, however, be carried to a great degree, for the liquid would be expelled by vomiting. This frequently happens to persons that swallow a great quantity of drink quickly. When we wish to excite vomiting in persons who have taken an emetic, one of the best means is to make them drink a number of glasses of liquid quickly.

The presence of drinks in the stomach produces local phænomena like those which take place from the *accumulation of the aliments*; the same changes in the form and position of the organ, the same distension of the abdomen, the same contraction of the pylorus and the œsophagus, &c.

The general phænomena are different from

those produced by the aliments: this depends on the action of the liquids upon the sides of the stomach, and the quickness with which they are carried into the blood.

Potations, in passing rapidly through the mouth and the œsophagus, preserve more than the food their proper temperature until they arrive in the stomach. We therefore prefer them to those when we wish to experience in this organ a feeling of heat, or of cold: hence arises the preference that we give to hot drinks in winter, and cold drinks in summer.

Every one knows that the drinks remain much shorter time in the stomach than the aliments; but the manner of their passage out of this viscus is still very little known. It is generally supposed that they traverse the pylorus, and pass into the small intestine, where they are absorbed with the chyle; nevertheless, a ligature applied round the pylorus in such a manner as to hinder it from penetrating into the duodenum, does not much retard its disppearance from the cavity of the stomach.

Alteration of drinks in the stomach.—Fluids, in respect of the alterations that they prove in the stomach, may be divided into two classes: the one sort do not form any chyme, and the other are chymified wholly or in part.

To the first class belong pure water, alkohol, sufficiently weak to be considered as a drink, the vegetable acids, &c. During its stay in the stomach, water assumes an equilibrium of temperature with the sides of this viscus: it mixes at the same time with mucus, the gastric juice, and the saliva which are found in it; it becomes muddy, and afterwards disappears slowly without suffering any other transformation. One part passes into the small intestine; the other appears to be directly absorbed. There remains, after its disappearance, a certain quantity of mucus, which is very soon reduced to chyme, like the aliments. By observation we know that water deprived of atmospheric air, as distilled water, or water charged with a great quantity of salts, as well water, remain long in the stomach, and produce a feeling of weight.

Alkohol acts quite in a different manner. We know the impression of burning heat that it causes at first in its passage through the mouth, the pharynx, the œsophagus; and that which it excites when it enters the stomach: the effects of this action determine the contraction of this organ, irritate the mucous membrane, and augment the secretion of which it is the seat; it coagulates at the same time all the albuminous parts with which it is in contact; and as the different liquids in the stomach contain a considerable proportion of this matter, it happens that a short time after alkohol has been swallowed, there is in this viscus a certain quantity of concrete albumen. The mucus undergoes a modification analogous to that of the albumen; it becomes hard, forms irregular elastic filaments, which preserve a certain transparency.

In producing these phænomena, the alkohol mixes with the water that the saliva and the gastric juice contain; probably it dissolves a part of the elements that enter into their composition, so that it ought to be much weakened by its stay in the stomach. It disappears very quickly; its general effects are also very rapid, and drunkenness or death follow almost immediately the introduction of too great a quantity of alkohol into the stomach.

The matters coagulated by the action of the alkohol are, after its disappearance, digested like solid aliments.

Amongst the drinks that are reduced to chyme, some are reduced in part, and some wholly.

Oil is in this last case: it is transformed, in the pyloric part, into a matter analogous in appearance with that which is drawn from the purification of oils by sulphuric acid; this matter is evidently the chyme of oil. On account of this transformation, oil is, perhaps, the liquid that remains longest in the stomach.

Every one knows that milk curdles soon after it is swallowed: this curd then becomes a solid aliment, which is digested in the ordinary manner. Whey only can be considered as drink.

The greatest number of drinks that we use are formed of water, or of alkohol, in which are in suspension or dissolution immediate animal or vegetable principles, such as gelatine, albumen, ozmazome, sugar, gum, fecula, colouring or astringent matters, &c. These drinks contain salts of lime, of soda, of potash, &c.

The result of several experiments that have been made upon animals, and some observations that have been made on man, is, that there is a separation of the water and the alkohol in the stomach from the matters that these liquids hold in suspension or solution. These matters remain in the stomach, where they are transformed into chyme, like the aliments; whilst the liquids with which they were united are absorbed, or pass into the small intestine; lastly, they are conducted, as we have just now seen, in treating of water and alkohol.

Salts that are in solution in water do not abandon this liquid, and are absorbed with it. Red wine, for example, becomes muddy at first by its mixture with juices that are formed in, or carried into the stomach; it very soon coagulates the albumen of these fluids, and becomes flaky; afterwards, its colouring matter, carried, perhaps, by the mucus and the albumen, is deposited upon the mucous membrane: there is a certain quantity of it seen, at least, in the pyloric portion; the watery and alkoholic parts disappear with rapidity.

The broth of meat undergoes the same changes. The water that it contains is absorbed; the gelatine, the albumen, the fat, and, probably, the osmazome, remain in the stomach, where they are reduced into chyme.

Action of the small intestine upon drinks.—After what has been said, it is clear that fluids penetrate, under two forms, into the

small intestine: 1st, under that of liquid; 2dly, under that of chyme.

The liquids that pass from the stomach into the intestine remain but a short time, except under particular circumstances: they do not appear to undergo any other alteration than their mixture with the intestinal juice, the chyme, the pancreatic liquid, and the bile; they do not form any sort of chyle; they are generally absorbed in the duodenum, and the commencement of the jejunum; they are rarely seen in the ileum, and still more rarely in the large intestine. It appears that this last case does not happen, except in the state of sickness; for example, during the action of a purgative.

The chyme that proceeds from drinks follows the same rule, and appears to undergo the same changes as that of the food; it therefore produces chyle.

Such are the principal phænomena of the digestion of drinks: we see how necessary it was to distinguish them from those that belong to the digestion of the aliments.

But we do not always digest the aliments and the drinks separately, as we have supposed; very frequently the two digestions take place at the same time.

Drink favours the digestion of the aliments: this effect is probably produced in various manners. Those that are watery, soften, divide, dissolve even certain foods; they aid in this manner their chymification and their passage through the pylorus.

Wine fulfils analogous uses, but only for the substances that it is capable of dissolving; besides, it excites by its contact the mucous membrane of the stomach, and causes a greater secretion of the gastric juice. Alkohol acts much in the same manner as wine, only it is more intense. It is thus that those liquors which are used after meals, are useful in exciting the action of the stomach. — *Magendie.*

DIGESTIVE. (*Digestivus*; from *digero*, to dissolve.) A term applied by surgeons to those substances which, when applied to an ulcer or wound, promote suppuration: such are the *ceratum resinæ*, *unguentum elemi*, warm poultices, fomentations, &c.

Digestive salt of Sylvius. A muriate of potash.

Digesti'vum sal. See *Potassæ murias.*

DIGITA'LIS. (*is, is.* f.; from *digitus*, a finger; because its flower represents a finger.)

1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Angiospermia.* Fox-glove.

2. The pharmacopœial name of the common fox-glove. See *Digitalis purpurea.*

Digitalis purpurea. The systematic name of the fox-glove. *Digitalis — calycinis foliolis ovatis acutis, corollis obtusis, labio superiore integro*, of Linnæus. The leaves of this plant have a bitter nauseous taste, but no remarkable smell; they have been long used externally to ulcers and scrophulous tumours with considerable advantage. When properly dried, their colour is a lively green. They ought to be collected when the plant begins to blossom, to be dried quickly before the fire, and preserved unpowdered.

Of all the narcotics, digitalis is that which diminishes most powerfully the actions of the system; and it does so without occasioning any previous excitement. Even in the most moderate dose, it diminishes the force and frequency of the pulse, and, in a large dose, reduces it to a great extent, as from 70 beats to 40 or 35 in a minute, occasioning, at the same time, vertigo, indistinct vision, violent and durable sickness, with vomiting. In a still larger quantity, it induces convulsions, coldness of the body, and insensibility; symptoms which have sometimes terminated fatally. As a narcotic, fox-glove has been recommended in epilepsy, insanity, and in some acute inflammatory diseases. Lately, it has been very extensively employed in phthisis, and the beneficial effects which it produces in that disease are probably owing to its narcotic power, by which it reduces the force of the circulation through the lungs and general system. It is administered so as to produce this effect. One grain of the powdered leaves, or ten drops of the saturated tincture, may be given night and morning. This dose is increased one half every second day, till its action on the system becomes apparent. As soon as the pulse begins to be diminished, the increase of dose must be made with more caution; and, whenever nausea takes place, it ought rather to be reduced, or, if necessary, intermitted for a short time. If the sickness become urgent, it is best relieved by stimulants, particularly large doses of brandy, with aromatics. The tincture has been supposed to be the best form of administering digitalis, when the remedy is designed to act as a narcotic: it is also more manageable in its dose, and more uniform in its strength, than the dried leaves.

Besides its narcotic effects, digitalis acts as one of the most certain diuretics in dropsy, apparently from its power of promoting absorption. It has frequently succeeded where the other diuretics have failed. Dr. Withering has an undoubted claim to this discovery; and the numerous cases of dropsy related by him, and other practitioners of established reputation, afford incontestable evidence of its diuretic powers, and of its practical importance in the cure of those disorders. From Dr. Withering's extensive experience of the use of the digitalis in dropsies, he has been able to judge of its success by the following circumstances: — "It seldom succeeds in men of great natural strength, of tense fibre, of warm skin, of florid complexion, or in those with a tight and cordy pulse. If the belly, in ascites, be tense, hard, and circumscribed, or the limbs, in anarsarca, solid and resisting, we have but little hope. On the contrary, if the pulse be feeble or intermitting, the countenance pale, the lips livid, the skin cold, the swollen belly soft and fluctu-

ating, the anasarcous limbs readily pitting under the pressure of the finger, we may expect the diuretic effects to follow in a kindly manner." Of the inferences which he deduces, the fourth is, "that if it (digitalis) fails, there is but little chance of any other medicine succeeding." Although the digitalis is now generally admitted to be a very powerful diuretic, yet it is but justice to acknowledge that this medicine has more frequently failed than could have been reasonably expected from a comparison of the facts stated by Dr. Withering. The dose of the dried leaves in powder is from one to three grains twice a day. But if a liquid medicine be preferred, a drachm of the dried leaves is to be infused for four hours, in half a pint of boiling water, adding to the strained liquor an ounce of any spirituous water. One ounce of this infusion, given twice a day, is a medium dose. It is to be continued in these doses till it either acts upon the kidneys, the stomach, the pulse, (which, as has been said, it has a remarkable power of lowering,) or the bowels.

The administration of this remedy requires to be conducted with much caution. Its effects do not immediately appear; and when the doses are too frequent, or too quickly augmented, its action is concentrated so as to produce frequently the most violent symptoms. The general rules are, to begin with a small dose, to increase it gradually, till the action is apparent on the kidneys, stomach, intestines, or vascular system; and immediately suspending its exhibition, when its effects on any of these parts take place.

The symptoms arising from too large a dose of digitalis are, extreme sickness, vertigo, indistinct vision, incessant vomiting, and a great reduction of the force of the circulation, terminating sometimes in syncope, or convulsions. They are relieved by frequent and small doses of opium, brandy, aromatics, and strong bitters, and by a blister applied to the region of the stomach.

DIGITATUS. Digitate: fingered. Applied generally to whatever resembles a finger; to a leaf, *folium digitatum*, when several leaflets proceed from the summit of a common footstalk, as in *Potentilla verna*, and *reptans*; to the receptacle of the *Arum maculatum*, and *Calla æthiopica*.

DIGITIFORMIS. Finger-like. Applied also very generally, and synonymously with *digitatus*.

DIGI'TIUM. (From *digitus*, a finger.) 1. A contraction of the finger-joint.

2. A whitlow, or sore upon the finger.

DI'GITUS. (*us, i.* m.; from *digero*, to direct.) A finger. *Digitus manus*, is the finger, properly so called; and *digitus pedis*, the toe.

DIGITUS MANUS. A finger. The *fingers* and thumb in each hand consist of fourteen bones, there being three to each *finger*, and two to the thumb; they are a little convex and round towards the back of the hand, but hollow and plain towards the palm, except the last, where the nails are. The order of their disposition is called first, second, and third *phalanx*. The first is longer than the second, and the second longer than the third. What has been said of the fingers, applies to the toes also.

DIGITUS PEDIS. A toe. The toes are formed of the same number of bones as the fingers, and, like them, are arranged into phalanges.

DIGLO'SSUM. (*um, i.* n.; from δις, double, and γλωσσα, a tongue: so called, because above its leaf there grows a lesser leaf, like two tongues.) 1. The *Laurus alexandrina*.

2. Double or two-tongued. Galen makes mention of a man born with two tongues.

DIGNO'TIO. (From *dignosco*, to distinguish.) See *Diagnosis*.

DIGY'NIA. (*a, æ.* f.; from δις, twice, and γυνη, a woman.) The name of an order of several classes of the sexual system of plants, embracing those plants which to the character of the class, whatever it may be, add the circumstance of having two styles.

DIHÆ'MATON. (From δια, and αιμα, blood.) An antidote in which is the blood of many animals.

DIHA'LON. (From δια, and αλς, salt.) A plaster prepared with salt and nitre, adapted to foul ulcers.

DII'PETES. (From Ζευς, διος, Heaven, and πιπτω, to fall: *i. e.* falling as rain.) An epithet applied by Hippocrates to semen, when it is discharged like a shower of rain.

DILATA'TION. (*Dilatatio, onis.* f.; from *dilato*, to enlarge.) 1. An enlargement.

2. The diastole of the heart.

DILA'TOR. (*or, oris.* m.; from *dilato*, to enlarge.) The name of some muscles, the office of which is to open and enlarge parts.

DILATOR ALÆ NASI. See *Levator labii superioris*.

DILATO'RIUM. (*um, i.* n.; from *dilato*, to enlarge.) A surgical instrument for enlarging any part.

DILL. See *Anethum graveolens*.

DILLS. See *Fucus palmatus*.

DILUENT. (*Diluens*; from *diluo*, to wash away.) Those substances which increase the proportion of fluid in the blood. It is evident that this must be done by watery liquors. Water is, indeed, properly speaking, the only diluent. Various additions are made to it, to render it pleasant, and frequently to give it a slightly demulcent quality. But these are not sufficiently important to require to be noticed, or to be classed as medicines.

Diluents are merely secondary remedies. They are given in acute inflammatory diseases, to lessen the stimulant quality of the blood. They are used to promote the action of diuretics in dropsy, and to favour the operation of sweating.

DILUTUS. Dilute or diluted.

DIMIDIATUS. Half round; extending halfway round.

Dimness of sight. See *Caligo*.

DIMPLED. See *Umbilicatus*.

DINNER. (From a barbarous Latin word, *disnare*, to dine.) *Prandium*. The principal meal, which should be taken about the middle of the day.

DI'NICUM. (From δινος, giddiness.) A medicine which relieves a giddiness.

DI'NOS. See *Dinus*.

DI'NUS. (*us, i.* m.; from δινεω, to turn round.) *Dinos*. Dizziness. An illusory unsteadiness of the person while at rest, or of objects around the person.

DIOBOGON. A scruple.

DIO'CRES. The name of a lozenge.

DI'ODOS. (From δια, and οδος, the way through.) Evacuation by stool.

DIŒ'CIA. (*a, æ.* f.; from δις, double, and οικια, a house.) The name of a class of plants in the sexual system of Linnæus, containing such as have barren, or male flowers on one individual, and fertile, or female ones, on another of the same species.

DIŒNA'NTHES. (From δια, and οιvανθη, the flower of the vine.) A remedy said to be good for cholera, in which was the flower of the vine-tree.

DIO'GMUS. (From διωκω, to persecute. A distressing palpitation of the heart.

DIOI'CUS. (From δις, double, and οικος, a house.) Diœcious. Plants and flowers are so called, when the barren and fertile flowers grow from two separate roots.

DIONIS, PETER, was born about the middle of the 17th century, and educated to the practice of surgery. He published a useful *Epitome of Anatomy*, which passed through several editions. His next work, *A Course of Surgical Operations*, obtained still more celebrity. Besides these, a dissertation *On Sudden Death*, and *A Treatise on Midwifery*, were published by this author.

DIONYSIA. (*a, æ.* f.) The jay.

DIONYSI'SCUS. (From Διονυσος, Bacchus, who was of old represented as having horns.) Certain bony excrescences, near the temples, were called dionysisci.

DIONYSONY'MPHAS. (From Διονυσος, Bacchus, and νυμφα, a nymph.) A herb which, if bruised, smells of wine, and yet resists drunkenness.

DIOPO'RUM. (From δια, and οπωρα, autumnal fruits.) A medicine composed of ripe fruits for quincy.

DIOPSIDE. A subspecies of oblique edged augite, found near Piedmont.

DIOPTASE. Emerald; copper ore.

DIO'PTRA. (From διοπτομαι, to see through.) *Dioptron*. 1. An instrument for dilating any natural cavity, the better to see its condition.

2. The lapis specularis.

DIO'PTRIC. (*Diop!ricus*. Διοπτομαι, to see through.) Appertaining to the doctrine of light.

DIOPTRISMOS. The operation for dilating a part with the dioptra.

DIOPTRI'SMUS. (From διοπτομαι, to see through.) Dilatation of any natural passage.

DIO'ROBUM. (From δια, and οροβος, a vetch.) A medicine, in the composition of which there are vetches.

DIORRHO'SIS. (From δια, and οῤῥος, the serum.) *Diorosis*. 1. A dissolved state of the blood.

2. A conversion of the humours into serum and water.

DIORTHRO'SIS. (From διορθροω, to direct.) The reduction of a fracture.

DIOSCO'REA. (*a, æ.* f.; named in honour of Dioscorides.) The name of a genus of plants in the Linnæan system. Class, *Diœcia*; Order, *Hexandria*.

DIOSCOREA ALATA. The name of the plant which affords the esculent root, called the yam; which, however, is obtained from three species: the *alata*, *bulbifera*, and *sativa*. They grow spontaneously in both Indies, and their roots are promiscuously eaten as the potato is with us. There is great variety in the colour, size, and shape of yams; some are generally blue or brown, round or oblong, and weigh from one pound to two. They are esteemed when dressed as being nutritious and easy of digestion, and are preferred to wheaten bread. Their taste is somewhat like the potato, but more luscious. The negroes, whose common food is yams, boil and mash them. They are also ground, and made into bread and puddings.

When they are to be kept for some time, they are exposed upon the ground to the sun, as we do onions, and when sufficiently withered, they are put into dry sand in casks, and placed in a dry garret, where they remain often for many seasons without losing any of their primitive goodness.

DIOSCOREA BULBIFERA. The yam plant. See *Dioscorea alata*.

DIOSCOREA SATIVA. See *Dioscorea alata*.

DIOSCO'RIDES, PEDACIUS, or PEDANIUS, a celebrated Greek physician and botanist of Anazarba, in Cilicia, now Caramania, who is supposed to have lived in the time of Nero. He is said to have been originally a soldier, but soon became eminent as a physician, and travelled much to improve his knowledge. He paid particular attention to the materia medica, and especially to botany, as subservient to medicine. He profited much by the writings of Theophrastus, who appears to have been a more philosophical botanist. Dioscorides has left a treatise on the materia medica, in five books, chiefly considering plants; also two books on the composition and application of medicines, an essay on antidotes, and another on venomous animals. His works have been often printed in modern times, and commented upon, especially by Matthiolus.

DIOSCU'RI. (*i. e.* Διος, Κουροι, the sons of Jupiter, or Castor and Pollux: so named from their twin-like equality in shape and position.) The parotid glands.

DIOSMA. (*a, æ.* f.; from Δις, διος, Jove, and οσμη, a smell: on account of its divine smell.) A genus of plants in the Class, *Pentandria*; Order, *Monogynia*.

DIOSMA CRENATA. This plant, called by the natives Buckro, has strong claims to attention. Its operation is on the kidneys, which it stimulates, and imparts to the urine a strong smell, somewhat like to that of spearmint. In cases of chronic inflammation of the kidneys and urinary bladder, it is particularly serviceable; and also in those cases of irritable and inflamed state of the internal coat of the bladder, in which a quantity of purulent ropy mucus is secreted. The best way of administering it, is in infusion of one ounce of the leaves to a pint of water, half of which should be taken at divided doses in the twenty-four hours.

DIOSPY'ROS. (*os, i.* f.; from Διs, διοs, Jupiter, and either πυρ, a flame, or fire, or else πυροs, wheat: the application of either is unintelligible.) The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Diœcia.*

DIOSPYROS LOTUS. The Indian date plum. The fruit, when ripe, has an agreeable taste, and is very nutritious; when unripe it is very astringent.

DIOTA. (From διs, double, and ουλοs, from ουs, the ear.) The name of a wooden cup with two ears.

DIOXELÆ'UM. (From δια, οξυs, acid, and ελαιον, oil.) A medicine composed of oil and vinegar.

DIO'XUS. (From δια, and οξυs, acid.) A collyrium composed chiefly of vinegar.

DIPETALOUS. (*Dipetalus:* from διs, and πεταλον, a petal.) Two-petalled.

DIPHYLLOUS. (*Diphyllus, i.* m.; from διs, double, and φυλλον, a leaf.) Two-leaved: applied to the perianthium of flowers, when there are two calyces; as in *Papaver rhœas.*

DIPLASIA'SMUS. (From διπλοω, to double.) The re-exacerbation of a disease.

DI'PLOE. (*e, es.* f.; from διπλοω, to double.) The spongy substance between the two tables of the skull.

DIPLOMA. (*a, atis.* n.; from διπλοω, to fold up: so called, because usually written on parchment and folded up.) 1. A written instrument which gives authority to physicians to practise.

2. A double vessel: to boil in *diplomate,* is to put the vessel, in which the article to be boiled is, into another filled with water. See *Balneum mariæ.*

DIPLO'PIA. (*a, æ.* f.; from διπλοοs, double, and οπτομαι, to see.) *Visus duplicatus.* A disease in which the person sees an object double or triple. The causes of this affection are very imperfectly known. When idiopathic, it is produced by some structural disease or by debility. It is mostly symptomatic of indigestion, worms, hysteria, &c.

DI'PNOOS. (From διs, twice, and πνεω, to breathe.) A wound which is perforated quite through, and admits the air at both ends.

Dipple's animal oil. See *Animal oil.*

DIPSACON. See *Dipsacus.*

DIPSACUM. See *Dipsacus.*

DI'PSACUS. (*us, i.* m.; from διψα, thirst: so called from the concave situation of its leaves, which hold water, by which the thirst of the traveller may be relieved.)

1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia.* The teasel.

2. A diabetes has been so called, from the continual thirst attending it.

DIPSAS. (From διψα, thirst.) 1. Dry earth.

2. The name of a serpent, the bite of which causes thirst.

DIPSETICUS. (From διψα, thirst.) That which causes thirst.

DIPSOSIS. (*is, is.* f.; from διψα, thirst.) Excessive thirst. See *Polydipsia.*

DIPYRE. A mineral found in white or reddish steatite in the Western Pyrenees, composed of silica, alumina, and lime.

DIPYRE'NUM. (From διs, twice, and πυρην, a berry.) 1. A berry, or kernel.

2. A probe with two buttons.

DIPYRI'TES. (From διs, twice, and πυρ, fire.) *Dipyros.* An epithet given by Hippocrates to bread twice baked, and which he recommended in dropsies.

DIRE'CTOR. (*or, oris.* m.; from *dirigo,* to direct.) 1. A hollow instrument for guiding an incisor-knife.

2. The name of a muscle.

DIRECTOR PENIS. See *Erector penis.*

DIRI'NGA. A name, in the isle of Java, for the *Acorus calamus.*

DISCE'SSUS. (From *discedo,* to depart.) The separation of any two bodies, before united, by chemical operation.

DISCIFORM. (*Disciformis;* from *discus,* a quoit, and *forma,* likeness.) Resembling a disk, or quoit, in shape. It is applied to the knee-pan.

DISCOID. (*Discoides,* from δισκοs, a quoit, and ειδοs, resemblance.) Resembling a disk, or quoit, in shape. It is applied to the crystalline humour of the eye.

DISCRI'MEN. 1. A small roller.

2. The diaphragm.

DISCUS. (*us, i.* m.; from δισκοs, a quoit and disk, and from its flat and round appearance like the circumference of the sun.) The disk, or central part of a leaf, and of a compound flower. In the common daisy, the white leaflets of the flower surround the disk.

The disk of a leaf is the whole flat surface within the margin, both above and below.

DISCU'TIENT. (*Discutiens;* from *discutio,* to shake in pieces.) *Discusorius; Diachyticus.* A term in surgery, applied to those substances which possess a power of repelling or resolving tumours.

DISEASE. *Morbus.* Health is indicated by that appearance of the body which is natural to it, and it is maintained by an operation of the vital principle, under which the functions of the body are performed in a natural and proper manner. Every deviation from this appearance and action is disease. A healthy state, then, regards the performance of the functions or actions of the body, which then afford the phænomena of

health; and disease consists in an alteration from these natural or healthy actions, which is known by the morbid phænomena. From this view of animal life, in health and in disease, it follows that the phænomena of both consist in certain actions of the organs of which the body is composed, each organ having, by a law of nature, an action *sui generis*, from which the peculiar circumstances belonging to an organ result. So long, therefore, as the several organs maintain their healthy actions, the functions of the body are executed with convenience and freedom, and nothing unnatural, or contrary to the healthy state, occurs: and when the action of any organ is altered, then the phænomena of disease take place.

The various actions or motions which establish the healthy state of the functions of our organs, are, by a law of nature, uniformly the same: they are under the control or influence of the vital principle; but in what way its influence operates on the variously constructed apparatuses, so as to maintain the solids and fluids uniformly the same in health, and so as to decompose them, and combine their elementary particles or principles into different structures, we know not. It is the same with all morbid actions: for in what way the functional actions are influenced, so as to alter the condition or structure of the brain, heart, or any other part, we know not. What the nature of that action is, by which healthy blood, urine, bile, &c. are formed, and how the actions of parts are influenced to produce pain, irritation, disquietude, &c.: what the nature of that change is, under which albumen, pus, &c. are deposited, and structural diseases formed, we are in ignorance.

It must be apparent, then, that our knowledge of the body, in health and in disease, is in proportion to the observations we make on the circumstances which result from healthy and from diseased actions; the phænomena of which afford us the beautiful economy of the system in health, and the wonderful alterations which take place in diseases.

Diseases have been variously denominated, and, from their particular characters, have been variously arranged: these considerations belong to nosology and classification. There are also certain other differences from which diseases have received some trivial names and arrangements, dependent on accidental circumstances regarding their origin, time, seat, course, nature, the occupation of the subject, the age, sex, or the climate, issue, &c.

From their origin, diseases are said to be,

1. *Hereditary*; as gout, scrofula, &c.
2. *Congenital*, or *connate*; as mothers' marks.
3. *Adventitious*; as fever, &c.
4. *Protopathic*, or *primary*; as an inflammatory fever.
5. *Deuteropathic*, or *secondary*; as cephalitis, from inflammatory fever.
6. *Epidemic*; as influenzas.
7. *Endemic*; as bronchocele.
8. *Pandemic*; as rheumatism.
9. *Sporadic*; as an ague.
10. *Natural*; as small-pox.
11. *Artificial*; as inoculated small-pox.
12. *Fictitious*, or counterfeited; as falling fits and locked-jaw.
13. *Legitimate*; as pulmonitis.
14. *Spurious*; as pulmonitis notha.

The *situation*, or *seat*, gives rise to the following:—

1. An *external* disease; one which is on the surface of the body.
2. An *internal* disease; seated in the viscera.
3. A *vague* disease; one which migrates, as gout.
4. A *fixed* disease; as most are.
5. *Retrograde*; leaving an external part, and seizing an internal one; as gout.
6. *Universal*; as fever.
7. *Partial*; as dropsy.
8. *Topical*, or *local*; as a fracture.
9. *Idiopathic*; as a typhus fever.
10. *Symptomatic*; as fever from an inflammation.
11. *Sympathetic*; as vomiting from a strangulated hernia.

From their course, time, or duration, diseases are either,

1. *Acute*; as inflammation of the bowels.
2. *Chronic*; as rheumatism.
3. *Accessory*; as convulsion in fever.
4. *Successory*; as boils after small-pox.
5. *Continued*; having no interval, as some fevers and inflammation.
6. *Remittent*; having remissions, as some fevers.
7. *Intermittent*, or *periodical*; as agues.

From its *nature*, a disease is called,—

1. *Mild*; as many are.
2. *Malignant*; as cancer, fever, &c.
3. *Refractory*; as scrofula, lupus, &c.
4. *Contagious*; as typhus, syphilis, &c.
5. *Regular*; as small-pox.
6. *Irregular*; as irregular small-pox.
7. *Simple*; as scarlatina simplex.
8. *Compound*, when accompanied by another; as pneumonitis, with measles.
9. *Complicated*; as diseased liver, with dropsy and epistaxis.

From their *event*, or *issue*:—

1. *Curable*; as most diseases are.
2. *Incurable*; as hernia.
3. *Mortal*; as internal aneurisms.
4. *Doubtful*; as fevers.
5. *Recidive*; relapsing, as agues.
6. *Salutary*; as hæmorrhage sometimes, and abscess.
7. *Detrimental*; as bleedings in an impoverished or ill-conditioned state of the blood.

The *occupations* give rise to,—

Diseases of literary people, soldiers, sailors, lying-in women, &c. &c.

The *constitutions* and *temperaments* produce,—

Bilious, sanguineous, pituitous diseases, &c. &c.

The *sex* has its particular diseases; as those peculiar to males and females.

The *age* also: hence diseases of infants and children; as spina bifide, teething, &c.; and those of the juvenile, adult, and old age.

From *climate*:—

Diseases of hot, cold, and temperate regions.

From the *time of the year* and *day*, into,—

1. *Vernal;* as inflammations of the eyes, throat, and agues, &c.

2. *Æstival;* as cholera.

3. *Autumnal;* as colic, &c.

4. *Hyemal;* as rheumatism, &c.

5. *Diurnal;* as hemeralopia.

6. *Nocturnal;* as incubus, &c.

From the essential differences in diseases, they are arranged by nosologists into classes, orders, genera, species, and varieties. Of these arrangements there are very many. That which is mostly followed, in this country, is the Cullenian; but the arrangements of Good, Sauvages, Linnæus, Vogel, Sagar, Macbride, and Crichton, may be consulted with advantage.

A primary division of diseases also, from essential differences, is into,—

1. *Functional;* or derangements of actions or functions only: these regard the cohesion, elasticity, irritability, and sensibility.

2. *Structural*, or *organic;* in which the part is altered in its component principles or structure.

3. *Humoral;* or alterations in the fluids.

DISK. See *Discus*.

DISLOCA'TION. (*Dislocatio, onis.* f.; from δις, out of, and *locus*, a place: from *disloco*, to put out of place.) Luxation. The secession of a bone of a moveable articulation from its natural cavity.

DISPE'NSARY. (*Dispensarium, ii.* n.; from *dispendo*, to distribute.) 1. The shop or place in which medicines are prepared.

2. The name of an institution, in which the poor are supplied with medicines and advice.

DISPE'NSATORY. (*Dispensatorium, ii.* n.; from *dispendo*, to distribute.) *Antidotarium.* A book which treats of the composition of medicines.

DISPERMUS. (*us, i.* m.; from δις, two, and σπερμα, a seed.) Dispermous, or two-seeded.

DISSE'CTION. (*Dissectio, onis.* f.; from *disseco*, to cut asunder.) The cutting to pieces of any part of an animal, or vegetable, for the purpose of examining its structure. See *Anatomy*.

DISSECTUS. Cut. A term used by botanists synonymously with *incised* and *laciniated*, to leaves which are cut, as it were, into numerous irregular portions. See *Leaf*.

DISSEPIMENTUM. (*um, i.* n.; from *dissepio*, to separate.) A partition. Applied by botanists to partitions which separate the cells of a capsule. See *Capsula*.

Disse'ptum. (From *dissepio*, to enclose round.) The diaphragm, or membrane, which divides the cavity of the thorax from the abdomen.

DISSILIENS. (From *dissileo*, to burst.) Dissilient, or bursting suddenly asunder.

Dissolve'nt. (*Dissolvens, tis.* n.; from *dissolvo*, to loosen.) 1. A medicine which loosens and dissolves morbid concretions in the body.

2. In *Chemistry*, it means a menstruum.

Dissolu'tus. (From *dissolvo*, to loosen.) Loose; applied to dysentery.

DISTANS. Distant: applied to petals from their direction; as in *Cucubalus bacciferus*.

DISTENDED. See *Ventricosus*.

Diste'ntio. (From *distendo*, to stretch out.) 1. Distension or dilatation.

2. A convulsion.

DISTHENE. See *Cyanite*.

Disti'chia. See *Distichiasis*.

DISTICHI'ASIS. (*is, is.* f.; from διστιχια; from δις, double, and ϛιχος, a row.) *Distichiasis; Distichia.* A disease of the eyelash, in which there is a double row of hairs, the one row growing outwards, the other inwards towards the eye.

DISTICHUS. Two-ranked. Applied to stems, leaves, &c. when they spread in two horizontal directions; as the branches of the *Pinus picea*, or silver fir, and the leaves of the *Taxus baccata*, or yew.

DISTILLA'TION. (*Distillatio, onis.* f.; from *distillo*, to drop little by little.) *Alsacta; Catastagmos.* A chemical process, very similar to evaporation, instituted to separate the volatile from the fixed principles, by means of heat. Distillatory vessels are either alembics or retorts; the former consist of an inferior vessel called a cucurbit, designed to contain the matter to be examined, and having an upper part fixed to it, called the capital, or head. In this last, the vapours are condensed by the contact of the surrounding air, or, in other cases, by the assistance of cold water surrounding the head, and contained in a vessel called the refrigeratory. From the lower part of the capital proceeds a tube, called the nose, beak, or spout, through which the vapours, after condensation, are, by a proper figure of the capital, made to flow into a vessel called the receiver, which is usually spherical. These receivers have different names, according to their figure, being called mattrasses, balloons, &c. Retorts are a kind of bottle of glass, pottery, or metal, the bottom being spherical, and the upper part gradually diminishing into a neck, which is turned on one side.

Distilled vinegar. See *Acetum*.

DISTOMA. (*a, atis.* n., from δις, and ϛομα, a mouth.) Two-mouthed. The name of a genus of worms in Rudolphi's classification.

Distoma hepaticum. *Fasciola humana* of Gmelin and others. The liver fluke. A small flat flounder-like worm, about the size of the nail of the little finger; found very commonly in the bile ducts of sheep and oxen. They have been found by Pallas, Chabert, and Bucholz in the human subject.

DISTO'RTION. (*Distortio;* from *distorqueo*, to wrest aside.) A term applied to the eyes, when a person seems to turn them

from the object he would look at, and is then called squinting, or strabismus. It also signifies the bending of a bone preternaturally to one side; as distortion of the spine, or vertebræ.

DISTO'RTOR. (From *distorqueo*, to wrest aside.) A muscle, the office of which is to draw the mouth awry.

DISTORTOR ORIS. See *Zygomaticus minor.*

DISTRICHI'ASIS. See *Distichiasis.*

DI'STRIX. (*ix, icis.* f.; from δις, double, and θριξ, the hair.) A disease of the hair, when it splits and divides at the end.

DITTANDER. See *Lepidium sativum.*

DITTANY. See *Dictamnus.*

Dittany, bastard. See *Dictamnus albus.*

Dittany of Crete. See *Origanum.*

Dittany, white. See *Dictamnus albus.*

DIURE'SIS. (*is, is.* f.; from δια, through, and ουρεω, to make water.) An increased secretion of urine. It is also applied to a diabetes.

DIURETIC. (Διουρητικος. *Diureticus;* from διουρησις, a discharge of urine.) That which, when taken internally, augments the flow of urine from the kidneys. It is obvious that such an effect will be produced by any substance capable of stimulating the secreting vessels of the kidneys. All the saline diuretics seem to act in this manner. They are received into the circulation; and passing off with the urine, stimulate the vessels, and increase the quantity secreted.

There are other diuretics, the effect of which appears not to arise from direct application, but from an action excited in the stomach, and propagated by nervous communication to the secreting urinary vessels.

The diuretic operation of squill, and other vegetables, appears to be of this kind.

There is still, perhaps, another mode in which certain substances produce a diuretic effect; that is, by promoting absorption. When a large quantity of watery fluid is introduced into the circulating mass, it stimulates the secreting vessels of the kidneys, and is carried off by urine. If, therefore, absorption be promoted, and if a portion of serous fluid, perhaps previously effused, be taken up, the quantity of fluid secreted by the kidneys will be increased. In this way digitalis seems to act: its diuretic effect, it has been said, is greater when exhibited in dropsy than it is in health.

On the same principle (the effect arising from stimulating the absorbent system), may probably be explained the utility of mercury in assisting several diuretics.

The action of these remedies is promoted by drinking freely of mild diluents. It is also influenced by the state of the surface of the body. If external heat be applied, diuresis is frequently prevented, and diaphoresis produced. Hence the doses of them should be given in the course of the day, and the patient, if possible, be kept out of bed.

The direct effects of diuretics are sufficiently evident. They discharge the watery part of the blood; and, by that discharge, they indirectly promote absorption over the whole system.

Dropsy is the disease in which they are principally employed; and when they can be brought to act, the disease is removed with less injury to the patient than it can be by exciting any other evacuation. Their success is very precarious, the most powerful often failing; and, as the disease is so frequently connected with organic affection, even the removal of the effused fluid, when it takes place, only palliates without effecting a cure.

Diuretics have been likewise occasionally used in calculous affections, in gonorrhœa, and with a view of diminishing plethora, or checking profuse perspiration.

Murray, in his Elements of Materia Medica, classes the super-tartrate of potash, or cream of tartar, and nitrate of potash, or nitre, the muriate of ammonia, or crude sal-ammoniac, potash, and the acetate of potash, or kali acetatum, among the *saline* diuretics; and selects the following from the *vegetable* kingdom: — scilla maritima, digitalis purpurea, nicotiana tabacum, solanum dulcamara, lactuca virosa, colchicum autumnale, gratiola officinalis, spartium scoparium, juniperis communis, copaifera officinalis, pinus balsamea, and pinus larix; and the blistering fly from the *animal* kingdom.

In speaking of particular diuretics, Dr. Cullen says, the diuretic vegetables mentioned by writers are of very little power, and are employed with very little success. Of the umbellatæ, the medicinal powder resides especially in their seeds; but he never found any of them very efficacious. The semen dauci sylvestris has been commended as a diuretic; but its powers as such are not very remarkable. In like manner, some of the *plantæ stellatæ* have been commended as diuretics; but none of them deserve our notice, except the *rubia tinctorium*, the root of which passes so much by the kidneys as to give its colour to the urine. Hence it may fairly be supposed to stimulate the secretories; but Dr. Cullen found its diuretic powers did not always appear, and never to any considerable degree; and as, in brute animals, it has always appeared hurtful to the system, he does not think it fit to be employed to any extent in human diseases. The bardana, lithospermum, ononis, asparagus, enula campana, are all substances which seem to pass, in some measure, by the kidneys; but their diuretic powers are hardly worth notice.

The principal articles included by Dr. Cullen, in his catalogue of diuretics, are dulcamara, digitalis, scilla; some of the alliaceæ and siliquosæ; the balsams and resins; cantharides, and the diuretic salts.

DIVAPORA'TIO. Evaporation.

DIVARICATION. The crossing of any two things: thus when the muscular or tendinous fibres intersect each other at different angles, they are said to divaricate.

DIVARICATUS. Straddling: standing wide from each other.

Divellent affinity. See *Affinity, quiescent.*

DIVERGENS. Diverging. In *Botany*, opposed to compact, and means spreading wide from the stem, almost horizontally.

DIVERSO'RIUM. (From *diversor*, to resort to.) The receptaculum chyli.

DIVERTI'CULUM. (*um, i.* n.; a bye-way.) A mal-formation or diseased appearance of a part, in which a portion goes out of the regular course, and thereby forms a diverticulum, or deviation from the usual course. It is generally applied to the alimentary canal.

DIVERTICULUM NUCKII. The opening through which the round ligaments of the uterus pass. Nuck asserted that it remained open a long time after birth; to these openings he gave the name of *diverticula*.

DIVI'NUS. A pompous epithet of many compositions, from their supposed excellence.

DIVU'LSIO. (From *divello*, to pull asunder.) An irregular separation of the urine, in which the sediment is divided and ragged.

DIZZINESS. See *Dinus.*

DOCIMASTIC. (*Docimasticus*; from *Docimasia*: the art of examining fossils, in order to discover what metals, &c. they contain.) Appertaining to the art of examining fossils.

DOCK. See *Rumex.*

Dock-cresses. See *Lapsana.*

Dock, sour. See *Rumex acetosa.*

Dock, water. See *Rumex hydrolapathum.*

DODDER. See *Cuscuta epithymum.*

DODECADA'CTYLUS. (*us, i.* m.; from δωδεκα, twelve, and δακ]υλος, a finger: so named because its length is about the breadth of twelve fingers.) The duodenum. It must be observed, that at the time this name was given, anatomy consisted in the dissection of brutes; and the length was therefore probably adjudged from the gut of some animal, and not of man.

DODECA'NDRIA. (*a, æ.* f.; from δωδεκα, twelve, and ανηρ, a man.) The name of a class of plants in the sexual system, embracing those with hermaphrodite flowers, and twelve stamina.

DODECAPHA'RMACUM. (From δωδεκα, twelve, and φαρμακον, a medicine.) An ointment consisting of twelve ingredients, for which reason it was called the ointment of the twelve apostles.

DODECA'THEON. (From δωδεκα, twelve, and τιθημι, to put.) An antidote consisting of twelve simples.

DODONÆUS, REMBERTUS, (or DODOENS,) was born at Mechlin in 1517. His fame rests on his botanical publications, particularly his "Pemptades," or 30 books of the history of plants. The "Frugum Historia," "Herbarium Belgicum," &c. are of much inferior merit.

DODRANS. (*s, tis.* m.) A measure called a palm, or the space between the end of the thumb and the end of the little finger, when fully extended: about nine inches. This is nearly the palm of foreign nations, and is something more than the quarter of an English yard.

DOG. See *Canis.*

Dog's-bane, Syrian. See *Asclepias.*

Dog's-day. Canicularis. The time when the canicula, or dog's-star, rises and sets with the sun. Some centuries ago they began about the middle of July, or somewhat later, and ended about the latter end of August or beginning of September; but the heliacal rising and setting of this star are now at a different period. These days, however, still retain in our almanac this appellation, and the idea of dog-days is connected with extreme heat. In some countries they continue to maintain the opinion, that bleeding and other evacuations are not efficacious in this season, or rather in very hot weather, because of the unusual languor that results, and probably with reason.

Dog's-grass. See *Triticum repens.*

Dog's-mercury. See *Mercurialis.*

Dog-rose. See *Rosa canina.*

Dog-stones. See *Orchis mascula.*

DO'GMA. (*a, atis.* n.; from δοκεω, to be of opinion.) A dogma, or opinion founded on reason and experience.

DOGMATIST. (*Dogmaticus*; from δογμα.) A set of ancient physicians, of whom Hippocrates is presumed to be the first, who supposed principles from which they drew conclusions, and applied those principles and conclusions to particular diseases: hence they were also called *logici*, logicians, and were distinguished from the *empirici* and *methodici*. In the present day they are called *regular* scientific physicians.

DOLERITE. When volcanic masses are composed of grains distinct from each other, and contain, besides felspar, much pyroxene, black oxide of iron, ampibole, &c. they are called, by the French geologists, *dolerite.*

DO'LICHOS. (*os, i.* m.; from δολιχος, long: so called from its long shape.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria.*

2. The pharmacopœial name of the cowhage. See *Dolichos pruriens.*

DOLICHOS PRURIENS. The systematic name of the *Dolichos*, or cowhage.

Dolichos — volubilis, leguminibus racemosis, valvulis subcarinatis hirtis, pedunculis ternis, of Linnæus. The pods of this plant are covered with sharp hairs, which are the parts employed medicinally in form of electuary, as anthelmintics. The manner in which these hairy spicula act, seems to be purely mechanical: for neither the tincture, nor the decoction, possess the least anthelmintic power.

DOLICHOS SOJA. The systematic name of the plant which affords the soy. It is much cultivated in Japan, where it is called *daidsu*, and where the pods supply their kitchens with various productions; but the two principal are

a sort of butter, termed *miso*, and a pickle called *sooju*.

DOLABRIFORMIS. (From *dolabella*, a hatchet, and *forma*, resemblance.) Hatchet-shaped. Applied to a leaf, which is compressed with a very prominent dilated keel, and a cylindrical base; as in *Misembryanthemum dolabriforme*.

DOLOMITE. A calcareo-magnesian carbonate.

DO'LOR. (*or, oris*. f.) Pain; ache.

DOLPHIN. See *Delphinus*.

Dolphin, acid of. See *Delphinic acid*.

DORADILLA. See *Ceterach officinalis*.

DORO'NICUM. (*um, i*. n.; from *dorongi*, Arab.) Leopard's bane. See *Arnica*.

DORONICUM GERMANICUM. See *Arnica*.

DORONICUM ROMANUM. The pharmacopœial name of the Roman leopard's bane. See *Doronicum pardalianches*.

DORONICUM PARDALIANCHES. The systematic name of the Roman leopard's bane; called also *Doronicum romanum*.

Doronicum —foliis cordatis, obtusis, denticulatis; radicalibus petiolatis; caulinis amplexicaulibus, of Linnæus. The root of this plant, if given in a full dose, possesses poisonous properties; but instances are related of its efficacy in epileptical, and other nervous diseases.

DO'RSAL. (*Dorsalis*; from *dorsum*, the back.) Belonging to the back.

DORSTE'NIA. (*a, æ*. f.; named in honour of Dr. Dorsten.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria*; Order, *Monogynia*.

DORSTENIA BRAZILIENSIS. The systematic name of the plant the root of which is used by the natives of Brazil, internally and externally. They call it *Caa apia*. When chewed, it has the same effects as ipecacuanha. The wounds from poisoned darts are said to be cured with the juice of the root, which they pour into the wound.

DORSTENIA CONTRAYERVA. The systematic name of the plant which affords the contrayerva root; called also, *Contrayerva; Drakena; Cyperus longus, odorus, peruanus; Bezoardica radix*. The contrayerva root was first brought into Europe about the year 1581, by Sir Francis Drake, whence its name Drakena. It is the root of a small plant found in Peru, and other parts of the Spanish West Indies. Dr. Houston observes, that the roots of different species of dorstenia are promiscuously gathered and exported for those of the contrayerva; and, as all the species bear a great resemblance to each other, they are generally used for medical purposes in this country. The tuberous parts of these roots are the strongest, and should be chosen for use. They have an agreeable aromatic smell; a rough bitter, penetrating taste; and, when chewed, they give out a sweetish kind of acrimony.

It is diaphoretic and antiseptic, and was formerly used in low nervous fevers, and those of the malignant kind; but its use is superseded by the cinchona.

Dr. Cullen observes, that this and serpentaria are powerful stimulants; and both have been employed in fevers in which debility prevailed. However, he thinks wine may always supersede the stimulant powers of these medicines; and that debility is better remedied by the tonic and antiseptic powers of cold and Peruvian bark, than by any stimulants.

By the assistance of heat, both spirit and water extract all its virtues; but they carry little or nothing in distillation: extracts made by inspissating the decoction, retain all the virtues of the root.

The London College forms the compound powder of contrayerva, by combining five ounces of contrayerva root with a pound and a half of prepared shells. This powder was formerly made up in balls, and called *lapis contrayervæ*, employed in the decline of ardent fevers, and through the whole course of low and nervous ones. The radix serpentariæ virginiensis, in all cases, may be substituted for the contrayerva.

DORSTENIA DRAKENA. The systematic name for one sort of the contrayerva.

DORSTENIA HOUSTONII. See *Dorstenia contrayerva*.

DO'THIEN. A name for the furunculus.

DOTTED. See *Punctatus*.

DOUBLE. See *Didymus*.

Doubled together. See *Conduplicatus*.

DOUGLAS, JAMES, M.D. was born in Scotland in 1675. After completing his education, he came to London, and applied himself diligently to the study of anatomy and surgery, which he both taught and practised several years with success. Haller has spoken very highly of his preparations to show the motion of the joints, and the structure of the bones. He patronised the celebrated William Hunter, who assisted him shortly before his death in 1742. He was reader of Anatomy to the Company of Surgeons, and a Fellow of the Royal Society, to which he made several communications. He published, in 1707, a more correct *Description of the Muscles* than had before appeared; eight years after, a tolerable account of preceding anatomical writers; in 1726, a *History of the lateral Operation for the Stone*; and in 1730, a very accurate *Description of the Peritonæum*, &c.

DOUGLAS, JOHN, brother of the preceding, was surgeon to the Westminster Infirmary, and author of several controversial pieces.

DOVE. See *Columba*.

DOVE'S-FOOT. See *Geranium*.

Dover's powder. See *Pulvis ipecacuanhæ compositus*.

Down of seed. See *Pappus*.

DRA'BA. (*a, æ*. f.; from δρασσω, to seize: so called from its sudden effect upon the nose of those who eat it.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliculosa*.

DRABA VERNA. The systematic name of a small plant, very common on most walls.

The seed is hot and stimulating, and might be used for pepper.

DRA'CO. (*o, onis.* m. Δρακων, the dragon.) The dragon. Some plants take this name, from the supposed resemblance of the flower, or some other part, to the dragon's mouth, or tail.

Draco mitigatus. The submuriate of mercury.

Draco sylvestris. See *Achillea.*

DRACOCE'PHALUM. (*um, i.* n.; from δρακων, a dragon, and κεφαλη, a head.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

Dracocephalum canariense. The systematic name of the balm of Gilead: called also, Turkey-balsam; Canary balsam; balsam of Gilead. *Moldavica,* and *Melissa Turcica.*

Dracocephalum moldavica — floribus verticellatis, bracteis lanceolatis, serraturis capillaceis, of Linnæus. This plant affords a fragrant essential oil, by distillation, known in Germany by the name of *oleum syriæ.* The whole herb abounds with an aromatic smell, and an agreeable taste, joined with an aromatic flavour: it is recommended to give tone to the stomach and nervous system.

Draconis sanguis. Dragon's blood. See *Calamus rotang.*

DRACONTIA. The dracontia of the Greeks, according to Pliny, was the Guinea worm, or *dracunculus.* See *Filaria medinensis.*

DRACO'NTIUM. (*um, i.* n.; from δρακων, a dragon: so called because its roots resemble a dragon's tail.) The name of a genus of plants. Class, *Gynandria;* Order, *Polyandria.*

Dracontium pertusum. *Arum dracontium.* This is an extremely acrimonious plant. The Indians cover dropsical parts with the fresh leaves, which produces vesications, and an oozing of serum.

DRACU'NCULUS. (*us. i.* m; from δρακων, a serpent.) See *Filaria medinensis.*

Dracunculus pratensis. See *Achillea.*

Dragaca'ntha. See *Astragalus.*

Dragant gum. See *Astragalus.*

DRAGON. See *Draco.*

Dragon's blood. See *Calamus rotang.*

Dragon's wort. See *Arum dracunculus.*

DRAKE, James, M. D., published, in 1707, "A new System of Anatomy;" which is taken principally from Cowper, on a reduced plan. In the third edition, it was styled "Anthropologia Nova." In abscesses of the antrum maxillare, he advised drawing out one of the molar teeth, to let out the matter. The description of the internal nostrils, and of the cavities entering them, is new; as are also the plates of the abdominal viscera.

Drake'na. The contrayerva plant was once so named, after Sir Francis Drake, who first brought it over from America. See *Dorstenia contrayerva.*

DRA'STIC. (*Drasticus.* Δραστικος, active, brisk; from δραω, to effect.) A term generally applied to those medicines which are very violent in their action; thus, drastic purges, emetics, &c.

Drawing slate. See *Chalk, black.*

DRELINCOURT, Charles, was born in 1633, and died in 1697. He was a voluminous and learned writer. He strenuously opposed the introduction of chemical preparations into medicine, which was then very prevalent. His son, *Charles,* succeeded him in practice, but has left no publication, except his thesis "De Lienosis."

DRIMYPHAGIA. (From δριμυς, acrid, and φαγω, to eat.) Food which is acrimonious.

DRIVELLING. An involuntary flow of saliva, from a sluggishness of deglutition, without their being any increased flow of the saliva. It happens in infancy, in old age, and to idiots and dotards.

Dro'ma. The name of a plaster described by Myrepsus.

DROOPING. See *Nutans.*

Dropaci'smus. (From δρεπω, to remove.) *Dropax.* A stimulant plaster of pitch, wax, &c. to take off hair.

Dro'pax. See *Dropacismus.*

Drop-serene. See *Amaurosis.*

DRO'PSY. See *Hydrops.*

Dropsy of the belly. See *Ascites.*

Dropsy of the brain. See *Hydrocephalus.*

Dropsy of the chest. See *Hydrothorax.*

Dropsy of the ovary. See *Ascites.*

Dropsy of the skin. See *Anasarca.*

Dropsy of the testicle. See *Hydrocele.*

DROPWORT. See *Œnanthe crocata,* and *Spiræa filipendula.*

Dropwort, hemlock. See *Œnanthe.*

Dropwort, water. See *Œnanthe.*

DRO'SERA. (*a, æ.* f.; from δροσερα, dewy; which is from δροσος, dew: drops hanging on the leaves like dew.) The name of a genus of plants. Class, *Pentandria;* Order, *Hexagynia.* Sun-dew.

Drosera rotundifolia. The systematic name of the sun-dew: called also, *Ros solis,* and *Rorella.*

Drosera rotundifolia — scapis radicatis; foliis orbiculatis, of Linnæus. This elegant little plant is said to be so acrid as to ulcerate the skin, and remove warts and corns; and to excite a fatal coughing and delirium in sheep who eat it. It is seldom given medicinally in this country, but by the lower orders, who esteem a decoction of it as serviceable in asthmas and coughs.

Drosobo'tanum. (From δροσος, dew, and βοτανη, a herb: so called from its being covered with an aromatic dew.) The herb betony. See *Betonica officinalis.*

Drosso'meli. (From δροσος, dew, and μελι, honey.) Honey-dew. See *Manna.*

DROWNING. See *Submersio.*

DRUPA. (*a, æ.* f.; from *drupæ,* unripe olives.) A stone fruit, formed of a fleshy or coriaceous seed-vessel, enclosing a nut.

It is distinguished into, *Drupa:* —

1. *Succosa,* when of a succulent fleshy con-

sistence; as the cherry, plum, peach, and nectarine.

2. *Fibrosa*, the nut being fibrose; as in *Cocos nucifera*.

3. *Exsicca*, dry and subcoriaceous; as the almond and horse-chestnut.

4. *Dehiscens*, opening; as in *Juglans regia*, and *Myristica moschata*.

From the number of nuts it contains, the *drupa* is said to be,—

1. *Monosperm*, when there is but one; as in the olive and *pistachia*.

2. *Disperm*, when there are two; as in *Styrax*.

DRUPACEOUS. (*Drupaceus*; from *drupa*.) Resembling a drupe, or stone fruit. Applied to the pod of *Erucago* and *Bunias*.

DUCK. See *Anas*.

DUCT. See *Ductus*.

Duct, biliary. See *Biliary duct*.

DUCTI'LITY. *Ductilitas*. A property by which bodies are elongated by repeated or continued pressure. It is peculiar to metals. Most authors confound the words malleability, laminability, and ductility together, and use them in a loose indiscriminate way; but they are very different. Malleability is the property of a body which enlarges one or two of its three dimensions, by a blow or pressure very suddenly applied. Laminability belongs to bodies extensible in dimension by a gradually applied pressure; and ductility is properly to be attributed to such bodies as can be rendered longer and thinner by drawing them through a hole of less area than the transverse section of the body so drawn.

DU'CTUS. A canal or duct.

Ductus ad nasum. See *Canalis nasalis*.

Ductus arteriosus. A great artery-like canal, found only in the fœtus and very young children, between the pulmonary artery and the aorta. In adults it is closed up.

Ductus auris palatinus. The Eustachian tube.

Ductus biliaris. See *Choledochus ductus*.

Ductus communis choledocus. See *Choledochus ductus*.

Ductus cysticus. The trunk of the biliary ducts, which carries the bile from them into the gall-bladder.

Ductus hepaticus. See *Hepatic duct*.

Ductus lachrymalis. See *Lachrymal duct*.

Ductus lactiferus. *Ductus galactophorus*. The excretory ducts of the glandular substance composing the female breast. The milk passes along these ducts to the nipple.

Ductus pancreaticus. The pancreatic duct. It is white and small, and arises from the sharp extremity of the pancreas, runs through the middle of the gland towards the duodenum, into which it pours its contents, by an opening common to it and the *ductus communis choledochus*.

Ductus salivalis. The excretory duct of the salivary glands, which convey the saliva into the mouth.

Ductus stenonis. The Stenonian duct, which was so called after its discoverer, *Steno*. It arises from all the small excretory ducts of the parotid gland, and passes transversely over the masseter muscle, penetrates the buccinator, and opens into the mouth.

Ductus thoracicus. See *Thoracic duct*.

Ductus venosus. When the vena cava passes the liver, in the fœtus, it sends off the ductus venosus, which communicates with the sinus of the vena portæ; but, in adults, it becomes a flat ligament.

Ductus warthonianus. The excretory duct of the maxillary glands; so named after its discoverer.

DULCA'CIDUM. (From *dulcis*, sweet, and *acidus*, sour.) A medicine composed of a sweet and sour ingredient.

DULCAMA'RA. (*a*, *æ*. f.; from *dulcis*, sweet, and *amarus*, bitter.) The bitter sweet. See *Solanum dulcamara*.

Dulce. See *Fucus palmatus*.

Dulce, red. See *Fucus edulis*.

Dulesh. See *Fucus palmatus*.

DUMBNESS. See *Aphonia*.

Dumosæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of shrubby plants, which are thick set with irregular branches, and bushy.

DUMOSUS. (From *dumus*, a bush.) Dumose: bushy.

DUNCAN, Daniel, was born at Montauban, in Languedoc, in 1649, son of a professor of physic in that city, but of a family originally Scotch. At Paris he published his first work, upon the *Principle of Motion in Animal Bodies*; and some years after he attempted to explain the Animal Functions on Chemical and Mechanical Principles. In 1714, he settled in London.

DUNG. See *Fæx*.

Dung, devil's. See *Ferula assafœtida*.

DUO. (Δυω, two.) Some compositions, consisting of two ingredients, are distinguished by this term; as pilulæ ex duobus.

DUODE'NUM. (*um*, *i*. n.; from *duodenus*, consisting of twelve: so called because it was supposed not to exceed the breadth of twelve fingers; but as the ancients dissected only animals, this does not hold good in the human subject.) The first portion of the small intestines. See *Intestines*.

DUPLEX. (From *duo*, two, and *plico*, to fold.) Double or two-fold. In *Botany*, applied to leaves, petals, perianths, &c. The *perianthum duplex* is seen in *Malva althæa* and *Hibiscus*.

Duplica'nus. (From *duplex*, double.) Double: applied to a double tertian fever.

DUPLICATUS. (From *duplex*, double.) Duplicate: doubled: applied, in *Botany*, to flowers which have two series or rows of petals.

DU'RA MATER. (From *durus*, hard; from its comparative hardness with the *pia mater*.) *Dura meninx*; *Dermatodes*. A thick and somewhat opake and insensible membrane, formed of two layers, that surrounds and defends the brain, and adheres strongly

to the internal surface of the cranium. It has three considerable processes, the falciform, the tentorium, and the septum cerebelli; and several sinuses, of which the longitudinal, lateral, and inferior longitudinal, are the principal. Upon the external surface of the dura mater, there are little holes, from which emerge fleshy-coloured papillæ, and which, upon examining the skull-cap, will be found to have corresponding foveæ. These are the external glandulæ Pacchioni. They are in number from ten to fifteen on each side, and are chiefly lateral to the course of the longitudinal sinus. The arteries which supply this membrane with vessels for its own nourishment, for that of the contiguous bone, and for the perpetual exudation of the fluid, or halitus rather, which moistens or bedews its internal surface, may be divided into anterior, middle, and posterior. The first proceeds from the ophthalmic and ethmoidal branches; the second from the internal maxillary and superior pharyngeal; the posterior from the occipital and vertebral arteries.

The principal artery of the dura mater, named, by way of distinction, the great artery of the dura mater, is derived from the internal maxillary artery, a branch of the external carotid. It is called the spinalis, or spheno-spinalis, from its passing into the head through the spinous hole of the sphenoid bone, or meninga media, from its relative situation, as it rises in the great middle fossa of the skull. This artery, though it sometimes enters the skull in two branches, usually enters in one considerable branch, and divides, soon after it reaches the dura mater, into three or four branches, of which the anterior is the largest; and these spread their ramifications beautifully upon the dura mater, over all that part which is opposite to the anterior, middle, and posterior lobes of the brain. Its larger trunks run upon the internal surface of the parietal bone, and are sometimes, for a considerable space, buried in its substance. The extreme branches of this artery extend so as to inosculate with the anterior and posterior arteries of the dura mater; and through the bones (chiefly parietal and temporal bones) they inosculate with the temporal and occipital arteries. The meningeal artery has been known to become aneurismal, and distended at intervals; it has formed an aneurism, destroying the bones and causing epilepsy.

Dura meninx. See *Dura mater*.

DURUS. Hard. In general use to distinguish the nature of structure, &c.: hence *dura mater*, *portio dura*, &c.

DUST. See *Pollen*.

DWALE. See *Atropa belladonna*.

DWARF. (*Pumilio, onis*, m.; *à puero*.) 1. A diminutive being, whose growth has been checked by art, or arrested by disease. The height of dwarfs differs, but, in general, they have exceeded three feet. The famous Polish dwarf, Borulawski, was, however, but twenty-eight inches; and Bebe, kept by Stanislaus, King of Poland, measured only thirty-three inches. Their intellectual faculties are, in general, imperfect: they are lively, but simple; and sharp, but timorous. Borulawski, who was known to the author, possessed superior mental powers. It is not easy to assign a cause for such diminutive forms, except their growth is checked by disease, and their forms distorted by confinement in one posture.

2. Any thing under its usual size, or that which, though diminutive in size, resembles what is much larger. In *Botany*, the term *humilis* is often used to express it.

Dwarf elder. See *Sambucus ebulus*.

DYNAMIS. (From δυναμαι, to be able.) 1. The faculty or power from whence an action proceeds.

2. Galen often uses this word for a medicine, particularly of an approved one.

Dyo'ta. (From δυω, two, and ους, ωτος, an ear.) A chemical instrument with two ears, or handles.

DYSÆSTHE'SIA. (*a, æ*. f.; from δυς, difficulty, and αισθανομαι, to feel or perceive.) Impaired feeling. The sense of touch, or general feeling, may be,

1. Painfully acute or sensible to impressions not generally received; as in soreness, itching, heat, and coldness.

2. The organ of touch may be totally impercipient of objects applied to it; as in numbness, and insensibility of the skin.

3. The feeling may be imaginary; as when a person perceives pain in a limb which has been some time amputated. See *Anæsthesia*, *Parapsis*, and *Pseudæsthesia*.

Dysæsthesiæ. (The plural of *Dysæsthesia*.) The name of an order in the class *Locales* of Dr. Cullen's Nosology, containing those diseases in which the senses are depraved or destroyed, from a defect of the external organs.

DYSALTHES. (From δυς, difficulty, and αλθω, to cure.) Difficult of cure. Not used.

Dysanago'gus. (From δυς, with difficulty, and αναγω, to subdue.) Difficult to remove: formerly applied to viscid expectoration.

DYSCATAPO'TIA. (*a, æ*. f.; from δυς, and καταπινω, to drink.) A difficulty of swallowing liquids. Dr. Mead thinks this a more proper term than that generally used for canine madness, viz. hydrophobia; as it is more particularly descriptive of the affection under which the unhappy patients labour; for, in reality, they dread water from the difficulty of swallowing it.

DYSCINE'SIA. (*a, æ*. f.; from δυς, bad, and κινεω, to move.) Bad or imperfect motion.

Dyscinesiæ. (The plural of *dyscinesia*.) The name of an order in the class *Locales* of Cullen's Nosology; embracing diseases in which the motion is impeded or depraved, from an imperfection of the organ.

DYSCOPHO'SIS. (From δυς, with difficulty, and κωφοω, to be deaf.) A defect in the sense of hearing.

DYSCRA'SIA. (*a, æ*. f.; from δυς, with

difficulty, and κεραννυμι, to mix.) A bad habit of body.

DYSECŒ'A. (*a, æ.* f.; from δυς, difficulty, and ακοη, hearing.) Deafness. Hearing diminished or destroyed. Dr. Cullen has two species of this genus:—

1. The *organic,* which arises from wax in the meatus, injuries of the membrane, or inflammation and obstruction of the tube.

2. The *atonic,* when without any discernible injury of the organ. See *Paracusis.*

DYSE'LCUS. (From δυς, with difficulty, and ελκος, an ulcer.) An inveterate ulcer, or one difficult to heal.

DYSE'METUS. (From δυς, with difficulty, and εμεω, to vomit.) A person not easily made to vomit.

DYSENTERY. (*Dysenteria, æ.* f.; from δυς, difficulty, and εντερα, the bowels.) The flux. This disease is known by contagious fever; frequent griping stools; tenesmus; stools, chiefly mucous, sometimes mixed with blood, the natural fæces being retained or voided in small, compact, hard substances, known by the name of scybala, loss of appetite, and nausea. It occurs chiefly in summer and autumn, and is often occasioned by much moisture succeeding quickly intense heat, or great drought, whereby the perspiration is suddenly checked, and a determination made to the intestines. It is likewise occasioned by the use of unwholesome and putrid food, and by noxious exhalations and vapours: hence it appears often in armies encamped in the neighbourhood of low marshy grounds, and proves highly destructive. But the cause which most usually gives rise to it, is a specific contagion; and when it once makes its appearance, where numbers of people are collected together, it not unfrequently spreads with great rapidity. A peculiar disposition in the atmosphere seems often to predispose, or give rise to the dysentery, in which case it prevails epidemically.

It frequently occurs about the same time with autumnal intermittent and remittent fevers, and with these it is often complicated.

The disease, however, is much more prevalent in warm climates than in cold ones; and in the months of August, September, and October, which is the rainy season of the year in the West Indies, it is very apt to break out and to become very general among the negroes on the different plantations in the colonies. The body having been rendered irritable by the great heat of the summer, and being exposed suddenly to much moisture with open pores, the blood is thereby thrown from the exterior vessels upon the interior, so as to give rise to dysenteries.

An attack of dysentery is sometimes preceded by loss of appetite, costiveness, flatulency, sickness at the stomach, and a slight vomiting, and comes on with chills, succeeded by heat in the skin, and frequency of the pulse. These symptoms are, in general, the forerunners of the griping and increased evacuations which afterwards occur.

Inflammation soon takes place in the lower part of the intestinal tube: the stools then become more frequent, and less abundant; and, in passing through the inflamed parts, they occasion great pain, so that every evacuation is preceded by a severe griping, as also a rumbling noise.

The motions vary both in colour and consistence, being sometimes composed of frothy mucus, streaked with blood, and at other times of an acrid watery humour, like the washings of meat, and with a very fœtid smell. Sometimes pure blood is voided: now and then lumps of coagulated mucus, resembling bits of cheese, are to be observed in the evacuations, and in some instances a quantity of purulent matter is passed.

Sometimes what is voided consists merely of a mucous matter, without any appearance of blood, exhibiting that disease which is known by the name of dysenteria alba, or morbus mucosus.

Whilst the stools consist of these various matters, and are voided frequently, it is seldom that we can perceive any natural fæces among them; and, when we do, they appear in small hard balls, called scybala, which being passed, the patient is sure to experience some temporary relief from the griping and tenesmus.

It frequently happens, from the violent efforts which are made to discharge the irritating matters, that a portion of the gut is forced beyond the verge of the anus, which, in the progress of the disease, proves a troublesome and distressing symptom; as does likewise the tenesmus, there being a constant inclination to go to stool, without the ability of voiding any thing, except, perhaps, a little mucus.

More or less fever usually attends with the symptoms which have been described, throughout the whole of the disease, where it is inclined to terminate fatally, and is either of an inflammatory or putrid tendency. In other cases, the febrile state wholly disappears after a time, while the proper dysenteric symptoms probably will be of long continuance. Hence the distinction into acute and chronic dysentery.

When the symptoms run high, produce great loss of strength, and are accompanied with a putrid tendency, and a fœtid and involuntary discharge, the disease often terminates fatally in the course of a few days; but when they are more moderate, it is often protracted to a considerable length of time, and so goes off at last by a gentle perspiration, diffused equally over the whole body; the fever, thirst, and griping then ceasing, and the stools becoming of a natural colour and consistence. When the disease is of long standing, and has become habitual, it seldom admits of an easy cure; and when it attacks a person labouring under an advanced stage of scurvy, or pulmonary consumption, or whose constitution has been much impaired by any other disorder, it is sure to prove fatal.

It sometimes appears at the same time with autumnal intermittent and remittent fevers, as has been observed, and is then more complicated and difficult to remove.

Upon opening the bodies of those who die of dysentery, the internal coat of the intestines (but more particularly of the colon and rectum) appears to be affected with inflammation and its consequences, such as ulceration, gangrene, and contractions. The peritonæum, and other coverings of the abdomen, seem likewise, in many instances, to be affected by inflammation.

Dysentery often exists as a mild disease, being attended with very little fever or constitutional derangement, and the excretions affording occasionally relaxed or scybalous fæcal matter, but more frequently slimy, gelatinous, or sanguineous stools. In this form it is soon controlled by medicines and diet; and it may be doubted whether it is contagious. It was formerly the practice to commence with blood-letting; but in the present day this is never thought of, unless a very plethoric state of the vascular system exists, or an inflammatory diathesis, or actual inflammation, in which latter state the disease of course requires the lancet. Mild aperients, of sulphate of magnesia, tartarised soda, senna, rhubarb, tamarinds, manna, and the like, are exhibited every, or every other morning, and an opiate at night. Sydenham gave rhubarb, with tamarinds and senna, in preference to other aperients, and in full doses. "I prefer," says he, "the use of rhubarb in this form to giving it alone, or in a smaller quantity, because, unless it acts thoroughly, it does not much conduce to a cure; and because, also, though more powerful cathartics might be employed, they would but aggravate the gripings, and increase the general disorder, and especially the depression of spirits: and hence, even after the rhubarb purge, I commonly give the anodyne at an earlier hour than usual,—indeed, at any time in the afternoon, as soon as the laxative has ceased to operate,—and thus get rid of the excitement it has occasioned. This purgative I repeat twice every other day, always following up the dose with an anodyne, as above; and I resort to the anodyne every morning and evening, even when no aperient is given, that I may repress the violence of the symptoms, and gain a truce while I am evacuating the peccant humour. The anodyne I make use of, is sixteen or eighteen drops of laudanum in a dose of cordial water of any kind." Sydenham depended principally on his celebrated liquid laudanum: and so attached was he to it, and so persuaded of its permanent efficacy, that where the symptoms were more violent he increased the dose, and three times a day instead of twice; and prescribed also daily an opiate injection. In mild cases, indeed, he omitted evacuants, and trusted to opium alone. The principles on which this mode of practice is founded are clear and rational, and indicate an attempt to diminish inflammatory action, to relax the spasmodic constriction, which both blocks up the fæces and produces the griping pains, and to assist the discharge of fæces, as the natural passage is sufficiently opened.

Rhubarb has been objected to on account of its astringency, but many advocate its employment as clearing the primæ viæ better than any other purgative. Its astringent effect may be well guarded against by giving a little carbonate of magnesia, tamarinds, or manna.

Castor oil is perhaps the best of all purgatives in dysentery: if this be given every other day, in a dose to clear the bowels, and some saline sudorific with the compound powder of ipecacuanha night and morning, the disease will soon vanish.

The other form of dysentery, which is highly contagious, and is attended with acute fever, is always an important and more complicated disease. The fæces when discharged are of various colours and consistence, highly fœtid, and mixed with putrid sanies, membraneous films, and sanguineous coagula; and the fever which attends is either inflammatory or typhous. In one of these forms, the disease spreads with tremendous rapidity through camps, or crowds of any kind, consociating too closely together without sufficient ventilation, and particularly in swamps, or other moist lowlands. In the present day, Dr. Good observes, the accompanying fever is most commonly typhous. "I am induced to believe," he says, "that it is chiefly in sporadic cases that the dysenteric fever is a cauma;—that is, inflammatory: while in those of epidemic or contagious origin, the fever is of a typhous, or at least of a synochous character; of a mixed breed, with a strongly marked tendency to run from a caumatic to a typhous type."

In laying down a curative plan for these more acute forms of dysentery, our first attention must be paid to the nature and degree of fever with which the disease opens. When, therefore, the pulse is hard and full, and particularly when there is a general pain and tension over the belly, indicating an inflammatory diathesis, blood should be drawn copiously, and with all possible speed, and repeated according as circumstances may require. There is no disease that more requires the exercise of a sound judgment on this point than dysentery: for if not typhous from the first, it has a general tendency to pass into this type; and the intestinal inflammation is perhaps of the erysipelatous kind; and hence, unless the indications for it are strong and prominent, this mode of cure had better not be ventured upon, and if blood is to be abstracted, it should be by leeches.

The next most probable means of diminishing the febrile action, is by the use of general relaxants, and particularly those which may operate equally on the skin and the whole range of the intestinal canal: these are emetics and sudorifics, and especially those medicines which produce both these effects at the same

time. An emetic will, in many instances, be found extremely serviceable; and in public practice, in the navy and army, a solution of tartar emetic and sulphate of magnesia has been resorted to, in the beginning of acute and inflammatory dysentery, with decided benefit. Of two grains of tartar emetic, and six drachms of sulphate of magnesia, dissolved in eight ounces of any aromatic water, a fourth part should be given every two hours, until the desired effect takes place. After having by these or similar means cleared the primæ viæ, diaphoretics and opium are to be administered, resorting to local bleeding, fomentation, and blisters, if there be reason to think any tendency to inflammation exists, and occasionally administering saline or oleaginous purgatives. The best diaphoretics are, antimonial powder, submuriate of mercury, opium, or Dover's powder, in combination, every four or six hours: when the irritation is much in the lower bowels, and especially when there is tenesmus, and very frequent and loose motions, opium introduced into the rectum acts like a charm. Four ounces of the decoctum lini, or decoctum amyli, with a drachm of the tinctura opii, form the best injection, which may be used night and morning, or oftener, according to circumstances.

In the other acute forms of dysentery, in which the accompanying fever is typhous, as well as with those which, though in the commencement accompanied by a fever of an inflammatory or mixed type, have become typhous, the bowels are to be cleared from their putrescent fæcal contents from time to time, by solutions of sulphate of magnesia, with dilute mineral acids, and light infusions of roses, calumba, cascarilla, cinchona, simarouba, cortex conessi, liquor calcis: the nitric acid is much esteemed by some, the nitro-muriatic acid also, and the chlorides of lime and soda. With all these opium must be given, at the same time, either in combination, or a full dose night and morning. Five drops of dilute nitric acid, with ten of liquid laudanum, and twelve drachms of cinnamon water, every four or six hours, is a valuable compound. Ten drops of dilute sulphuric acid, with as much tincture of opium, and an ounce and a half of the infusion or decoction of any of the above-mentioned barks or roots, sweetened, is the proper dose and way of administering them. Some symptoms require particular attention in all cases of dysentery; thus, a diarrhœal state will call for the addition of kino or catechu, or hæmatoxylum: — great pain is only relieved by large doses of opium, fomentations, and warm bath: — flatulence, by the addition of carminatives, &c. &c.

The diet should consist of farinaceous decoctions, especially those of arrow-root, sago, salop, gruel, barley, and rice. In simple cases, a little light mutton, veal, or beef tea or broth will be useful; but in acute ones, no preparation of animal substances is permitted: for if there be a tendency to inflammation, or if a synoche exist, or a typhous fever, it will prove too stimulating to the one, and increase the putrescent state of the contents of the intestinal canal in the other. Severe cases, especially where the spasmodic pains are severe, will be benefited by the free use of vegetable gluten, and isinglass. Wine, brandy, and the like are serviceable in all cases where there is debility, or a typhous fever.

Great attention should also be given to the clothing: the feet must be kept warm, and the skin kept moist, if possible, but never so as to weaken by strong perspirations.

Dysepulo'ticus. (From δυς, with difficulty, and επυλοω, to cicatrise.) *Dysepulotus.* Difficult to be healed: applied to ulcers.

Dyshæmorrho'is. (From δυς, with difficulty, and αιμορροις, the piles.) Suppression of the bleeding from piles.

DYSLO'CHIA. (*a, æ.* f.; from δυς, difficulty, and λοχια, the lochia.) An imperfect excretion or suppression of the lochia.

DYSMENORRHÆ'A. (*a, æ.* f.; from δυς, with difficulty, and μηνορροια, the menses.) Difficult or painful menstruation, accompanied with severe pains in the back, loins, and bottom of the belly.

In most cases of difficult and painful menstruation, the secretion is scanty throughout the period, or particularly during the two first days, when the pain is often extremely severe, and, in some few cases, so much so as to produce convulsions, especially in hysterical women, for which state dysmenorrhæa often lays the foundation. The secretion, in some cases, becomes more abundant after the two first days, and the pain subsides. In many cases the discharge is unhealthy, being mixed with flakes like an organised decidua, small portions of membrane, the size of a sixpence or larger, and sometimes mixed with coagula.

Cold, mental anxiety, and a natural debility of the uterus, are its common causes

The treatment is directed to the disease when present, and to the prevention of its return, by remedies administered during the interval.

In the first instance, opium, æther, assafœtida, tepid baths, and fomentations, with stimulants, have been found useful. A full dose of the former, taken just as the period is about to arrive, sometimes relaxes the spasms, or destroys the susceptibility for pain, and the secretion goes on well. When the hip bath and fomentations are beneficial, they are resorted to during the day of the first appearance, or persevered in for a day or two before. Opium applied to the loins is often serviceable; and so likewise is laudanum and assafœtida, thrown into the rectum in a glyster, or solid opium, with assafœtida introduced as a suppository. Hyosciamus, extract of poppy, and other sedatives, are, in milder cases, sometimes sufficient to remove the disease.

The medicines resorted to in the interval

between the periods are very various: most of them are tonics, others relaxants. Occasionally cupping the back, applying leeches to the perinæum, and observing an abstemious diet, is, in some cases, useful; and this plan is indicated in those whose fibres are rigid, and who have a vascular plethora. In other and opposite states, where the subject is pallid, and there is a more evident appearance of laxity and debility, a generous and stimulating diet, with chalybeates or tonics, of bark and cascarilla, and the fœtid gums, and cold bathing, must be preferred.

DYSO'DES. (From δυς, bad, and οζω, to smell.) A bad smell: applied,

1. By Hippocrates to a fœtid disorder of the small intestines.

2. To a malagma for a pleurisy, and to an acopon, prescribed by Galen and Paulus.

3. Sauvages forms a genus of disease by the name of *dysodia*, to express a disagreeable exhalation from the whole body.

DYSO'PIA. (*a*, *æ. f.*; from δυς, bad, and ωψ, an eye.) Bad sight. Sight depraved. Under this term are comprehended,

1. *Night-sight;* called by the Greeks nyctalopia. See *Nyctalopia.*

2. *Day-sight;* or hemeralopia of the Greeks. See *Hemeralopia.*

3. *Longsightedness.* This is a morbid affection of the iris, which is habitually dilated, and not easily stimulated to a contractile action. It occurs to every period of life, but mostly to the aged: and hence it is usually denominated presbyopia. See *Presbyopia.*

4. *Shortsightedness.* This is, in most respects, an opposite disease to the last. See *Myopia.*

5. *Lateral vision,* or skewsightedness. The vision is here accurate only when the object is placed obliquely, so that the person can only see in an oblique direction, in consequence of some partial obfuscation of the cornea, which usually proceeds from slight scars, or of the humours through which the light is transmitted, or from a partial paralysis of the retina. It is a very different thing from squinting: for the axis of the eye affected usually coincides with that of the sound eye; whereas, in squinting, the two axes do not coincide, and the judgment is formed from the strongest eye.

DYSORE'XIA. (*a*, *æ. f.*; from δυς, bad, and ορεξις, appetite.) A depraved appetite.

Dysorexiæ. The name of an order in the Class *Locales* of Cullen's Nosology, which he divides into two sections, *appetitus erronei,* and *deficientes.*

DYSPE'PSIA. (*a*, *æ. f.*; from δυς, bad, and πεπτω, to concoct.) Indigestion. This very common disease consists generally in a want of appetite, a sudden and transient distension of the stomach, eructations of various kinds, heartburn, pain in the region of the stomach, perhaps vomiting, frequent rumbling noise in the bowels, and great costiveness. A long train of nervous symptoms are also frequent attendants.

The number of these symptoms varies in different cases, with some being felt only in part; in others, being accompanied even with additional ones, equally unpleasant, such as severe transient pains in the head and breast, and various affections of the sight, as blindness, double vision, &c.

It chiefly arises in persons between thirty and forty years of age, and is principally to be met with in those who devote much time to study, or who lead either a very sedentary or irregular life. A great singularity attendant on it is, that it may and often does continue a great length of time, without any aggravation or remission of the symptoms.

Great grief and uneasiness of mind, intense study, profuse evacuations, excess in venery, hard drinking, particularly of spirituous liquors, and of tea, tobacco, opium, and other narcotics, immoderate repletion, and over-distension of the stomach, a deficiency in the secretion of the bile, or gastric juice, and the being much exposed to moist and cold air, when without exercise, are the causes which usually occasion dyspepsia.

Dyspepsia never proves fatal, unless when, by a very long continuance, it produces great general debility and weakness, and so passes into some other disease, such as dropsy; but it is at all times very difficult to remove, but more particularly so in warm climates.

It is often a secondary and symptomatic disease, caused by structural alterations of some part of the stomach; and there are few organic diseases in the neighbouring viscera, from which the stomach does not become weakened, and indigestion result.

The morbid appearances to be observed on dissections of this disease, are principally confined to the stomach, which is perceived to be considerably relaxed, and distended with air.

The treatment of dyspepsia consists, 1. In obviating the several exciting causes. 2. In relieving urgent symptoms, some of which may tend to prolong the disease. 3. In restoring the tone of the stomach, or of the general system, and thus getting rid of the liability to relapse.

I. In fulfilling the first indication, we are often much circumscribed by the circumstances or habits of the patient; and particularly when they have been accustomed to drink spirits, which they can hardly relinquish, or only in a very gradual manner. The diet must be regulated by the particular form of the disease: in those who are liable to acidity, it should be chiefly of an animal nature, with the least acescent vegetable substances, and for drink, toast and water, or soda water, adding a little brandy, if really necessary; where the opposite, or septic tendency appears, which happens especially in persons of a florid complexion, it should consist principally of vegetable matter, particularly the ripe subacid fruits, with the meat of young animals occasionally, and if plain water be not agreeable, table-beer, cyder, &c. may be allowed for drink; and in those of

the phlegmatic temperament the most nutritious and digestible articles must be selected, mostly of an animal nature, assisted by the warmer condiments, and the more generous fermented liquors in moderation. It will be generally better to take food oftener, rather than to load the stomach too much at once; but more than four meals a day can hardly be requisite: if at any other time a craving should occur, a crust of bread or a piece of biscuit may be eaten.

II. Among the symptoms requiring palliation, heartburn is frequent, resulting from acrimony in the stomach, and to be relieved by antacid or antiseptic remedies, according to circumstances, or diluents and demulcents may answer the purpose. A sense of weight at the stomach, with nausea, may occasionally indicate a gentle emetic; but will be less likely to occur if the bowels are kept regular. Flatulence may be relieved by aromatics, æther, &c.; and these will be proper for spasmodic, or nervous pains: but if ineffectual, opium should be had recourse to. Vomiting is generally best checked by carbonic acid. When diarrhœa occurs, the aromatic confection is mostly proper, sometimes with a little opium. But the bowels are much more commonly confined, and mild cathartics should be frequently exhibited, as castor oil, rhubarb, aloes, &c.; sometimes the more active, where these do not answer. In those of a florid complexion a laxative diet, with the supertartrate of potash, or other saline cathartic occasionally, may agree better: and where the liver is torpid, mercurials should be resorted to.

III. The third object is to be attempted by tonics, particularly the aromatic bitters, the mineral acids, or the preparations of iron; by the cold bath prudently regulated; by gentle exercise steadily persevered in, particularly walking or riding on horseback; by a careful attention to the diet; by seeking a pure mild air, keeping regular hours, with relaxation and amusement of the mind, &c.

DYSPERMATI'SMUS. (*us, i.* m.; from δυς, bad, and σπερμα, seed.) Slow, or impeded emission of semen, during coition, insufficient for the purpose of generation. The species of *dyspermatismus* are,

1. *Urethralis,* when the obstruction is in the urethra.

2. *Nodosus,* when a tumour is formed in either corpus cavernosum penis.

3. *Præputialis,* when the impediment is from a straitness of the orifice of the præpuce.

4. *Mucosus,* when the urethra is obstructed by a viscid mucus.

5. *Hypertonicus,* when there is an excess of erection of the penis.

6. *Epilepticus,* from epileptic fits coming on during coition.

7. *Apractodes,* from a want of vigour in the genitals.

8. *Refluus,* in which the semen is thrown back into the urinary bladder. See *Sterility.*

DYSPHA'GIA. (*a, æ.* f.; from δυς, with difficulty, and φαγω, to eat.) A difficulty of deglutition. This may arise from a great variety of causes. The organs principally concerned in the act of swallowing, are the tongue, the parts constituting the fauces, the œsophagus; all of which, when diseased, may produce a difficulty of swallowing. It very seldom occurs as an idiopathic disease, but is common as a symptomatic and sympathetic affection. As the former, it occurs in paralytic states of the tongue, parts about the fauces and œsophagus; in enlargements, natural or diseased, of the tongue; in diminished diameter of the œsophagus, from stricture, scirrhus, ossification, carcinoma of the tongue, œsophagus, and the cardiac opening of the stomach, and from the like diseases, and others, as aneurism, bronchocele, &c. around the fauces or œsophagus; from extraneous bodies lodging in the fauces and œsophagus; in inflammation of these and neighbouring parts. Sympathetic dysphagia frequently occurs in hysteria, in tetanus, trismus, hypochondriasis, &c.

In the idiopathic disease, the uvula is relaxed and elongated, or the muscular coat of the pharynx and œsophagus is in an extremely relaxed and weak state; and the remedies are such as stimulate the œsophagus, as spices and dilute spirituous gargles, and the internal use of tonics and stimulants. In the symptomatic and sympathetic forms, the remedies must be derived from attention to the diseases of which this affection is a symptom.

DYSPHO'NIA. (*a, æ.* f.; from δυς, bad, and φονη, the voice.) Dissonant voice. Nosologists comprehend, under this generic term, those alterations or states of the voice in which the sound is imperfect or depraved; as the weak, whispering, scarcely audible voice; the change of the voice which happens about the age of puberty; the rough and harsh voice; the nasal voice; the squeaking, whizzing, guttural, palatine voice. See *Psellismus.*

DYSPHORIA. (*a, æ.* f.; from δυς, and φορεω, *gesto.*) Restlessness.

DYSPNŒ'A. (*a, æ.* f.; from δυς, difficult, and πνεω, to breathe.) *Dyspnoon.* Difficult respiration. A permanent difficulty of breathing or anhelation. There has been no small perplexity, Dr. Good observes, felt by nosologists in arranging the various diseases which are chiefly characterised by distressful breathing. The lungs, like the stomach, maintain a close connection with most of the functions of the body, and the organs which are instrumental to them: while the complaints affecting respiration, that originate in the chest, run so frequently into each other, as to require the utmost nicety in drawing the line between what ought to be regarded as genera, and what as species. There are three thoracic disorders that are particularly obnoxious to this remark: those which are described under the names of dyspnœa, orthropnœa, and asthma. Celsus, following the Greek physicians, regards them as only modi-

fications of the same malady, merely differing from each other in degree. "Each," says he, "consists in difficulty of breathing. When this difficulty is moderate and unsuffocative, it is called dyspnœa; when it is more vehement, so that the breathing is sonorous and wheezing, it constitutes asthma; and when it can only take place in an erect position, it is denominated orthropnœa. The first is usually a chronic affection, the two latter acute." Almost all the continental physicians make each affection a separate genus. Cullen makes a genus of dyspnœa, as well as of asthma, and merges orthropnœa in the former. In his first lines, he expresses doubts, whether, under almost every modification, it is to be regarded otherwise than as a vicarious or symptomatic affection.

Chronic dyspnœa, or a uniformly short and difficult breathing, is mostly accompanied by a little cough. The causes of it exist in the chest locally, or in the habit or constitution generally; they are inbred, or the result of accident, arising from organic deformity, oppression, or accidental injury, which contract the cavity of the chest, and weaken its moving powers, or curtail their action. By these causes a difficulty of breathing, very frequently, is produced. Post mortem examinations of those who have suffered from this kind of dyspnœa, have found, in most cases, some organic disease of the lungs or their membranes. In all these cases little is to be expected from our art. The most perfect tranquillity of mind and body, gentle exercise, a mild diet, with total abstinence from every kind of food that proves flatulent, and an undeviating habit of regular hours, comprises, perhaps, the whole that can be recommended by the physician, or attempted by the patient.

Sawyers, and hewers of free-stone or other fossil matters; glass-cutters, lapidaries, and workers upon metals, are often subjects of dyspnœa, from having the lungs loaded with fine pulverulent particles, detached from the materials on which they are employed, and floating in the atmosphere which surrounds them. Exposure to the vapour of mineral acids, or of metallic or other mischievous exhalations, is also frequently found to produce a permanent difficulty of breathing. The treatment of this disease, thus produced, must be regulated by the variety of the cause; but a free inhalation of oxygene gas will be serviceable in all cases, and breathing pure air, with great attention to regulate the several functions of the body, and the use of such tonics as are calculated to invigorate the body.

The breathing is sometimes permanently difficult in persons of a phlegmatic temperament, whose vascular action is very sluggish. In such persons, whatever depresses the living power will affect the breathing; and taking cold in the feet, and checking the perspiration, are almost sure so to do. Tonic and gently stimulating medicines are here decidedly useful; as the warm gums, camphire, terebinthinate preparations, bitters, and iron, and the like, combined with squills. The warm bath is also serviceable in these cases; and good exercise, with a moderately stimulating diet.

Another cause of permanent difficult respiration is corpulency. Abstinence from spirits, wines, and fermented drinks, and a scanty allowance of animal food, with strong exercise and occasional purges, are the most likely to afford relief.

Chronic difficulty of breathing appears also as a symptom or sequel in various other diseases, or affections of various other organs, especially diseased conditions of the heart and aorta.

To the permanent difficulty of breathing produced in the above-mentioned ways, it must be remarked, that the dyspnœa is occasionally very much increased, there being, as it were, paroxysms or exacerbations of it, which state is widely different from asthma. This is mostly produced by some accidental augmentation of the ordinary cause, or by some sudden excitement of body or mind, or some diseased action that is capable of uniting with the primary one, directly or remotely. In asthma, the returns are for the most part strictly periodical, and, in the intervals, the breathing is not difficult. Much good, in an increased state of dyspnœa, often is effected by position, volatile alkali, camphire, and a small blister to the chest, and unloading the bowels.

Dr. Cullen arranges dyspnœa into the eight following species:—

1. *Dyspnœa catarrhalis*, when with a cough there are copious discharges of viscid mucus: called also *asthma catarrhale*, *pneumodes*, *pneumonicum*, and *pituitosum*.

2. *Dyspnœa sicca*, when there is a cough without any considerable discharge.

3. *Dyspnœa aërea*, when much increased by slight changes of the weather.

4. *Dyspnœa terrea*, when earthy or calculous matters are spit up.

5. *Dyspnœa aquosa*, when there is a scarcity of urine and œdematous feet, without the other symptoms of a dropsy in the chest.

6. *Dyspnœa pinguedinosa*, from corpulency.

7. *Dyspnœa thoracica*, when parts surrounding the chest are injured, or deformed.

8. *Dyspnœa extrinseca*, from manifest external causes.

Dy'spnoon. See *Dyspnœa*.

Dysra'chitis. The name of a plaster.

Dystherapeutos. (From δυς, difficulty, and θεραπευω, to heal.) Difficult to heal.

DYSTHETIC. (Δυσθετικα. *Dystheticus*. An ill-conditioned state of the body.) See *Cachexia*.

DYSTHY'MIA. (*a*, *æ*. f.; from δυς, bad, and θυμος, mind.) Insanity.

DYSTO'CHIA. (*a*, *æ*. f.; from δυς, with difficulty, and τικτω, to bring forth.) Difficult labour.

DYSTŒCHI'ASIS. (*is*, *is*. f.; from δυς, bad, and στοιχος, order.) An irregular disposition of the hairs in the eyelids.

Dystome. Difficult to cleave.

DYSU'RIA. (*a, æ.* f.; from δυς, difficulty, and ουρον, urine.) Difficulty in discharging the urine. When there are frequent, painful, or uneasy urgings to discharge the urine, and it passes off only by drops, or in very small quantities, the disease is called strangury. When a sense of pain or heat attends the discharge, it passes with difficulty, and is styled ardor urinæ, heat of the urine. Dysuria is acute, or chronic. Dr. Cullen enumerates six species:—

1. *Dysuria ardens,* with a sense of heat, without any manifest disorder of the bladder.
2. *Dysuria spasmodic,* from spasm.
3. *Dysuria compressionis,* from a compression of the neighbouring parts.
4. *Dysuria phlogistica,* from violent inflammation.
5. *Dysuria calculosa,* from stone in the bladder.
6. *Dysuria mucosa,* from an abundant secretion of mucus.

The causes which give rise to these diseases are an inflammation of the urethra, occasioned either by venereal sores, or by the use of acrid injections, tumour, ulcer of the prostate gland, inflammation of the kidneys or bladder, considerable enlargements of the hæmorrhoidal veins, a lodgment of indurated fæces in the rectum, spasm at the neck of the bladder, the absorption of cantharides, applied externally, or taken internally, and excess in drinking either spirituous or vinous liquors; but particles of gravel sticking at the neck of the bladder, or lodging in the urethra, and thereby producing irritation, prove the most frequent cause. Gouty matter falling on the neck of the bladder, will sometimes occasion these complaints.

In dysury, there is a frequent inclination to make water, with a smarting pain, heat, and difficulty in voiding it, together with a sense of fulness in the region of the bladder. The symptoms often vary, however, according to the cause which has given rise to it. If it proceeds from a calculus in the kidney or ureter, besides the affections mentioned, it will be accompanied with nausea, vomiting, and acute pains in the loins and region of the ureter and kidney of the side affected. When a stone in the bladder, or gravel in the urethra, is the cause, an acute pain will be felt at the end of the penis, particularly on voiding the last drops of urine, and the stream of water will either be divided into two, or be discharged in a twisted manner, not unlike a corkscrew. If a scirrhus of the prostate gland has occasioned the suppression or difficulty of urine, a hard indolent tumour, unattended with any acute pain, may readily be felt in the perinæum, or by introducing the finger into the rectum. The cure of this disease, which is always symptomatic, requires the removal of the several causes, and the administration of those medicines and means which are recommended for the removal of the primary affection.

E.

EAGLE. See *Falco.*

Eagle stone. An argillaceous iron-stone, formerly used medicinally.

EAR. *Auris.* The organ of hearing. It is situated at the side of the head, and is divided into external and internal ear.

1. The *auricula,* or *pinna,* commonly called the ear, constitutes the external part. It is of a greater or less size, according to the individual. Its external face, which, in a well-formed ear, is a little anterior, presents five eminences, the *helix, antihelix, tragus, anti-tragus, lobula;* and three cavities, those of the *helix, fossa navicularis, concha.*

It is formed of a *fibrous cartilage,* elastic and pliant; the skin which covers it is thin and dry; adheres to the fibro-cartilage by a cellular tissue, which is compact, and contains very little adipose substance: the lobule alone contains it in considerable quantity. There are seen under the skin a number of sebaceous follicles, which furnish a micaceous white matter, that produces the polish and suppleness of the skin.

There are also seen, upon the different projections of the cartilaginous ear, certain appearances, like muscular fibres, receiving many vessels and nerves. The external ear is very sensible, and easily becomes red. It is fixed to the head by the cellular tissue, and by muscles which are called, according to their position, *anterior, superior,* and *posterior.* These muscles are much developed in many animals: in man they may be considered as simple vestiges.

The passage which leads from the external ear is called the *meatus auditorius:* it extends to the membrane of the *tympanum;* its length, variable according to the age, is from ten to twelve lines in the adult; it is narrower in the middle than at the ends; it presents a slight curve above, and in front. Its external orifice is commonly covered with hairs, like the entrance to the other cavities. It is composed of an osseous part, of a fibro-cartilaginous substance, which is confounded with that of the pinna, of a fibrous part, which completes it above. The skin sinks into it, becoming thinner, and terminates in covering the external surface of the membrane of the *tympanum.* Below this skin exists a great number of sebaceous follicles, which furnish the *cerumen,* a yellow, bitter matter.

The *middle ear* comprehends the cavity of

the tympanum, the little bones which are contained in this cavity, the mastoid cells, the Eustachian tube, &c.

The *tympanum* is a cavity which separates the external from the internal ear. Its form is that of a portion of a cylinder, but a little irregular. Its external partition presents, on the upper part, the *fenestra ovalis*, which communicates with the vestibule, and which is formed by a membrane; immediately below, a projection which is called *promontory*; below this projection, a little groove, which lodges a small nerve; still lower, an opening called the *fenestra rotunda*, which corresponds to the external winding of the cochlea: and which is also shut by a membrane. The external side presents the *membrana tympani*. This membrane is directed obliquely downward and inward: it is bent, very slender and transparent, covered on the outside by a continuation of the skin, on the inside by the narrow membrane which covers the tympanum; it is also covered on this side by the nerve called *chorda tympani*: its centre serves as a point of fixation for the extremity of the handle of the malleus; its circumference is fixed to the bony extremity of the meatus auditorius: it adheres equally in every point, and presents no opening that might admit a communication between the external and middle ear. Its tissue is dry, brittle, and has nothing analogous in the animal economy; there are neither fibres, vessels, nor nerves found in it. The circumference of the tympanum presents, in the fore part, 1st, The opening of the Eustachian tube, by which the cavity communicates with the superior part of the pharynx; 2dly, The opening by which the tendon of the internal muscle of the malleus enters. Behind are seen, 1st, The opening of the mastoid cells,—irregular winding cavities, which are formed in the mastoid process, and which are always filled with air; 2dly, The pyramid, a little hollow projection, which lodges the muscle of the *stapes*; 3dly, The opening by which the *chorda tympani* enters into the hollow of the tympanum. Below, the tympanum presents a slit, called *glenoid*, by which the tendon of the anterior muscle of the *malleus* enters, and the *chorda tympani* passes out, and goes to unite itself with the lingual nerve of the fifth pair.

Above, the circumference presents only a few small openings, by which blood-vessels pass. The cavity of the tympanum, and all the canals which end there, are covered with a very slender mucous membrane: this cavity, which is always full of air, contains besides four small bones, (the *malleus, incus, os orbiculare*, and *stapes*,) which form a chain from the membrana tympani to the fenestra ovalis, where the base of the stapes is fixed. There are some little muscles for the purpose of moving this osseous chain, of stretching and slackening the membranes to which they are attached: thus, the internal muscle of the malleus draws it forward, bends the chain in this direction, and stretches the membranes; the anterior muscle produces the contrary effect: it is also supposed that the small muscle which is placed in the pyramid, and which is attached to the neck of the *stapes*, may give a slight tension to the chain, in drawing it towards itself.

The *internal ear*, or *labyrinth*, is composed of the *cochlea*, of the *semicircular canals*, and of the *vestibule*.

The *cochlea* is a bony cavity, in form of a spiral shell, from which it has taken its name. This cavity is divided into two others, called the *gyri* of the cochlea, and which are distinguished into external and internal. The partition which separates them is a plate set edgeways, and which in its whole length is partly bony, and partly membraneous. The external gyration communicates by the fenestra rotunda with the cavity of the tympanum; the internal gyration ends in the vestibule.

The *semicircular canals* are, three cylindrical cavities, bent in a semicircular form, two of which are disposed horizontally, and the others vertically. These canals terminate by their extremities in the vestibule. They contain bodies of a grey colour, the extremities of which are terminated by swellings.

The *vestibule* is the central cavity, the point of union of all the others. It communicates with the tympanum by the fenestra ovalis, with the internal gyration of the cochlea, with the semicircular canals, and with the internal meatus auditorius, by a great number of little openings.

The whole of the cavities of the internal ear are hollowed out of the hardest part of the petrous portion of the temporal bone: they are covered with an extremely thin membrane, and are full of a very thin and limpid fluid, called *Liquor of Cotunnius*, which can flow out by two narrow apertures, known by the name of the *aquæducts of the cochlea*, and *of the vestibule*: they contain, besides, the acoustic nerve.

The *acoustic nerve* proceeds from the fourth ventricle; it enters into the labyrinth by the holes that the internal auditory meatus presents in its bottom. Having entered into the vestibule, it separates itself into a number of branches, one of which remains in the vestibule, another enters into the cochlea, and two go to the semicircular canals. Scarpa has very minutely described the distribution of these different branches in the cavities of the internal ear.

In terminating this short description, we remark that the internal and middle ear are traversed by several nervous threads, the presence of which is, perhaps, useful to hearing. It is known that the facial nerve proceeds a considerable space in a canal of the petrous portion. In this canal it receives a small thread of the vidian nerve; it furnishes the chorda tympani, which attaches itself to this membrane. There are two other nervous inosculations in the ear; to one of which Ribes called the attention of anatomists not long

since; the other was recently discovered by Jacobson.

Ear, inflammation of. See *Otitis.*

Ear-shape. See *Auriculatus.*

Ear-wax. See *Cerumen aurium.*

Earache. See *Otalgia.*

Ear'ites. Hematites, or blood-stone.

EARTH. (*Terra, æ.* f.) Although there seems to be an almost infinite variety of earthy substances scattered on the surface of this globe, yet, when we examine them with a chemical eye, we find, not without surprise, that all the earth and stones which we tread under our feet, and which compose the largest rocks, as well as the numerous different specimens which adorn the cabinets of the curious, are composed of a very few simple or elementary earths. " Analysis had shown, that the various stony or pulverulent masses which form our mountains, valleys, and plains, might be considered as resulting from the combination or intermixture, in various numbers and proportions, of nine primitive earths, to which the following names were given: —

1. Barytes. 2. Strontites. 3. Lime. 4. Magnesia. 5. Alumina, or clay. 6. Silica. 7. Glucina. 8. Zirconia. 9. Yttria. 10. Thorina.

Alkalies, acids, metallic ores, and native metals, were supposed to be of an entirely dissimilar constitution.

The discovery by Sir H. Davy, in 1808, of the metallic bases of potash, soda, barytes, strontites, and lime, subverted the ancient ideas regarding the earths, and taught us to regard them as all belonging, by most probable analogies, to the metallic class.

Chemists consider the earths to be those solid bodies composing the mineral strata, which are incombustible, colourless, not convertible into metals by all the ordinary methods of reduction, or when reduced by scientific refinements, possessing but an evanescent metallic existence, and which, either alone, or at least when combined with carbonic acid, are insipid and insoluble in water.

Earth, absorbent. See *Absorbent.*

Earth, aluminous. See *Alumina.*

Earth, argillaceous. See *Alumina.*

Earth, bolar. See *Bole.*

Earth, fuller's. See *Fuller's earth.*

Earth, heavy. See *Barytes.*

Earth, Japan. See *Acacia catechu.*

Earth, sealed. *Terra sigillata.* See *Bole.*

Earth-bath. See *Balneum—dry baths.*

Earth-nut. See *Bunium.*

Earth-worm. See *Lumbricus terrestris.*

Eau-de-luce. See *Spiritus ammoniæ succinatus.*

Eau médicinale. See *Colchicum.*

Ebel. The seeds of sage, or of juniper.

Ebe'smech. Quicksilver.

Ebi'scus. See *Hibiscus abelmoschus.*

EBRACTEA'TUS. Ebractiate: without a bractea, or floral leaf.

Ebsemech. Quicksilver.

EBULLI'TION. (*Ebullitio, onis.* f.; from *ebullio,* to bubble up.) Boiling. This consists in the change which a fluid undergoes from a state of liquidity to that of an elastic fluid, in consequence of the application of heat, which dilates and converts it into vapour.

E'BULUS. (*us, i.* f.; from *ebullio,* to make boil: so called because of its supposed use in purifying the humours of the body.) See *Sambucus ebulus.*

ECALCULATUS. Without a spur, or horn.

Ecbo'licus. (From εκϐαλλω, to cast out.) That which causes abortion.

Ecbo'lios. (From εκϐαλλω, to cast out.) Miscarriage.

Ecbra'sma. (*a, atis.* n.; from εκϐραζω, to be very hot.) *Ecchyma.* A painful fiery pimple.

Ecbra'smus. (From εκϐραζω, to become hot.) Fermentation.

Ecbyrso'ma. (*a, atis.* n.; from εκ, and βυρσα, the skin.) A protuberance of a bone at the joints, which appears through the skin.

Eccatha'rticus. (From εκκαθαιρω, to purge outwards.) According to Gorræus, eccathartics are medicines which open the pores of the skin. Sometimes expectorants are thus called, and also purgatives. An obsolete term.

Ecchylo'ma. (From εκ, and χυλος, juice.) An extract.

Ecchy'ma. (From εκχυω, to pour out.) See *Ecbrasmata.*

ECCHYMO'MA. (*a, atis.* n. Εκχυμωμα; from εκχυω, to pour out.) *Ecchymosis.* Extravasation. A black and blue swelling, either from a bruise or spontaneous extravasation of blood. It is removed by the application of leeches and cold stimulating lotions.

Ecchymoma arteriosum. The false aneurism.

ECCHYMO'SIS. See *Ecchymoma.*

E'CCLISIS. (*is, is.* f.; from εκκλινω, to turn aside.) A luxation, or dislocation.

E'CCOPE. (*e, es.* f.; from εκκοπτω, to cut off.) The cutting off any part.

Ecco'peus. (From εκκοπτω, to cut off.) An ancient instrument, the raspatory, used in trepanning.

ECCOPRO'TIC. (*Eccoproticus;* from εκ, and κοπρος, dung.) An opening medicine. The term has been generally applied to one, the operation of which is very gentle; such as manna, senna, &c.

ECCRINOCRI'TICUS. (From εκκρινω, to secrete, and κρινω, to judge.) A judgment formed from the secretions.

ECCRINO'LOGY. (*Eccrinologia, æ.* f.; from εκκρινω, to secrete, and λογος, a discourse.) The doctrine of secretions.

E'CCRISIS. (*is, is,* f.; from εκκρινω, to secrete.) A secretion of any kind.

ECCRI'TIC. (*Eccriticus;* from εκκρινω, to secern, or strain off.) Excernent; secernent: applied to diseases.

ECCYESIS. (From εκ, and κυησις, gravidity.) Extra uterine fœtation.

ECCYMO'SIS. See *Ecchymoma.*

E'CDORA. (*a, æ.* f.; from εκδερω, to excoriate.) An excoriation: and particularly used for an excoriation of the urethra.

Ecdo'rius. (From εκδερω, to excoriate.) That which excoriates and burns through the skin.

Echeco'llon. (From εχω, to have, and κολλα, glue.) *Echecollum.* Any topical glutinous remedy.

Echetro'sis. The white bryony.

ECHINATUS. (*Echinatus*, from εχινος, a hedge-hog.) Bristly; set with prickles: applied, in *Botany*, to any thing beset with bristles; as the pod of *Glycyrrhiza echinata*, and to the gourd seed-vessel, or *pepo*.

Echini'des. In Hippocrates it is mentioned as what he used for purging the womb with.

ECHINOCOCCUS. (*us, i.* m.) Rudolphi calls the small granular bodies, found in the acephalocysts, by the name of echinococci.

ECHINOPHTHA'LMIA. (*a, æ.* f.; from εχινος, a hedge-hog, and οφθαλμια, an inflammation of the eye.) An inflammation of that part of the eyelids, where the hairs bristle out like the quills of an hedge-hog.

ECHINOPO'DIUM. (*um, ii.* n.; from εχινος, a hedge-hog, and πους, a foot: so named because its flowers resemble the foot of an urchin.) A species of broom, probably the *Spartium scoparium*.

ECHI'NOPS. (*ops, opis.* m.; from εχινος, as beset with prickles.) The name of a genus of plants. Class, *Syngenesia*; Order, *Polygamia segregata*.

Echinops sphærocephalus. The systematic name of the globe-thistle; called also, *Crocodilion, Acanthalruca, Scabiosa carduifolia, Sphærocephala elatis*, and *Echinopus*. It is raised in our gardens. The root and seeds are moderately diuretic, but seldom used.

Echi'nopus. See *Echinops*.

ECHI'NUS. (*us, i.* m.) 1. In *Zoology*, the hedge-hog. See *Erinaceus*.

2. In *Botany*, formerly applied to several plants, which were beset with spines or thorns.

3. A genus in the Linnæan system, included in the molusca order of vermes.

4. The calcareous petrifaction of the sea hedge-hog.

5. The prominent points on the surface of the *pileus*, or upper part of the mushroom tribe, are called *echini*. See *Fungus*.

Echinus marinus. The sea hedge-hog, or urchin, the petrified spine of which is called amygdaloides, from its shape.

ECHIOIDES. (From εχις, a viper, and ειδος, resemblance.) The trivial name of some plants, from their supposed resemblance to the *Echium*.

E'CHIUM. (*um, ii.* n.; from εχις, a viper: so called because it was said to heal the stings of vipers. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*. Viper's bugloss.

Echium ægyptiacum. Wall bugloss, the root of which is sudorific, and is used with oil as a dressing for wounds.

E'CHOS. Ηχος. Sound. In Hippocrates it signifies the same as the tinnitus aurium, or noise in the ears.

E'CHYSIS. (*is, is.* f.; from εχυω, to pour out.) A fainting or swooning.

ECLA'MPSIA. (From εκλαμπω, to shine.) See *Eclampsis*.

ECLA'MPSIS. (*is, is.* f.; from εκλαμπω, to shine.) *Eclampsia.* Splendour, brightness, effulgence, flashing of light, scintillation.

1. Applied to the flashing light, or those sparklings which strike the eyes of epileptic patients.

2. The epilepsy itself.

ECLE'CTIC. (*Eclecticus*; from εκλεγω, to select.) Archigenes and some others selected from all other sects what appeared to them to be the best and most rational: hence they were called *Eclectics*, and their medicine *Eclectic medicine*.

ECLE'CTOS. (From εκλειχω, to lick up.) A linctus, or soft medicine, like an electuary, to be licked up.

ECLE'GMA. (From εκλειχω, to lick.) *Eclectos. Eclcictos.* A linctus, or form of medicine made by the incorporation of oils with syrups, and which is to be taken upon a liquorice stick.

E'CLYSIS. (*is, eos.* f.; from εκλυω, to dissolve.) An universal faintness.

ECMA'GMA. (*a, atis.* n.; from εκμασσω, to form together.) A mass of substances kneaded together.

Ecpepie'menos. (From εκπιεζω, to press out.) An ulcer with protuberating, or high lips.

ECPHLYSIS. (*is, is.* f. Εκφλυσις; from εκφλυζω, to boil, or bubble up, or over.) A vesicular eruption.

ECPHRA'CTIC. (*Ecphracticus*; from εκφρασσω, to remove obstructions.) That which attenuates tough humours, so as to promote their discharge.

ECPHRA'XIS. (*is, is.* f.; from εκφρασσω, to remove obstruction.) A perspiration; an opening of obstructed pores.

ECPHRONIA. (*a, æ.* f. Εκφρωνη, or εκφροσυνη; from εκφρων, *extra mentem*, out of one's mind.) Insanity and craziness.

E'cphyas. (From εκ, and φυω, to produce.) 1. An appendix, or excrescence.

2. The appendicula cæci vermiformis.

ECPHYMA. (*a, atis.* n.; from εκφυω, *educo, egero.*) A cutaneous excrescence.

E'cphyse. (From εκφυσαω, to blow out.) Flatus from the bladder through the urethra or vagina.

Ecphyse'sis. (From εκφυσαω, to breathe through.) A quick expulsion of the air from the lungs.

E'cphysis. (From εκφυω, to produce.) An apophysis, appendix, or process.

Ecpie'sma. (From εκπιεζω, to press out.) A fracture of the skull, in which the bones press inwardly.

Ecpie'smos. (From εκπιεζω, to press out.) A disorder of the eye, in which the globe is almost pressed out of the socket by an afflux of humours.

Ecplero'ma. (From εκπληροω, to fill.) In Hippocrates they are hard balls of leather, or other substances, adapted to fill the armpits, while by the help of the heels, placed against the balls, and repressing the same, the luxated os humeri is reduced into its place.

ECPLE'XIS. (*is, is.* f.; from εκπλησσω, to terrify or astonish.) A stupor or astonishment, from sudden external accidents.

E'cpnoe. (From εκπνεω, to breathe.) Expiration.

ECPTO'MA. (From εκπιπτω, to fall out.) *Ecptosis.* A falling down of any part: applied to a luxation; the expulsion of the placenta; the falling off of gangrenous parts; to hernia of the uterus, &c.

Ecpy'cticus. (From εκπυκαζω, to condense.) Rendering the fluids more solid.

ECPYE'MA. (*a, atis.* n.; from εκ, and πυον, pus.) A collection of pus.

ECPYESIS. (*is, is.* f.; from εκπυω, to suppurate.) Humid scalp.

Ecre'gma. (From εκρηγνυμι, to break.) A rupture.

Ecre'xis. (From εκρηγνυμι, to break.) A rupture: applied by Hippocrates to a rupture or laceration of the womb.

Ecrhy'thmos. (From εκ, and ρυθμος, harmony.) Irregular: formerly applied to the pulse.

E'croe. (From εκρεω, to flow out.) An efflux, or the course by which any humour which requires purging is evacuated.

Ecrueles. The French for scrophula.

E'crysis. (From εκρεω, to flow out.) In Hippocrates it is an efflux of the semen before it receives the conformation of a fœtus, and therefore is called an efflux, to distinguish it from abortion.

ECSARCO'MA. (*a, atis.* n.; from εκ, and σαρξ, flesh.) A fleshy excrescence.

E'CSTASY. (*Ecstasis, eos.* f. Εκστασις; from εξισταμαι, to be out of one's senses.)

1. An ecstasy. This disease consists in a total suspension of sensibility and voluntary motion, mostly of mental power; the muscles are rigid, the body erect and inflexible, and the pulsation of the heart is felt, and the breathing not affected. The causes of this nervous disease are mostly some mental affection. It differs from catalepsy and trance in the inflexible and rigid state of the muscles, and the obvious continuance of the breathing, and the heart's action. It occasionally exists with a plethoric state of the blood-vessels; in which case bleeding and depletions are found useful. In other more obviously nervous states, the nervous stimulants and aperients are to be preferred.

2. In Hippocrates it signifies a delirium.

Ecstro'phius. (From εκστρεφω, to invert.) An obsolete epithet for any medicine that makes the blind piles appear outwardly.

Ecthely'nsis. (From εκθηλυνω, to render effeminate.) Softness. Applied formerly to the skin and flesh, when lax and soft, and to bandages, when not sufficiently tight.

Ecthli'mma. (From εκθλιβω, to press out against.) An ulceration caused by pressure of the skin.

Ecthli'psis. (From εκθλιβω, to press out against.) Elision, or expression. It is spoken of swelled eyes, when they dart forth sparks of light.

E'CTHYMA. (*a, atis.* n. Εκθυειν, to rage, or break forth with fury.) An eruption of phlyzacious pustules, which are usually distinct, arising at a distance from each other, seldom very numerous, unaccompanied by fever, and not contagious.

This eruption does not very frequently alone demand the assistance of medicine. It shows itself under three or four varieties, and is usually attributed to long continued exertion and fatigue, to much watching, to imperfect nutriment, to the influence of cold, to a state of pregnancy, or to the debilitating effects of previous malignant fevers, especially of small-pox, measles, and scarlatina. It occurs chiefly on the extremities. The diagnosis of this eruption, from the contagious pustular diseases, as well as from some of the secondary appearances of syphilis, is of considerable importance in practice, and renders it necessary to notice this genus.

1. The *Ecthyma vulgare* is the slightest form of the disorder, and consists of a partial eruption of small hard pustules, on some part of the extremities, or on the neck and shoulders, which is completed in three or four days. In the course of a similar period, the pustules successively enlarge, and inflame highly at the base, while pus is formed in the apex; and in a day or two more they break, pour out their pus, and afterwards a thinner fluid, which speedily concretes into brown scabs. In a week more, the soreness and inflammation subside, and the scabs soon afterwards fall off, leaving no mark behind.

This eruption commonly supervenes a state of languor, of some continuance, with loss of appetite, irregularity of the alvine evacuations, and pains in the stomach or limbs. Young persons are principally subject to it, and children are sometimes affected with it, especially in the spring or summer, after being over-heated, or fatigued, or disturbing the digestive organs by improper food. The constitutional derangement is not immediately relieved on the appearance of the eruption, but ceases before its decline. The use of gentle purgatives, in the early stage, and of the decoction of cinchona, after the maturation of the pustules, appears to comprehend all that is requisite in regard to medicine.

2. The *Ecthyma infantile* occurs in weakly infants, during the period of lactation, when an insufficient nutriment is afforded them. The pustules are, in appearance, the same as those of the preceding species, and go through similar stages of progress in the same time. But the disorder does not terminate here: fresh eruptions of phlyzacia continue to rise in succession, and to a much greater extent than in the ecthyma vulgare, appearing not only over the extremities and trunk, but on

the scalp, and even on the face; in which situation the pustules do not occur in the other varieties of ecthyma. Hence, also, the duration of the eruption is much greater than in the preceding species, being sometimes protracted for several months. Yet the patients usually remain free from fever, and the pain and irritation seem to be inconsiderable, except when a few of the pustules become very large and hard, with a livid base, and ulcerate to some depth: in this case, also, a slight whitish depression is permanently left on the seat of the pustule.

The principal means of cure will be found in changing the nurse; and the advantages of better aliment will be aided by proper clothing and exercise, as well as by moderate alteratives, and by the cinchona, or chalybeates.

3. *Ecthyma luridum.* The most obvious peculiarity of this variety of the phlyzacious pustules, is the dark red colour of their base, which is likewise hard and elevated. But they differ also from the two preceding varieties, in being of a larger size; and from the first, in the slow but long succession in which they arise, and in the extent of surface over which they spread, the face alone being exempt from their occurrence. This form of the disease is most frequently seen in persons of an advanced age, who have injured their constitutions by hard labour, intemperance in the use of spirits, and night-watching; and it is most severe in the winter season. Under these circumstances, the pustules, as might be expected, are slow in healing. They break in the course of eight or ten days, and discharge a curdly, sanious, or bloody matter: the ulcerated cavities, extending beyond the original boundary, soon become filled with hard, dark scabs, and remain surrounded by a deep-seated hardness in the flesh, and dark, inflamed borders, until the scabs are about to separate; a period generally of several weeks, and sometimes of many months. The scabs are commonly firmly seated; but if removed by violence, they are not speedily reproduced: on the contrary, tedious ulcers, with callous edges and a sanious discharge, are often thus produced.

The treatment must be chiefly directed to the amendment of the constitution, by means of good diet, by the occasional use of the warm bath, and by the bark and vegetable decoctions internally.

Ectillo'ticus. (From εκτιλλω, to pull out.) That which eradicates tubercles or corns, or destroys superfluous hair.

ECTO'PIA. (*a, æ.* f.; from εκτοπος, out of place.) Displaced: applied to the viscera mostly.

Ectopiæ. Parts displaced. An order in the class *Locales* of Cullen's Nosology.

Ectrapeloga'stros. (From εκτρεπομαι, to degenerate, and γαστηρ, a belly.) One who has a monstrous belly.

Ectri'mma. (From εκτριβω, to rub off.) An excoriation.

E'ctrope. (From εκτρεπω, to divert, pervert, or invert.) 1. A duct by which the humours are diverted and drawn off.

2. In Paulus Ægineta it is the same as *Ectropium*.

ECTRO'PIUM. (*um, ii.* n.; from εκτρεπω, to evert.) An eversion of the eye-lids, so that their internal surface is outermost.

There are two species of this disease: one produced by an unnatural swelling of the lining of the eyelids, which not only pushes their edges from the eyeball, but also presses them so forcibly, that they become everted; the other arising from a contraction of the skin covering the eyelid, or of that in the vicinity, by which means the edge of the eyelid is first removed for some distance from the eye, and afterwards turned completely outward, together with the whole of the affected eyelid.

The morbid swelling of the lining of the eyelids, which causes the first species of ectropium, arises mostly from a congenital laxity of this membrane, afterwards increased by chronic ophthalmies, particularly of a scrophulous nature, in relaxed, unhealthy, subjects; or else the disease originates from the small-pox affecting the eyes.

The second species is not unfrequently a consequence of puckered scars, produced by a confluent small-pox, deep burns, or the excision of tumours, without saving a sufficient quantity of skin. This disease is only to be cured by a surgical operation. Caustics have been tried by Mr. Ware, Scarpa, and many able surgeons; but, they all acknowledge, with uncertain effect. The operation proposed and practised by Sir William Adams is now generally resorted to. It consists, first, in removing the whole of the fungous growth by a small curved bistoury; next, in stripping away a piece of the edge of the tarsus, in the form of the letter V; afterwards, in separating the eyelid from the cheek, whenever it adheres to it; and, finally, in supporting the lid, now raised into the proper place, and confining the edges of the cut eyelid, brought in a state of juxtaposition by a proper bandage. The divided edges heal by the first intention; and the cure is often completed in a fortnight, with a restoration of the eyelid to its healthy form.

ECTRO'SIS. (*is, is.* f. Εκτρωσις; from εκτιτρωσκω, to miscarry.) A miscarriage.

Ectro'ticus. (From εκτιτρωσκω, to miscarry.) *Ectyroticus, Ectyloticus.* Causing an abortion.

Ectylo'ticus. See *Ectilloticus.*

Ectyro'ticus. See *Ectroticus.*

ECZE'MA. (From εκζεω, to boil out.) *Eczesma.* A cutaneous disease, characterised by an eruption of small vesicles on various parts of the skin, usually set close or crowded together, with little or no inflammation round their bases, and unattended by fever. It is not contagious.

This eruption is generally the effect of irritation, whether internally or externally ap-

plied, and is occasionally produced by a great variety of irritants, in persons whose skin is constitutionally very irritable. It differs from miliaria, inasmuch as it is not the result of fever, and, unless it be very extensively diffused, is not accompanied with any derangement of the constitution: even in the most violent cases, the functions of the sensorium and of the stomach are seldom disturbed. When limited to the fingers, hands, and part of the fore-arm, it is not unfrequently mistaken for itch: but it may be distinguished by the appearance of its acuminated and pellucid vesicles; by the closeness and uniformity of their distribution; by the absence of surrounding inflammation, and of subsequent ulceration; and, in many cases, by the sensations of smarting and tingling, rather than of itching, which accompany them. According to the nature of the irritating cause, the extent and form of the disease are somewhat various. One of the most common species is the,

1. *Eczema solare*, which occurs in the summer season, and is the effect of irritation from the direct rays of the sun, or from the heated air. Hence it affects almost exclusively those parts of the surface which are exposed to their influence; as the face, the neck, and fore-arms in women, but more particularly the back of the hands and fingers. They are popularly termed *heat-spots*.

This eruption is successive, and has no regular period of duration or decline: it commonly continues for two or three weeks, without any particular internal disorder. The included lymph becomes more milky, and is gradually absorbed, or dried into brownish scales, which exfoliate, or into brownish yellow scabs, of the size of a small pin's head, especially when the vesicles are broken. But successive eruptions of the vesicles are liable to appear, which terminate in a similar manner by exfoliation or scabbing; and in those persons who, by the peculiar irritability of their skin, are much predisposed to the disorder, it is thus continued many weeks, to the end of autumn, or even prolonged to the winter. When this happens, the vesicles generally pour out an acrid serum, by which the surface is inflamed, rendered tender, and even slightly ulcerated, and the disease assumes the form of impetigo.

The course of this disorder does not appear to be materially shortened by the operation of medicine. The mineral acids, with a decoction of cinchona, or other vegetable tonic, and a light but nutritious diet, seem to be most effectual in diminishing the eruption. Simple ablution with tepid water contributes to relieve the smarting and tingling of the parts affected, which do not bear unguents, or any stimulant application.

2. *Eczema impetiginodes*. A local eczema is produced by the irritation of various substances; and, when these are habitually applied, it is constantly kept up in a chronic form, differing from the impetigo only in the absence of pustules. Small separate vesicles, containing a transparent fluid, and, like the psydracious pustules, but slightly elevated, arise, and slowly increase: they are attended with pain, heat, smarting, and often with intense itching. When they break, the acrid lymph that is discharged irritates and inflames the surrounding cuticle, which becomes thickened, rough, reddish, and cracked, as in the impetiginous state. The alliance, indeed, of this affection with impetigo is further proved by the circumstance, that, in some cases, vesicles and pustules are intermixed with each other; and, in different individuals, the same irritant will excite a pustular or a vesicular eruption respectively; the vesicular disease being always the most painful and obstinate.

The first step towards the cure of this species of eczema, is to remove the irritating cause, where that is obvious. The eruption, however, is not easily removed: but the painful sensations connected with it are greatly alleviated by simple poultices, and by frequently washing the parts with warm gruel, and milk or bran and water. Where there is any other evidence of a cachectic condition of the patient, similar treatment must be prescribed for the improvement of the general health, as is recommended in ecthyma.

3. *Eczema rubrum*. The most remarkable variety of the eczema rubrum, is that which arises from the irritation of mercury; whence it has been called *eczema mercuriale*, and *erythema mercuriale*, and *hydrargyria*. But the disease is not exclusively occasioned by this mineral, either in its general or more partial attacks: it has been observed to follow exposure to cold, and to recur in the same individual at irregular intervals, sometimes without any obvious or adequate cause.

It is preceded by a sense of stiffness, burning heat, and itching, in the part where it commences, which is most frequently the upper and inner surface of the thighs, and about the scrotum in men; but sometimes it appears first in the groins, axillæ, or in the bend of the arms, or about the wrists and hands, or in the neck. These sensations are soon followed by an appearance of redness, and the surface is somewhat rough to the touch. This, however, is not a simple erythema: for on examining it minutely between the light and the eye, or with a convex glass, the roughness is found to be occasioned by innumerable minute and pellucid vesicles, which have been mistaken for papulæ. In two or three days, these vesicles, if they are not ruptured, attain the size of a pin's head; and, the included serum then becoming somewhat opake and milky, the character of the eruption is obvious. It soon extends itself over the body and limbs in successive large patches, and is accompanied by a considerable swelling of the integuments, such as is seen in small-pox, and other eruptive fevers, and by great tenderness of the skin, and much itching. When the vesicles begin to lose

their transparency, they generally burst, and discharge, from numerous points, a thin acrid fluid, which seems to irritate the surface over which it passes, and leaves it in a painful, inflamed, and excoriated condition. The quantity of this ichorous discharge is very considerable, and it gradually becomes thicker and more adhesive, stiffening the linen which absorbs it, and which thus becomes a new source of irritation: it emits also a very fœtid odour. This process takes place in the successive patches of the eruption, until the whole surface of the body, from head to foot, is sometimes in a state of painful excoriation, with deep fissures in the bends of the joints, and in the folds of the skin of the trunk; and with partial scaly incrustations, of a yellowish hue, produced by the drying of the humour, by which also the irritation is augmented. The extreme pain arising from the pressure of the weight of the body upon an extensive portion of such a raw surface, is sufficient to give rise to an acceleration of the pulse, and white tongue; but the functions of the stomach and of the sensorium commune are not evidently disturbed by this disease.

The duration of this excoriation and discharge is uncertain and irregular: when only a small part of the body is affected, it may terminate in ten days; but when the disorder has been universal, the patient seldom completely recovers in less than six weeks, and is often afflicted to the end of eight or ten weeks. By so severe an inflammation, the whole epidermis is destroyed in its organisation; and when the discharge ceases, it lies loose, assuming a pale brown colour, which changes almost to black before it falls off in large flakes. As in other superficial inflammations, however, the new red cuticle that is left is liable to desquamate again, even to the third or fourth time, but in smaller branny scales, of a white colour; and a roughness sometimes remains for a considerable period, like a slight degree of psoriasis. In some instances, not only the cuticle, but the hair and nails are also observed to fall off; and the latter, when renewed, are incurvated, thickened, and furrowed, as in lepra.

The eczema rubrum, however, even from the irritation of mercury, is often limited to a small space; and then the discharge is slight, and its whole duration short. Similar local attacks of it occur in irritable constitutions, especially in hot weather, affecting the hands and wrists, the neck and external ear, and other parts, but without any constitutional disorder. Successive crops of the vesicles arise, in irregular patches, with a red blush around them, which produce partial incrustations, as the ichor, that issues, is dried: and by these vesications and desiccations of the matter the affection is kept up for some weeks.

The treatment of this species of eczema may be comprised in few words; for it is principally palliative. But although medicine may not possess the power of shortening the period of its duration, yet the omission of the palliative measures will allow an extreme aggravation of the sufferings of the patient to take place, and probably prolong it beyond its natural course, as well as contribute to wear out the vigour of his constitution.

The misery and exhaustion resulting from the excessively tender and irritated state of the skin, may be greatly alleviated by frequent ablution or fomentation with warm gruel, or strained bran and water; or by the frequent use of the warm bath, which has the advantage of cleansing the surface, without occasioning any abrasion by friction. A constant application of poultices has produced considerable ease to the patient, when the affection was confined to the extremities. Where the cuticle has exfoliated, Mr. Pearson recommends the application of a mild cerate, consisting of litharge plaster, wax, and oil, spread thickly on linen rollers, and renewed twice a day. With the same view of diminishing the irritation of the surface, the bed and body linen of the patient, which becomes hard and stiff as the discharge dries upon it, should be frequently changed.

Every additional irritation from stimulating food and drink should be avoided; the bowels should be kept open by the administration of occasional laxatives; and some saline diaphoretic, or an antimonial, should be given regularly, to which an opiate may be added, for the purpose of soothing the sensations of the patient. The sulphuric acid is grateful and refreshing; and, in the decline of the swelling and discharge, it may be conbined advantageously with the liberal exhibition of cinchona and sarsaparilla.

Eczema mercuriale. See *Eczema.*

Ede'lphus. The prognosis of a disease from the nature of elements.

E'des. Amber.

Ede'ssenum. An eye-water of tragacanth, gum-arabic, opium, &c.

E'detz. Amber.

E'dic. *Edich; Edir.* Iron.

E'dra. A fracture; also the lower part of the rectum.

EDULCORANT. (*Edulcorans*; from *edulco*, to make sweet.) A medicine which purifies the fluids, by depriving them of their acrimony.

EEL. See *Muræna anguilla.*

Eel, conger. See *Muræna conger.*

EFFERVESCENCE. (*Effervescentia*, *æ.* f.; from *effervesco*, to grow hot.)

1. That agitation which is produced by mixing substances together, which cause the evolution of a gas.

2. A small degree of ebullition.

E'ffides. Cerusse.

E'ffila. Freckles.

EFFLORESCENCE. (*Efflorescentia*, *æ.* f.; from *effloresco*, to blow as a flower.)

1. In *Pathology*, a morbid redness of the skin.

2. In *Chemistry*, that effect which takes place when bodies spontaneously become converted into a dry powder. It is almost al-

ways occasioned by the loss of the water of crystallisation in saline bodies.

3. In *Botany*, the blooming of flowers, and the time of flowering.

EFFLU'VIUM. (*um, ii.* n.; from *effluo*, to spread abroad.) See *Contagion*.

Effractu'ra. (From *effringo*, to break down.) A fracture, in which the bone is much depressed by the blow.

EFFUSION. (*Effusio, onis.* f.; from *effundo*, to pour out.) In *Pathology*, it means the escape of any fluid out of the vessel, or viscus, naturally containing it, and its lodgment in another cavity, in the cellular substance, or in the substance of parts. Effusion also sometimes signifies the morbid secretion of fluids from the vessels; thus physicians frequently speak of coagulable lymph being effused on different surfaces.

EGERAN. A sub-species of pyramidal garnet, of a reddish brown colour.

Ege'ries. (From *egero*, to carry out.) *Egestio*. An excretion, or evacuation.

EGG. *Ovum*. This word comprehends the ovum of all birds, and also that of all oviparous animals.

I. *Of the Egg of the Domestic Fowl or Hen.*

The form of this is somewhat oval, larger at one extremity than the other, which is more pointed. It is of a white colour mostly, and about two inches long, and one and a half in its broadest diameter, weighing generally about two ounces.

The parts of which an egg are composed are, the shell, the membranes, and the semifluid substances.

1. The *shell*. This is a calcareous investment, the *cortex* or *putamen* of old anatomists. It is secreted from the internal surface of that part of the oviduct which is called the uterus. It adheres firmly to the external membrane of the egg, and is of the thickness of the nail of our thumb. It is composed of carbonate of lime principally, with a little phosphate, and the particles are held in connection by a little gelatine. This part of the hen's egg was formerly much esteemed in the cure of diseases, as an antacid and absorbent; and even in the present day, *testæ ovarum* are directed in fine powder by old practitioners, in the dose of from one to three scruples.

2. The *external membrane*. Blumenbach calls this *membrana albuminis*. It possesses exactly the form of the shell, which adheres firmly to it like a lining. It is very delicate and smooth on the side next to the egg. It is composed of two laminæ, which at the great end of the egg are separate, thus forming a space: this space is called the *folliculus æris*, or *air-cell*.

3. The semifluid substances are the white and the yolk, which together form nearly the whole bulk of the egg.

a. The white was called, by Aristotle, *albitudo ovi;* by Pliny, *liquor albus ovi;* by Celsus, *candidum ovi;* by Apicius, *album et albimentum ovi;* and by Fabricius, *ab aquapendente, albumen:* which latter name is now generally used. This part of the egg is a white, viscid, tenacious, semifluid mass, commonly called the white of the egg. It does not float about promiscuously through the egg, but adheres to the membrane lining the small end of the egg, and always preserves its proper relative position to the yolk. In its natural state, it has little taste or smell. When spread thin and slowly over any body, it forms a varnish similar to what is made from gum-acacia. It soon putrefies, unless dried; in which state it may be preserved for any length of time. It is insoluble in alkohol and æther. Acids do not dissolve it, unless it be coagulated, and heat employed. When mixed by agitation with water, and alkalies are added, no apparent change takes place; but if a concentrated solution of pure potash be triturated with the white of the egg for some time, and then allowed to be at rest, a coagulation gradually takes place. It then hardens; and, at a particular period of its drying, it resembles very much the crystalline lens of the eye. When quite dry, it is brittle and transparent.

According to the chemical analysis which has been made of the white of the egg, 100 parts of it contain 80 of water, 4·5 of uncoagulable matter, and 15·5 of pure albumen. By distillation it affords water, carbonate of ammonia, and empyreumatic oil; a coal remaining in the retort, which yields soda and phosphate of lime.

The white of the egg is well known to be coagulable by heat, acids, and alkohol.

b. The yolk, or yellow, is called *vitellus*. It is the spherical mass which occupies the centre of the egg, and is surrounded by the white. It is smaller in quantity than the white. It is usually of a bright yellow colour. The substances into which the yolk of eggs is resolvable are, water, oil, albumen, and gelatine. If, after being boiled, the yolk be heated in a pan, it softens; and when squeezed between the fingers, drops of oil exude: if put into linen in this state and pressed, an oil will be forced out. This oil is of a yellow colour, and insipid. Its properties are those of fixed oil, or rather of semifluid fat. The residue, after the separation of the oil, possesses the properties of albumen.

The *vitellus ovi* is used in the preparation of some medicines, to combine some of its articles, and give a smoothness to the mixture: in this way it is employed in the *Julepum vitæ Bateanum* in emulsions, with resin, oil, camphire, and various linctuses: but its principal use is as an article of diet, either alone, variously dressed, or entering into almost every pudding, custard, forced meat, and a vast variety of other alimentary articles.

II. *Of the Eggs of the Human Ovarium.*

The vesicles in the ovarium of females are called the eggs, *ova*, or *ovula*. When fecundation takes place in one or more of these, they pass, after a short time, along the Fallopian tube into the uterus.

"*Development of the ovum in the uterus.*— The ovum, in the first moments of its abode in the uterus, is free and unattached; its volume is nearly that which it had in quitting the ovarium; but, in the course of the second month, its dimensions increase, it becomes covered with filaments of about a line in length, which ramify in the manner of blood-vessels, and are implanted into the *decidua*. In the third month they are seen only on one side of the ovum, the others have nearly disappeared; but those which remain have acquired a greater extent, thickness, and consistence, and are more deeply implanted into the deciduous membrane; taken together, they form the *placenta*. The ovum, in the rest of its surface, presents only a soft flocculent layer called *decidua reflexa*. The ovum continues to increase until the end of pregnancy, when its volume is nearly equal to that of the uterus; but its structure suffers important changes, which we will examine.

At first its two membranes have yielded to its enlargement, whilst becoming thicker or more resisting: the exterior is called *chorion*; the other *amnion*. The liquid contained by the latter augments in proportion to the volume of the ovum. In the second month of pregnancy there exists also a certain quantity of liquid between the chorion and amnion, but it disappears during the third month.

Up to the end of the third week, the ovum presents nothing indicative of the presence of the germ; the contained liquid is transparent, and partly coagulable as before. At this period there is seen, on the side where the ovum adheres to the uterus, something slightly opake and gelatinous, all the parts of which appear homogeneous; in a short time, certain points become opake, two distinct vesicles are formed, nearly equal in volume, and united by a pedicle, one of which adheres to the amnion by a small filament. Almost at the same time a red spot is seen in the midst of this last, from which yellowish filaments are seen to take their rise: this is the heart, and the principal sanguiferous vessels. At the beginning of the second month, the head is very visible, the eyes form two black points, very large in proportion to the volume of the head; small openings indicate the place of the ears and nostrils; the mouth, at first very large, is contracted afterwards by the development of the lips, which happens about the sixtieth day, with that of the ears, nose, extremities, &c.

The development of all the principal organs happens successively until about the middle of the fourth month; then the state of the *embryo* ceases, and that of the *fœtus* begins, which is continued till the termination of pregnancy. All the parts increase with more or less rapidity during this time, and draw towards the form which they must present after birth. Before the sixth month, the lungs are very small, the heart large, but its four cavities are confounded, or at least difficult to distinguish; the liver is large, and occupies a great part of the abdomen; the gall-bladder is not full of bile, but of a colourless fluid, not bitter; the small intestine, in its lower part, contains a yellowish matter, in small quantity, called *meconium*; the testicles are placed upon the sides of the superior lumbar vertebræ; the ovaria occupy the same position. At the end of the seventh month, the lungs assume a reddish tint which they had not before; the cavities of the heart become distinct; the liver preserves its large dimensions, but removes a little from the umbilicus; the bile shows itself in the gall-bladder; the meconium is more abundant, and descends lower in the great intestine; the ovaria tend to the pelvis; the testicles are directed to the inguinal rings. At this period the fœtus is capable of life, that is, it could live and breathe if expelled from the uterus. Every thing becomes more perfect in the eighth and ninth months. We cannot here follow the interesting details of this increase of the organs; they belong to anatomy: we shall consider the physiological phænomena that relate to them.

Functions of the ovum, and of the fœtus.— The ovum begins to grow as soon as it arrives in the cavity of the uterus; its surface is covered with asperities that are quickly transformed into sanguiferous vessels; there is then life in the ovum. But we have no idea of this mode of existence; probably the surface of the ovum absorbs the fluids with which it is in contact, and these, after having undergone a particular elaboration by the membranes, are afterwards poured into the cavity of the amnion.

What was the germ before its appearance? Did it exist, or was it formed at that instant? Does the little almost opake mass that composes it contain the rudiments of all the organs of the fœtus and the adult, or are these created the instant they begin to show themselves? What can be the nature of a nutrition so complicated, so important, performed without vessels, nerves, or apparent circulation? How does the heart move before the appearance of the nervous system? Whence comes the yellow blood that it contains at first? &c. &c. No reply can be given to any of these questions in the present state of science.

We know very little of what happens in the embryo, whose organs are only yet rudely delineated; nevertheless, there is a kind of circulation recognised. The heart sends blood into the large vessels, and into the rudimentary placenta; probably blood returns to the heart by veins, &c.— But when the new being has reached the fœtal state, as most of the organs are very apparent, then it is possible to recognise some of the functions peculiar to that state.

The circulation is the best known of the functions of the fœtus: it is more complicated than that of the adult, and is performed in a manner quite different.

In the first place, it cannot be divided into venous and arterial; for the fœtal blood has

sensibly every where the same appearance, that is, a brownish red tint: in other respects, it is much the same as the blood of the adult; it coagulates, separates into clot and serum, &c. Some learned chemists have believed that it does not contain fibrin.

The placenta is the most singular and one of the most important organs of the circulation of the fœtus; it succeeds to those filaments which cover the ovum during the first months of pregnancy. Very small at first, it soon acquires a considerable size. It adheres, by its exterior surface, to the uterus, presents irregular furrows, which indicate its division into several lobes or *cotyledons*, the number and form of which are not determined. Its fœtal surface is covered by the chorion and amnion, except at its centre, into which the umbilical cord is inserted. Its parenchyma is formed of sanguiferous vessels, divided and subdivided. They belong to the divisions of the umbilical arteries, and to the radicals of the vein of the same name. The vessels of one lobe do not communicate with those of the adjoining lobes: but those of the same *cotyledon* anastomose frequently, for nothing is more easy than to make injections pass from one to another.

The *umbilical cord* extends from near the centre of the placenta to the umbilicus of the child; its length is often near two feet; it is formed by the two umbilical arteries and the vein, connected by a very close cellular tissue, and it is covered by the two membranes of the ovum.

In the first months of pregnancy, a vesicle, which receives small vessels, being a prolongation of the mesenteric artery and the meseraic vein, is found in the body of the cord, between the chorion and the amnion, near the umbilicus. This vesicle is not analogous to the *allantoid;* it represents the membranes of the yolk of birds and reptiles, and the umbilical vesicle of the *mammalia*. It contains a yellowish fluid, which seems to be absorbed by the veins of its parietes.

The umbilical vein, arising from the placenta, and then arriving at the umbilicus, enters the abdomen, and reaches the inferior surface of the liver; there it divides into two large branches, one of which is distributed to the liver, along with the *vena porta*, whilst the other soon terminates in the *vena cava* under the name of *ductus venosus*. This vein has two valves, one at the place of its bifurcation, and the other at the junction with the vena cava.

The heart and large vessels of the fœtus capable of life, are very different from what they become after birth: the valve of the vena cava is large; the partition of the auricles presents a large opening, provided with a semilunar valve, called *foramen ovale*. The pulmonary artery, after having sent two small branches to the lungs, terminates almost immediately in the aorta, in the concave aspect of the arch; it is called, in this place, *ductus arteriosus*.

The last character proper to the circulating organs of the fœtus, is the existence of the *umbilical arteries*, which arise from the internal iliacs, are directed over the sides of the bladder, attach themselves to the *urachus*, pass out of the abdomen by the umbilicus, and go to the placenta, where they are distributed as just mentioned.

According to this disposition of the circulating apparatus of the fœtus, it is evident that the motion of the blood ought to be different in it from that in the adult. If we suppose that the blood sets out from the placenta, it evidently passes through the umbilical vein as far as the liver; there one part of the blood passes into the liver, and the other into the vena cava; these two directions carry it to the heart by the inferior vena cava; being arrived at this organ, it penetrates into the right auricle, and into the left by the *foramen ovale*, at the instant in which the auricles are dilated. At this intstant, the blood of the inferior vena cava is inevitably mixed with that of the superior. How, indeed, could two liquids of the same nature, or nearly so, remain isolated in a cavity in which they arrive at the same time, and which contracts to expel them? However it may be, the contraction of the auricles succeeds their dilatation; the blood is thrown into the two ventricles the instant they dilate; these, in their turn, contract, and drive out the blood, the left into the aorta, and the right into the pulmonary artery; but as this artery terminates in the aorta, it is clear that all the blood of the two ventricles passes into the aorta, except a very small portion that goes to the lungs. Under the influence of these two agents of impulsion, the blood is made to flow through all the divisions of the aorta, and returns to the heart by the venæ cavæ. Lastly, it is carried to the placenta by the umbilical arteries, and returns to the fœtus by the vein of the cord.

It is easy to conceive the use of the foramen ovale, and the ductus arteriosus; the left auricle, receiving little or no blood from the lungs, could not furnish any to the left ventricle, if it did not receive it from the opening in the partition of the auricles. On the other hand, the lungs having no functions to fulfil, if all the blood of the pulmonary artery were distributed in them, the impulsive force of the right ventricle would have been vainly consumed; whilst, by means of the ductus arteriosus, the force of both ventricles is employed to move the blood of the aorta: without the joint action of both ventricles, probably the blood could not have reached the placenta, and returned again to the heart.

The motions of the heart are very rapid in the fœtus; they generally exceed 120 in a minute: the circulation possesses necessarily a proportionate rapidity.

A delicate question now presents itself for examination. What are the relations of the circulation of the mother with that of the fœtus? In order to arrive at some precise

notion on this point, the mode of junction of the uterus and placenta must first be examined.

Anatomists differ in this respect. It was long believed that the uterine arteries anastomosed directly with the radicles of the umbilical vein, and that the last divisions of the arteries of the placenta opened into the veins of the uterus; but the acknowledged impossibility of making matters injected into the uterine veins pass into the umbilical veins, and reciprocally to cause liquid matters injected into the umbilical arteries to reach the veins of the uterus, caused this idea to be renounced. It is at present generally admitted, that the vessels of the placenta and those of the uterus do not anastomose.

Notwithstanding the high authority of Boerhaave, it cannot be admitted that the fœtus continually swallows the water of the amnion, and digests it for its nourishment. Its stomach, indeed, contains a viscid matter in considerable quantity; but it has no resemblance to the *liquor amnii;* it is very acid and gelatinous; towards the pylorus, it is somewhat grey, and opake; it appears to be converted into chyme in the stomach, in order to pass into the small intestine, where, after having been acted upon by the bile, and perhaps by the pancreatic juice, it furnishes a peculiar chyle. The remainder descends afterwards into the large intestine, where it forms the meconium, which is evidently the result of digestion during gestation. Whence does the digested matter come? It is probably secreted by the stomach itself, or descends from the œsophagus; there is nothing, however, to prevent the fœtus from swallowing, in certain cases, a few mouthfuls of the liquor amnii; and this seems to be proved by certain hairs, like those of the skin, being found in the meconium. It is important to remark, that the meconium is a substance containing very little azote. Nothing is yet known regarding the use of this digestion of the fœtus; it is probably not essential to its growth, since infants have been born without a stomach, or any thing similar. Some persons say they have seen chyle in the thoracic duct of the former.

Exhalations seem to take place in the fœtus; for all its surfaces are lubricated nearly in the same manner as afterwards: fat is in abundance; the humours of the eye exist; cutaneous transpiration very probably takes place also, and mixes continually with the liquor amnii. With regard to this last liquor, it is difficult to say whence it derives its origin; no sanguiferous vessels appear to be directed to the amnion, and it is nevertheless probable that this membrane is its secreting organ.

The cutaneous and mucous follicles are developed, and seem to possess an energetic action, especially from the seventh month; the skin is then covered by a pretty thick layer of fatty matter, secreted by the follicles; several authors have improperly considered it as a deposit of the liquor amnii. The mucus is also abundant in the two last months of gestation.

All the glands employed in digestion have a considerable volume, and seem to possess some activity: the action of the others is little known. It is not known, for example, whether the kidneys form urine, or whether this fluid is injected by the urethra into the cavity of the amnion. The testicles and mammæ seem to form a fluid that resembles neither milk nor semen, and which is found in the *vesiculæ seminales* and lactiferous canals.

What can be said about the nutrition of the fœtus? Physiological works contain only vague conjectures on this point: it appears certain that the placenta draws from the mother the materials necessary for the development of the organs, but what these materials are, or how they are directed, we do not know."—*Magendie's Physiology.*

Egg-shaped. See *Ovatus.*

Egrego'rsis. (From εγρηγορεω, to watch.) A watchfulness, or want of sleep.

Ei'lamis. (From ειλεω, to involve.) A membrane involving the brain.

Eile'ma. (From ειλεω, to form convolutions.) In Hippocrates it signifies painful convolutions of the intestines from flatulence. Sometimes it signifies a covering. Vogel says, it is a fixed pain in the bowels, as if a nail was driven in.

Ei'leon. (From ειλεω, to wind.) Gorræus says it is a name of the intestinum ileum.

Ei'leos. (From ειλεω, to form convolutions.) The iliac passion.

Ei'sbole. (From εις, into, and βαλλω, to cast.) 1. Strictly an injection.

2. The access of a distemper, or of a particular paroxysm.

Ei'spnoe. (From εις, into, and πνεω, to breathe.) Inspiration of air.

EJACULANS. (From *ejaculo,* to cast out.) *Ejaculatorus.* The vessels which convey the seminal matter secreted in the testicles to the penis are called *ejaculantia.* These are the epididymis, the vasa deferentia, and the vesiculæ seminales, which are the receptacles of the semen.

EJE'CTIO. (*o, onis.* f.; from *ejicio,* to cast out.) Ejection, or the discharging of any thing from the body.

Elaca'lli. The Indian name of the *Euphorbia nervifolia* of Linnæus, which is cathartic.

Elæa'gnon. (From ελαιον, oil, and αγνος, chaste.) See *Vitex agnus castus.*

Elæo'meli. (From ελαιον, oil, and μελι, honey.) A sweet purging oil, like honey.

ELÆOSA'CCHARUM. (*um, i.* n.; from ελαιον, oil, and σακχαρον, sugar.) A mixture of an essential oil with sugar.

Elæoseli'num. See *Eleoselinum.*

ELAIN. (From ελαιον, oil.) The oily principle of solid fats. It is obtained by dissolving tallow in very pure hot alkohol; separating the *stearin* by crystallisation, and then

evaporating the spirit. A simpler, and probably a more exact method, is to squeeze tallow between the folds of porous paper, the *elain* soaks into it, while the *stearin* remains. The paper being then soaked in water, and pressed, yields up its oily impregnation. Elain has very much the appearance and properties of vegetable oil. It is liquid at the temperature of 60°. Its smell and colour are derived from the solid fats from which it is extracted.

Elais guinee'nsis. A species of palm, which grows spontaneously on the coast of Guinea, but is much cultivated in the West Indies. It is from this tree that the oil, called in the West Indies *Mackaw fat*, is obtained; and, according to some, the palm-oil, which is considered as an emollient and strengthener of all kinds of weakness of the limbs. It also is recommended against bruises, strains, cramps, pains, swellings, &c.

Elambica'tio. A method of analysing mineral waters.

Ela'nula. Alum.

ELAOLITE. A subspecies of pyramidal felspar.

ELAPHOBO'SCUM. (*um, i.* n.; from ελαφος, a stag, and βοσκω, to eat: so called because deer eat it greedily.) See *Pastinaca sativa.*

ELAPHOSCO'RODON. (From ελαφος, the stag, and σκοροδον, garlic.) Stag's or viper's garlic. A species of allium.

E'laquir. Red vitriol.

E'las maris. Burnt lead.

Ela'sma. (From ελαυνω, to drive.) A lamina of any kind. A clyster-pipe.

ELASTIC. (*Elasticus;* from ελαστης, *impulsor*, or of ελαυνειν, to impel, to push.) Springy; having the power of returning to the form from which it has been forced to deviate, or from which it is withheld: thus, a blade of steel is said to be elastic, because if it is bent to a certain degree, and then let go, it will of itself return to its former situation; the same will happen to the branch of a tree, a piece of Indian rubber, &c. See *Elasticity.*

Elastic fluid. See *Gas.*

Elastic gum. See *Caoutchouc.*

ELASTICITY. *Elasticitas.* A force in bodies by which they endeavour to restore themselves to the posture from whence they were displaced by any external force. To solve this property, many have recourse to the universal law of nature, attraction, by which the parts of solid and firm bodies are caused to cohere together: whereby, when hard bodies are struck or bent, so that the component parts are a little moved from one another, but not quite disjoined or broken off, nor separated so far as to be out of the power of the attracting force, by which they cohere together, they certainly must, on the cessation of the external violence, spring back with a very great velocity to their former state. But in this circumstance, the atmospherical pressure will account for it as well; because such a violence, if it be not great enough to separate the constituent particles of a body far enough to let in any foreign matter, must occasion many vacuola between the separated surfaces, so that upon the removal of the external force, they will close again by the pressure of the aërial fluid upon the external parts, *i. e.* the body will come again into its natural posture. The included air, likewise, in most bodies, gives that power of resilition upon their percussion.

If two bodies perfectly *elastic* strike one against another, there will be or remain in each the same relative velocity as before, *i. e.* they will recede with the same velocity as they met together. For the compressive force, or the magnitude of the stroke in any given bodies, arises from the relative velocity of those bodies, and is proportional to it, and bodies perfectly *elastic* will restore themselves completely to the figure they had before the shock; or, in other words, the restitutive force is equal to the compressive, and therefore must be equal to the force with which they came together, and consequently they must by elasticity recede again from each other with the same velocity. Hence, taking equal times before and after the shock, the distances between the bodies will be equal; and therefore the distances of them from the common centre of gravity will, in the same times, be equal. And hence the laws of percussion of bodies perfectly elastic are easily deduced.

ELATE'RIUM. (*um, i.* n.; from ελαυνω, to stimulate or agitate: so named from its great purgative qualities.) See *Momordica elaterium.*

ELATHE'RIA. (*a, æ.* f.) A name for the cascarilla bark.

ELATIN. The active principle of elaterium. See *Momordica elaterium.*

ELATI'NE. (*e, es.* f.; from ελαττων, smaller, being the smaller species.) See *Antirrhinum elatine.*

ELATIO. (*o, onis.* f.) Elevated, exalted.

Elati'tes. Bloodstone.

ELCOS. (*os, eos.* n. Ελκος, an ulcer.) An ulcer.

ELCO'SIS. (*is, eos.* f.; from ελκος, an ulcer.) A disease attended with fœtid, carious, and chronic ulcers.

ELDER. See *Sambucus.*

Elder, dwarf. See *Sambucus ebulus.*

ELECAMPANE. See *Inula.*

ELECTIVE. *Electus.* That which is done, or passes by election.

Elective affinity, double. See *Affinity.*

Elective attraction. See *Affinity.*

Elective attraction, double. See *Affinity.*

ELECTRICITY. (*Electricitas, atis.* f.; from *electrum*, amber, ηλεκτρον, from ηλεκτωρ, the sun, because of its bright shining colour; or from ελκω, to draw, because of its magnetic power.) A property which certain bodies possess when rubbed, heated, or otherwise excited, whereby they attract remote bodies, and frequently emit sparks or streams of light. The ancients first observed this property in amber, and hence arose the word electricity.

" If a piece of sealing-wax and of dry warm

flannel be rubbed against each other, they both become capable of attracting and repelling light bodies. A dry and warm sheet of writing-paper, rubbed with Indian rubber, or a tube of glass rubbed upon silk, exhibit the same phænomena. In these cases, the bodies are said to be *electrically excited;* and when in a dark room, they always appear luminous. If two pith-balls be electrified by touching them with the sealing-wax, or with the flannel, they repel each other; but if one pith-ball be electrified by the wax, and the other by the flannel, they attract each other. The same applies to the glass and silk: it shows a difference in the electricities of the different bodies; and the experiment leads to the conclusion, that *bodies similarly electrified repel each other, but that when dissimilarly electrified they attract each other.*

The term *electrical repulsion* is here used merely to denote the appearance of the phænomenon, the separation being probably referrible to the new attractive power which they acquire, when electrified, for the air and other surrounding bodies.

If one ball be electrified by sealing-wax rubbed by flannel, and another by silk rubbed with glass, those balls will repel each other; which proves that the electricity of the silk is the same as that of the sealing-wax. But if one ball be electrified by the sealing-wax and the other by the glass, they then attract each other, showing that they are oppositely electrified.

These experiments are most conveniently performed with a large downy feather, suspended by a silken thread. If an excited glass tube be brought near it, it will receive and retain its electricity; it will be first attracted and then repelled; and upon re-exciting the tube, and again approaching it, it will not again be attracted, but retain its state of repulsion; but upon approaching it with excited sealing-wax, it will instantly be attracted, and remain in contact with the wax till it has acquired its electricity, when it will be repelled, and in that state of repulsion it will be attracted by the glass. In these experiments care must be taken that the feather remains freely suspended in the air, and touches nothing capable of carrying off its electricity.

The terms *vitreous* and *resinous* electricity were applied to these two phænomena; but Franklin, observing that the same electricity was not inherent in the same body, but that glass sometimes exhibited the same phænomena as wax, and *vice versâ*, adopted another term, and instead of regarding the phænomena as dependent upon two electric fluids, referred them to the presence of one fluid, in excess in some cases, and in deficiency in others. To represent these states, he used the terms *plus* and *minus*, *positive* and *negative*. When glass is rubbed with silk, a portion of electricity leaves the silk, and enters the glass; it becomes *positive*, therefore, and the silk *negative:* but when sealing-wax is rubbed with flannel, the wax loses, and the flannel gains; the former, therefore, is negative, and the latter positive. All bodies in nature are thus regarded as containing the electric fluid; and when its equilibrium is disturbed, they exhibit the phænomena just described. Cat's skin, polished glass, woollen cloth, feathers, paper, silk, gum-lac, rough glass, become positively electrified when rubbed with those which follow them; but with those which precede them they become negatively electrical.

Very delicate pith-balls, or strips of gold leaf, are usually employed in ascertaining the presence of electricity; and by the way in which their divergence is effected by glass or sealing-wax, the kind or state of electricity is judged of. When properly suspended or mounted for delicate experiments, they form an *electrometer* or *electroscope.* For this purpose, the slips of gold leaf are suspended by a brass cap and wire in a glass cylinder: they hang in contact when unelectrified, but when electrified they diverge.

When this instrument, as usually constructed, becomes in a small degree damp, its delicacy is much diminished, and it is rendered nearly useless.

The kind of electricity by which the gold leaves are diverged may be judged of by approaching the cap of the instrument with a stick of excited sealing-wax: it it be *negative*, the divergence will increase; if *positive*, the leaves will collapse, upon the principle of the mutual annihilation of the opposite electricities, or that bodies similarly electrified repel each other, but that, when dissimilarly electrified, they become mutually attractive.

Some bodies suffer electricity to pass through their substance, and are called *conductors.* Others only receive it upon the spot touched, and are called *non-conductors.* The former do not in general become electrified by friction, and are called *non-electrics:* the latter, on the contrary, are *electrics*, or acquire electricity by friction. They are also called *insulators.* The metals are all conductors: dry air, glass, sulphur, and resins, are non-conductors. Water, damp wood, spirit of wine, damp air, and some oils, are imperfect conductors.

Rarefied air admits of the passage of electricity; so does the Jarricellian vacuum: hence, if an electrified body be placed under the receiver of the air-pump, it loses its electricity during exhaustion. So that the air, independent of its non-conducting power, appears to influence the retentive properties of bodies, in respect to electricity, by its pressure.

There appears to be no constant relation between the state of bodies and their conducting powers: among solids, metals are conductors; but gums and resins are non-conductors: among liquids, strong alkaline, acid, and saline solutions, are good conductors; pure water is an imperfect conductor, and oils are non-conductors; solid wax is almost a non-conductor, but when melted a good one.

Conducting powers belong to bodies in the

most opposite states: thus, the flame of alkohol and ice are equally good conductors. Glass is a non-conductor when cold, but conducts when red-hot: the diamond is a non-conductor; but pure and well-burned charcoal is among the best conductors.

There are many mineral substances which show signs of electricity when heated, as the tourmalin, topaz, diamond, boracite, &c.; and in these bodies the different surfaces exhibit different electrical states.

Whenever one part of a body, or system of bodies, is positive, another part is invariably negative; and these opposite electrical states are always such as exactly to neutralise each other. Thus, in the common electrical machine, one conductor receives the electricity of the glass cylinder, and the other that of the silk-rubber, and the former conductor is positive, and the latter negative; but if they be connected, all electrical phænomena cease.

Electricians generally employ the term *quantity* to indicate the absolute quantity of electric power in any body, and the term *intensity*, to signify its power of passing through a certain stratum of air, or other ill-conducting medium.

If we suppose a charged Leyden phial to furnish a spark, when discharged, of one inch in length, we should find that another uncharged Leyden phial, the inner and outer coating of which were communicated with those of the former, would, upon the same quantity of electricity being thrown in, reduce the length of the spark to half an inch; here the *quantity* of electricity remaining the same, its *intensity* is diminished by one half, by its distribution over the largest surface.

It is obvious that the extension of surface alluded to in the last paragraph will be attended with a greater superficial exposure to the unelectrified air; and hence it might be expected that a similar diminution of intensity would result from the vicinity of the electrified surface to the ground, or to any other body of sufficient magnitude in its ordinary state. That this is the case, may be shown by diverging the leaves of the gold-leaf electrometer, and in that state approaching the instrument with an uninsulated plate, which, when within half an inch of the electrometer-plate, will cause the leaves to collapse; but, on removing the uninsulated plate, they will again diverge, in consequence of the electricity regaining its former intensity. The same fact is shown by the condensing electrometer.

The power of the Leyden jar is proportioned to its surface; but a very large jar is inconvenient and difficult to procure: the same end is attained by arranging several jars, so that by a communication existing between all their interior coatings, their exterior being also united, they may be charged and discharged as one jar. Such a combination is called an electrical *battery*, and is useful for exhibiting the effect of accumulated electricity.

The discharge of the battery is attended by a considerable report, and if it be passed through small animals, it instantly kills them; if through fine metallic wires, they are ignited, melted, and burned; and gunpowder, cotton sprinkled with powdered resin, and a variety of other combustibles, may be inflamed by the same means.

There are many other sources of electricity than those just noticed. When glass is rubbed by mercury, it becomes electrified, and this is the cause of the luminous appearance observed when a barometer is agitated in a dark room, in which case flashes of light are seen to traverse the empty part of the tube. Even the friction of air upon glass is attended by electrical excitation: for Wilson found, that by blowing upon a dry plate of glass with a pair of bellows, it acquired a positive electricity. Whenever bodies change their forms, their electrical states are also altered. Thus, the conversion of water into vapour, and the congelation of melted resins and sulphur, are processes in which electricity is also rendered sensible.

When an insulated plate of zinc is brought into contact with one of copper or silver, it is found, after removal, to be positively electrical, and the silver or copper is left in the opposite state.

The most oxidisable metal is always positive, in relation to the least oxidisable metal, which is negative, and the more opposite the metals in these respects the greater the electrical excitation; and if the metals be placed in the following order, each will become positive by the contact of that which precedes it, and negative by the contact of that which follows it; and the greatest effect will result from the contact of the most distant metals:—

Platinum, gold, silver, mercury, copper, iron, tin, lead, and zinc.

If the nerve of a recently-killed frog be attached to a silver probe, and a piece of zinc be brought into the contact of the muscular parts of the animal, violent convulsions are produced every time the metals thus connected are made to touch each other. Exactly the same effect is produced by an electric spark, or the discharge of a very small Leyden phial.

If a piece of zinc be placed upon the tongue, and a piece of silver under it, a peculiar sensation will be perceived every time the two metals are made to touch.

In these cases the chemical properties of the metals are observed to be effected. If a silver and zinc wire be put into a wine-glass full of dilute sulphuric acid, the zinc wire will only evolve gas; but upon bringing the two wires in contact with each other, the silver will also copiously produce air bubbles.

If a number of alternations be made of copper or silver leaf, zinc leaf, and thin paper, the electricity excited by the contact of the metals will be rendered evident to the common electrometer.

If the same arrangement be made with the paper moistened with brine, or a weak acid, it will be found, on bringing a wire communicating with the last copper plate into contact

with the first zinc plate, that a spark is perceptible, and also a slight shock, provided the number of alternations be sufficiently numerous. This is the voltaic apparatus. See *Galvanism*.

Several modes of constructing this apparatus have been adopted, with a view to render it more convenient or active. Sometimes double plates of copper and zinc soldered together, are cemented into wooden troughs in regular order, the intervening cells being filled with water, or saline, or acid solutions.

Another form consists in arranging a row of glasses, containing dilute sulphuric acid, in each of which is placed a wire, or plate of silver, or copper, and one of zinc, not touching each other, but so connected by metallic wires, that the zinc of the first cup may communicate with the copper of the second; the zinc of the second with the copper of the third; and so on throughout the series.

When the poles of the voltaic apparatus are connected by a steel wire, it requires magnetic properties; and if by a platinum, or other metallic wire, that wire exhibits numerous magnetic poles, which attract and repel the common magnetic needle. This very curious fact was first observed by Professor Oersted, of Copenhagen.

On immersing the wires from the extremes of this apparatus into water, it is found that the fluid suffers decomposition, and that oxygene gas is liberated at the positive wire or pole, and hydrogene gas at the negative pole.

All other substances are decomposed with similar phænomena, the inflammable element being disengaged at the negatively electrical surface: hence it would appear, upon the principle of similarly electrified bodies repelling each other, and dissimilarly electrified bodies attracting each other, that the inherent or natural electrical state of the inflammable substances is positive, for they are attracted by the negative or oppositely electrified pole; while the bodies, called supporters of combustion, or acidifying principles, are attracted by the positive pole, and therefore may be considered as possessed of the negative power.

When bodies are thus under the influence of electrical decomposition, their usual chemical energies are suspended, and some very curious phænomena are observed.

The most difficult decomposable compounds may be thus resolved into their component parts by the electrical agency; by a weak power the proximate elements are separated, and by a stronger power these are resolved into their ultimate constituents.

All bodies which exert powerful chemical agencies upon each other when freedom of motion is given to their particles, render each other oppositely electrical when acting as masses. Hence Sir H. Davy, the great and successful investigator of this branch of chemical philosophy, has supposed that electrical and chemical phænomena, though in themselves quite distinct, may be dependent upon one and the same power, acting in the former case upon masses of matter, in the other upon its particles.

The power of the voltaic apparatus to communicate divergence to the electrometer, is most observed when it is well insulated, and filled with pure water; but its power of produced ignition and of giving shocks, and of producing the other effects observed when its poles are connected, are much augmented by the interposition of dilute acids, which act chemically upon one of the plates: here the insulation is interfered with by the production of vapour, but the quantity of electricity is much increased, a circumstance which may, perhaps, be referred to the increase of the positive energy of the most oxidisable metal, by the contact of the acid. In experiments made with the great battery of the Royal Institution, it has been found that 120 plates, rendered active by a mixture of one part of nitric acid, and three of water, produces effects equal to 480 plates rendered active by one part of nitric acid, and fifteen of water.

In the voltaic pile, the *intensity* of the electricity increases with the number of alternations, but the *quantity* is increased by extending the surface of the plates. Thus, if a battery, composed of thirty pairs of plates, two inches square, be compared with another battery of thirty pairs of twelve inches square, charged in the same way, no difference will be perceived in their effects upon bad or imperfect conductors: their powers of decomposing water, and of giving shocks, will be similar; but upon good conductors the effects of the large plates will be considerably greater than those of the small: they will ignite and fuse large quantities of platinum wire, and produce a very brilliant spark between charcoal points. The following experiment well illustrates the different effects of quantity and intensity in the voltaic apparatus:—

Immerse the platinum wires connected with the extremity of a charged battery composed of twelve-inch plates into water, and it will be found that the evolution of gas is nearly the same as that occasioned by a similar number of two-inch plates. Apply the moistened fingers to the wires, and the shock will be the same as if there were no connection by the water. While the circuit exists through the human body and the water, let a wire attached to a thin slip of charcoal be made to connect the poles of the battery, and the charcoal will become vividly ignited. The water and the animal substance discharge the electricity of a surface, probably not superior to their own surface of contact with the metals; the wires discharge all the residual electricity of the plates; and if a similar experiment be made on plates of an inch square, there will scarcely be any sensation when the hands are made to connect the ends of the battery, a circuit being previously made through water; and no spark, when charcoal is made the medium of connection, imperfect conductors having been previously applied. These relative effects of quantity and intensity were

admirably illustrated by the experiments instituted by Children, who constructed a battery, the plates of which were two feet eight inches wide, and six feet high. They were fastened to a beam, suspended by counterpoises, from the ceiling of his laboratory, so as to be easily immersed into, or withdrawn from, the cells of the acid. The effects upon metallic wires, and perfect conductors, were extremely intense; but upon imperfect conductors, such as the human body, and water, they were feeble. — *Phil. Trans.* 1815. p. 363.

When the extremes of a battery composed of large plates are united by wires of different metals, it is found that some are more easily ignited than others, a circumstance which has been referred to their conducting powers: thus platinum is more easily ignited than silver, and silver than zinc. If the ignition be supposed to result from the resistance to the passage of electricity, we should say that the zinc conducted better than silver, and the silver than platinum.

An important improvement has been suggested in the construction of the voltaic apparatus, by Dr. Wollaston, (Annals of Philosophy, Sept. 1815,) by which great increase of *quantity* is obtained, without inconvenient augmentation of the size of the plates: it consists in extending the copper plate, so as to oppose it to every surface of the zinc.

With a single pair of plates, of very small dimensions, constructed upon this principle, Dr. Wollaston succeeded in fusing and igniting a fine platinum wire. This is the most economical and useful form of the voltaic apparatus; certainly, at least, it is so for all those researches in which there is an occasional demand for quantity as well as intensity of electricity.

The theory of the voltaic pile is involved in many difficulties. The original source of electricity appears to depend upon the contact of the metals; for we know that a plate of silver, and a plate of zinc, or of any other difficultly and easily oxidisable metals, become negative and positive on contact. The accumulation must be referred to *induction*, which takes place in the electrical column, through the very thin stratum of air or paper, and through water, when that fluid is interposed between the plates. Accordingly, we observe, that the apparatus is in the condition of the series of conductors, with interposed air, and of the Leyden phials. When the electric column is insulated, the extremities exhibit feeble negative and positive powers; but if either extremity be connected with the ground, the electricity of its poles or extremities is greatly increased, as may be shown by the increased divergence of the leaves of the electrometer which then ensues.

As general changes in the form and constitution of matter are connected with its electrical states, it is obvious that electricity must be continually active in nature. Its effects are exhibited on a magnificent scale in the thunder-storm, which results from the accumulation of electricity in the clouds, as was first experimentally demonstrated by Dr. Franklin, who also first showed the advantage of pointed conductors as safeguards to buildings. In these cases, the conducting rod, or rods, should be of copper, or iron, and from half to three-fourths of an inch diameter. Its upper end should be elevated three or four feet above the highest part of the building, and all the metallic parts of the roof should be connected with the rod, which should be perfectly continuous throughout, and passing down the side of the building, penetrate several feet below its foundation, so as always to be immersed in a moist stratum of soil, or if possible, into water. The leaden waterpipes attached to houses, often might be made to answer the purpose of conductors, especially when thick enough to resist fusion.

During a thunder-storm the safest situation is in the middle of a room, at a distance from the chimney, and standing upon a woollen rug, which is a non-conductor. Blankets and feathers being non-conductors, bed is a place of comparative safety, provided the bell-wires are not too near, which are almost always melted in houses struck by lightning. When out of doors, it is dangerous to take shelter under trees: the safest situation is within some yards of them, and upon the dryest spot that can be selected.

The discharge of electricity in a thunder-storm is sometimes only from cloud to cloud; sometimes from the earth to the clouds, and sometimes from the clouds to the earth; as one or the other may be positive or negative. When aqueous vapour is condensed, the clouds formed are usually more or less electrical; and the earth below them being brought into an opposite state, by induction, a discharge takes place when the clouds approach within a certain distance, constituting lightning; and the undulation of the air, produced by the discharge, is the cause of thunder, which is more or less intense, and of longer or shorter duration, according to the quantity of air acted upon, and the distance of the place where the report is heard from the point of the discharge. It may not be uninteresting to give a further illustration of this idea. Electrical effects take place in no sensible time. It has been found that a discharge through a circuit of four miles is instantaneous; but sound moves at the rate of about twelve miles a minute. Now, suppose the lightning to pass through a space of some miles, the explosion will be first heard from the point of the air agitated nearest to the spectator; it will gradually come from the more distant parts of the course of electricity, and last of all, will be heard from the remote extremity, and the different degrees of the agitation of the air, and likewise the difference of the distance, will account for the different intensities of the sound, and its apparent reverberations and changes.

In a violent thunder-storm, when the sound instantly succeeds the flash, the persons who

witness the circumstance are in some danger; when the interval is a quarter of a minute, they are secure.

A variety of electrical apparatus has been devised to illustrate the operation of conductors for lightning, and the advantage of points over balls: the simplest consists of a model of a house, having a conductor with a break in it, in which some inflammable matter should be placed; the lower end of the conductor should be communicated with the exterior of a charged Leyden phial, the knob of which, brought over its upper end, will then represent a thunder-cloud. If the conductor be pointed, it will be slowly discharged; if surmounted by a ball, there will be an explosion, and the combustibles probably inflamed.

The coruscations of the *Aurora borealis* are also probably electrical, and much resemble flashes of electric light traversing rarefied air. The water-spout may be referred to the same source, and is probably the result of the operation of a weakly electrical cloud, at an inconsiderable elevation above the sea, brought into an opposite electrical state: and the attraction of the lower part of the cloud for the surface of the water, may be the immediate cause of this extraordinary phænomenon.

In the *gymnotus*, or *electric eel*, and in the *torpedo*, or *electric ray*, are arrangements given to those remarkable animals for the purpose of defence, which certain forms of the voltaic apparatus must resemble; for they consist of many alternations of different substances. These electrical organs are much more abundantly supplied with nerves than any other part of the animal, and the too frequent use of them is succeeded by debility and death.

That arrangements of different organic substances are capable of producing electrical effects, has been shown by various experimentalists. If the hind-legs of a frog be placed upon a glass plate, and the crural nerve dissected out of one made to communicate with another, it will be found, on making occasional contacts with the remaining crural nerve, that the limbs of the animal will be agitated at each contact. These circumstances have induced some physiologists to suppose, that electricity may be concerned in some of the most recondite phænomena of vitality; and Dr. Wollaston, Sir E. Home, and myself, have made some experiments tending to confer probability on this idea.

We have as yet no plausible hypothesis concerning the *cause* of electrical phænomena, though the subject has engaged the attention of the most eminent philosophers of Europe. They have been, by some, referred to the presence of a peculiar fluid existing in all matter, and exhibiting itself by the appearances which have been described wherever its equilibrium is disturbed, presenting negative and positive electricity when deficient and when redundant. Others have plausibly argued for the presence of two fluids, distinct from each other. Others have considered the effects as referrible to peculiar exertions of the attractive powers of matter, and have regarded the existence of any distinct fluid, or form of matter, to be as unnecessary to the explanation of the phænomena, as it is in the question concerning the cause of gravitation.

When the flame of a candle is placed between a positive and negative surface, it is urged towards the latter; a circumstance which has been explained upon the supposition of a current of electrical matter passing from the positive to the negative pole; indeed, it has been considered as demonstrating the existence of such a current of matter. But if the flame of phosphorus be substituted for that of a candle, it takes an opposite direction; and, instead of being attracted towards the negative, it bends to the positive surface. It has been shown that inflammable bodies are always attracted by negative surfaces, and acid bodies, and those in which the supporters of combustion prevail, are attracted by positive surfaces. Hence the flame of the candle throwing off carbon, is directed to the negative pole, while that of phosphorus forming acid matter goes to the positive, consistently with the ordinary laws of electro-chemical attraction.

There are other experiments opposed to the idea that electricity is a material substance. If we discharge a Leyden phial through a quire of paper, the perforation is equally burred upon both sides, and not upon the negative side only, as would have been the case if any material body had gone through in that direction. The power seems to have come from the centre of the paper, as if one half of the quire had been attracted by the positive, and the other by the negative surface.

When a pointed metallic wire is presented towards the conductor of the electrical machine, in a darkened room, a star of light is observed when the conductor is positive, but a brush of light when it is negative; a circumstance which has been referred to the reception of the electric fluid in the one case, and its escape in the other. In the voltaic discharge, the same appearances are evident upon the charcoal point, rays appearing to diverge from the negative conductor, while upon the positive a spot of bright light is perceptible. But these affections of light can scarcely be considered as indicating the omission or reception of any specific form of matter.

The efficacy of electricity in the cure of several diseases, has been supported by many very respectable authorities, especially in paralytic diseases. It considerably augments the circulation of the blood, and excites the action of the absorbents." — *Brande's Chemistry*.

ELECTRO-MAGNETISM. The name given to a class of very interesting phænomena, first observed by Oersted, of Copenhagen, in the winter of 1819-20, and which have since received great illustration from the labours of Ampère, Arago, Sir H. Davy,

Wollaston, Faraday, De la Rive, and several other philosophers. The following is a short outline of the fundamental facts:—

Let the opposite poles of a voltaic battery be connected by a metallic wire, which may be left of such length as to suffer its being bent or turned in various directions. This is the conjunctive wire of Oersted. Let us suppose that the rectilinear portion of this wire is extended horizontally in the line of the magnetic meridian. If a freely suspended compass needle be now introduced, with its centre *under* the conjunctive wire, the needle will instantly deviate from the magnetic meridian; and it will decline towards the *west*, under that part of the conjunctive wire which is nearest the negative electric pole, or the copper end of the voltaic apparatus. The amount of this declination depends on the strength of the electricity, and the sensibility of the needle. Its *maximum* is 90°.

We may change the direction of the conjunctive wire, out of the magnetic meridian, towards the east or the west, provided it remains above the needle, and parallel to its plane, without any change in the above result, except that of its amount. Wires of platinum, gold, silver, brass, and iron, may be equally employed; nor does the effect cease though the electric circuit be partially formed by water. The effect of the conjunctive wire takes place across plates of glass, metal, wood, water, resin, pottery, and stone.

If the conjunctive wire be disposed horizontally *beneath* the needle, the effects are of the same nature as those which occur when it is *above* it; but they operate in an inverse direction; that is to say, the pole of the needle under which is placed the portion of the conjunctive wire which receives the negative electricity of the apparatus, declines in that case towards to the *east*.

To remember these results more readily, we may employ the following proposition:—*The pole* ABOVE *which the negative electricity enters, declines towards the* WEST; *but if it enters* BENEATH *it, the needle declines towards the* EAST.

If the conjunctive wire (always supposed horizontal) is slowly turned about, so as to form a gradually increasing angle with the magnetic meridian, the declination of the needle increases, if the movement of the wire be towards the line of position of the disturbed needle; it diminishes, on the contrary, if it recede from its position.

When the conjunctive wire is stretched alongside of the needle in the same horizontal plane, it occasions no declination either to the east or west; but it causes it merely to incline in a vertical line, so that the pole adjoining the negative influence of the pile on the wire dips when the wire is on its west side, and rises when it is on the east.

If we stretch the conjunctive wire, either above or beneath the needle, in a plane perpendicular to the magnetic meridian, it remains at rest, unless the wire be very near the pole of the needle; for, in this case, it rises when the entrance takes place by the west part of the wire, and sinks when it takes place by the east part.

When we dispose the conjunctive wire in a vertical line opposite the pole of the needle, and make the upper extremity of the wire receive the electricity of the negative end of the battery, the pole of the needle moves towards the *east*; but if we place the wire opposite a point betwixt the pole and the middle of the needle, it moves to the *west*. The phænomena are presented in an inverse order, when the upper extremity of the conjunctive wire receives the electricity of the positive side of the apparatus.

It appears from the preceding facts, says Oersted, that the electric conflict (action) is not enclosed within the conducting wire, but that it has a pretty extensive sphere of activity round it. We may also conclude from the observations, that this conflict acts by revolution; for without this supposition we could not comprehend how the same portion of the conjunctive wire, which, placed *beneath* the magnetic pole, carries the needle towards the east, when it is placed *above* this pole, should carry it towards the west. But such is the nature of the circular action, that the movements which it produces take place in directions precisely contrary to the two extremities of the same diameter. It appears also, that the circular movement, combined with a progressive movement in the direction of the length of the conjunctive wire, ought to form a kind of action, which operates *spirally* around this wire as an axis. For further information, Faraday's able and original paper, in the Journal of Science, may be consulted; as also Ampère's several ingenious memoirs in the Annales de Chimie et de Physique.

ELECTRO'DES. (From ελεκ]ρον, amber.) Like to amber.

ELECTROMETER. (*Electrometrum*, *i.* n.; from ελεκ]ρον, and μετρον, a measure.) See *Electricity*.

ELECTROSCOPE. (From ελεκιρον, and σκοπεω, to see.) See *Electricity*.

ELE'CTRUM. (*um, i.* n. Ελεκ]ρον.) *Succinum*. Amber.

ELECTRUM MINERALE. The tincture of metals. It is made of tin and copper, to which some add gold, and double its quantity of martial regulus of antimony melted together; from these there results a metallic mass, to which some chemists have given the name of *electrum minerale*. This mass is powdered and detonated with nitre and charcoal to a kind of scoria; it is powdered again whilst hot, and then digested in spirit of wine, whence a tincture is obtained of a fine red colour.

ELECTUA'RIUM. (*um, i.* n.) An electuary. The London Pharmacopœia refers those articles which were formerly called electuaries to confections. See *Confectio*.

ELECTUARIUM ANTIMONII. ℞. Electuarii sennæ, ℥j.; guaiaci gummi, hydrargyri cum

sulphure, antimonii ppti. sing. ℥ss.; syrupi simplicis q. s.: misce. Of this electuary, from a drachm to about two drachms is given twice a day, in those cutaneous diseases which go under the general name of scorbutic. It is usually accompanied with the decoctions of elm bark or sarsaparilla.

Electuarium cassiæ. See *Confectio cassiæ.*

Electuarium catechu. *Confectio Japonica.* Electuary of catechu, commonly called Japonic confection. Take of mimosa catechu, four ounces; kino, three ounces; cinnamon, nutmeg, each one ounce; opium, diffused in a sufficient quantity of Spanish white wine, one drachm and a half; syrup of red roses, boiled to the consistence of honey, two pounds and a quarter. Reduce the solids to powder, and, having mixed them with the opium and syrup, make them into an electuary. A very useful astringent, and perhaps the most efficacious way of giving the catechu to advantage. Ten scruples of this electuary contain one grain of opium.

Electuarium cinchonæ cum soda. ℞. Sodæ carbonatis, ʒij.; pulveris cinchonæ, unciam; mucilaginis gummi arabici, q. s.: misce. In this composition, mucilage is preferred to syrup on account of its covering the taste of the bark much more advantageously. It should for this purpose, however, be made thin, otherwise it will increase the bulk of the electuary too much.

This remedy will be found an excellent substitute for the burnt sponge, the powers of which, as a remedy in scrophula, are believed to depend solely on the proportion of natron contained in it. The dose is two drachms, twice or thrice a day.

Electuarium opiatum. See *Confectio opii.*

Eleli'sphacos. (From ελελιζω, to distort, and σφακος, sage; so named from the spiral coiling of its leaves and branches.) A species of sage.

ELEMENT. (*Elementum, i.* n.) First principles. A substance which can no further be divided or decomposed by chemical analysis.

E'LEMI. (Indeclinable; an Ethiopian name.) Gum-elemi. The parent plant of this resin is supposed to be an amyris. See *Amyris elemifera.*

Elen'gi. A tree of Malabar, which is said to possess cordial and carminative properties.

ELEOCHRY'SUM. (*um, i.* n.; from ηλιος, the sun, and χρυσος, gold: so called from its shining gold-like appearance.) Goldilocks. See *Gnaphalium stœchas.*

ELEOSELI'NUM. (*um, i.* n.; from ελος, a lake; and σελινον, parsley.) See *Apium.*

ELEPHA'NTIA. (*a, æ.* f.; from ελεφας, an elephant: so called from the great enlargement of the body in this disorder.) See *Elephantiasis.*

Elephantia arabum. In Dr. Cullen's Nosology it is synonymous with elephantiasis. The term is, however, occasionally confined to this disease when it affects the feet.

ELEPHANTI'ASIS. (*is, is.* f.; from ελεφας, an elephant: so named from the legs of people affected with this disorder growing scaly, rough, and wonderfully large, at an advanced period, like the legs of an elephant.) *Elephas; Elephantia; Lazari morbus vel malum; Phœniceus morbus.* A disease that attacks the whole body, but mostly affects the feet, which appear somewhat like those of the elephant. It is known by the skin being thick, rough, wrinkly, unctuous, and void of hair, and mostly without the sense of feeling. It is said to be contagious. Cullen makes it a genus of disease in the class *Cachexiæ,* and order *Impetigines.*

Elephantiasis has generally been supposed to arise in consequence of some slight attack of fever, on the cessation of which the morbid matter falls on the leg, and occasions a distension and tumefaction of the limb, which is afterwards overspread with uneven lumps, and deep fissures. By some authors it has been considered as a species of leprosy; but it often subsists for many years without being accompanied with any of the symptoms which characterise that disease.

It sometimes comes on gradually, without much previous indisposition; but more generally, the person is seized with a coldness and shivering, pains in the head, back, and loins, and some degree of nausea. A slight fever then ensues, and a severe pain is felt in one of the inguinal glands, which, after a short time, becomes hard, swelled, and inflamed. No suppuration, however, ensues; but a red streak may be observed running down the thigh from the swelled gland to the leg. As the inflammation increases in all the parts, the fever gradually abates, and perhaps, after two or three days' continuance, goes off. It, however, returns again at uncertain periods, leaving the leg greatly swelled with varicose turgid veins, the skin rough and rugged, and a thickened membrana cellulosa. Scales appear also on the surface, which do not fall off, but are enlarged by the increasing thickness of the membranes; uneven lumps, with deep fissures, are formed, and the leg and foot become at last of an enormous size.

A person may labour under this disease many years, without finding much alteration in the general health, except during the continuance of the attacks; and perhaps the chief inconvenience he will experience is the enormous bulky leg which he drags about with him. The incumbrance has, indeed, induced many who have laboured under this disease to submit to an amputation; but the operation seldom proves a radical cure, as the other leg frequently becomes affected.

Hilary observes, that he never saw both legs swelled at the same time. Instances where they have alike acquired a frightful and prodigious size, have, however, frequently fallen under the observation of other physicians.

Elephantiasis italica. See *Pelagra.*

Elephanti'nus. Elephantine: applied to a plaster from its supposed great virtues. See *Emplastra.*

E'LEPHAS. (*as, antis.* m. Ελεφας, the elephant.) 1. The name of an animal.

2. A disease. See *Elephantiasis.*

3. *Aqua fortis* in some old chemical books.

Ele'rsna. An old term for black lead.

Ele'smatis. An old term for burnt lead.

Ele'ttari primum. The true amomum. See *Elettaria cardamomum.*

ELETTA'RIA. (*a, æ.* f.; from *elettari.*) The name of a new genus of plants formed by Dr. Maton, to which the lesser cardamom is referred. Class, *Monandria;* Order, *Monogynia.*

Elettaria cardamomum. *Cardamomum minus.* Lesser or officinal cardamom. *Amomum repens;* or, *le Cardamome de la côte de Malabar,* of Sonnerat. *Elettaria cardamomum,* of Maton, in Act. Soc. Lin. The seeds of this plant are imported in their capsules or husks, by which they are preserved, for they soon lose a part of their flavour when freed from this covering. On being chewed, they impart a glowing aromatic warmth, and grateful pungency; they are supposed gently to stimulate the stomach, and prove cordial, carminative, and antispasmodic, but without that irritation and heat which many of the other spicy aromatics are apt to produce. Simple and compound spirituous tinctures are prepared from them, and they are ordered as a spicy ingredient in many of the officinal compositions.

ELEUTHE'RIA. See *Croton.*

ELEVA'TIO. (From *elevo,* to lift up.) Elevation; sublimation.

ELEVA'TOR. (*or, oris.* m.; from *elevo,* to lift up.) 1. A muscle is so called, the office of which is to lift up the part to which it is attached.

2. A chirurgical instrument, with which surgeons raise any depressed portion of bone, but chiefly those of the cranium.

Elevator labii inferioris proprius. See *Levator labii inferioris.*

Elevator labii superioris proprius. See *Levator labii superioris alæque nasi.*

Elevator labiorum. See *Levator anguli oris.*

Elevator nasi alarum. See *Levator labii superioris alæquê nasi.*

Elevator oculi. See *Rectus superior.*

Elevator palpebræ superioris. See *Levator palpebræ superioris.*

Elevator scapulæ. See *Levator scapulæ.*

ELEVATO'RIUM. (*um, i.* n.; from *elevo,* to lift up.) An instrument to raise a depression in the skull.

Eli'banum. See *Juniperus lycia.*

ELICHRY'SUM. (*um, i.* n.; from ηλιος, the sun, and χρυσος, gold: so called from its goldlike, or shining yellow appearance.) See *Gnaphalium stœchas.*

Eli'drion. Mastich. A mixture of brass.

ELI'GMA. A linctus.

ELIOSELI'NUM. See *Eleoselinum.*

ELIPTIC. *Elipticus.* Applied to leaves and receptacles, which are of a somewhat oval form, but broader at each end; as in the leaf of the *Convallaria majalis,* and the receptacle of the *Dorstenia drakenia.*

ELIQUATION. An operation by means of which a more fusible substance is separated from another which is less fusible. It consists in the application of a degree of heat, sufficient to fuse the former, but not the latter.

ELITHROI'D. See *Elytroid.*

Elixa'tio. (From *elixo,* to boil.) The act of seething, or boiling.

ELI'XIR. (*Elixir, n.* ind.; from *elekser,* an Arabic word, signifying quintessence.) A term formerly applied to many preparations similar to compound tinctures.

Elixir paregoricum. See *Tinctura camphoræ composita.*

Elixir proprietatis. A preparation like the compound tincture of aloes.

Elixir sacrum. A tincture made principally of rhubarb and aloes.

Elixir salutis. See *Tinctura sennæ.*

Elixir stomachicum. See *Tinctura gentianæ composita.*

Elixivia'tio. (From *elixo,* to boil, or from *lixivium,* lye.) The extraction of a fixed salt from vegetables, by an effusion of water. See *Lixiviation.*

ELLAGIC. (*Ellagicus:* this name is obtained by reversing the word *galle.*) Of or belonging to a peculiar acid obtained, with the gallic acid, from the gall-nut.

Ellagic acid. *Acidum ellagicum.* The deposit which forms in infusion of nut-galls, left to itself, is not composed solely of gallic acid and a matter which colours it. It contains besides a little gallate and sulphate of lime, and a peculiar acid on which Braconnot has made observations, and calls it *ellagic,* from the word *galle* reversed. Probably this acid does not exist ready formed in nut-galls.

Elleborum. See *Helleborus.*

ELM. See *Ulmus.*

Elm-leaved sumach. See *Rhus coriaria.*

ELMINS. (*s, thos.* m. Ελμινς, a worm.) A worm.

ELMI'NTHES. (*es, is.* m.; from ειλεω, to involve, from its contortions.) A worm.

ELO'DES. (From ελος, a swamp.) Swampy: a term given to a sweating fever, from its great moisture.

ELONGA'TIO. (From *elongo,* to lengthen out.) An imperfect luxation, where the ligament is only lengthened, and the bone not put out of its socket.

ELOY, Nicholas Francis Joseph, was born in 1714. He was the author of an Historical Medical Dictionary, which was originally in two octavo volumes; but, in 1778, it appeared, greatly improved and enlarged, in four volumes quarto. An Introduction to Midwifery; a Memoir on Dysentery; Reflections on the Use of Tea; and a Medico-Political Tract on Coffee, were likewise written by this author.

ELUTRIATION. (*Elutriatio;* from *elutrio,* to cleanse.) Washing. It is the pouring a liquor out of one vessel into another, in order to separate the lighter earthy parts,

which are carried away, while the heavier metallic parts subside to the bottom.

ELU'VIES. (*es, ei.* f.; from *eluo*, to wash out.) 1. The effluvium from a swampy place.

2. The humour discharged in fluor albus.

ELUXA'TIO. (From *eluxo*, to put out of joint.) A luxation, or dislocation.

ELYMAGRO'STIS. (From ελυμος, the herb panic, and αγρωστις, wild.) Wild panic. See *Panicum*.

ELY'MUS. (*us, i.* m. Ελυμος; from ελυω, to fold up: alluding to the sheath which incloses the spike or ear of some of its species.) The herb panic, or panicum of Dioscorides. The name of a new genus of grasses, in the Linnæan system. Class, *Triandria*; Order, *Monogynia*.

ELYOT, Sir THOMAS, was born in Suffolk, about the beginning of the sixteenth century. He died in 1546. He was partial to medicine, and made himself master of the ancient authors on that subject, though he never exercised the profession. He published a work, about the year 1541, called "*The Castell of Health*," which was much admired.

ELYTRITIS. (*is, idis.* f.; from ελυτρον, the vagina, and the terminal ιτις, importing inflammation.) Inflammation of the genital vagina.

ELYTRITIS VENEREA. See *Urethritis*.

ELYTROCE'LE. (*e, es.* f.; from ελυτρον, the vagina, and κηλη, a tumour.) A hernia in the vagina. See *Hernia vaginalis*.

ELYTROI'D. (*Elytroides*; from ελυτρον, a sheath, and ειδος, form.) Like a sheath. The tunica vaginalis is so called by some writers, because it includes the testis like a sheath.

ELY'TRON. (*Elytrum, i.* n.; from ελυω, to involve.) A sheath. 1. The vagina.

2. The membranes which involve the spinal marrow are called ελυτρα.

EMACIATION. (*Emaciatio, onis.* f.; from *ematio*, to make lean.) See *Atrophia*, and *Marasmus*.

EMARGINA'TIO. (From *emargino*, to cleanse the edges.) The cleansing of the edges of wounds from scurf and filth.

EMARGINATE. *Emarginatus*. Nicked: that is, having a small acute notch at the summit; as the leaf of the bladder senna, *Colutea aborescens*, the petals of the *Allium roseum*, and *Agrostema flos jovis*.

EMASCULATE. (*Emasculatus*; from *emasculo*, to render impotent.) Impotent.

EMBA'MMA. (From εμβαπτω, to emerge in.) A medicated pickle to dip the food in.

E'MBOLE. (From εμβαλλω, to put in.) The setting of a dislocated bone.

E'MBOLUM. (*um, i.* n.; from εμβαλλω, to cast out; so named because it ejects the semen.) The penis.

EMBRE'GMA. (From εμβρεχω, to make wet.) A fluid application to any part of the body.

EMBROCA'TIO. (*o, onis.* f.; from εμβρεχω, to moisten or soak in.) An embrocation: a fluid application to rub any part of the body with. The following embrocations are in general use:—

EMBROCATIO ALUMINIS. ℞. Aluminis, ʒij. Aceti, spiritus vinosi tenuioris, sing. ℔ss. For chilblains and diseased joints.

EMBROCATIO AMMONIÆ. ℞. Embrocationis ammoniæ acetatis, ℥ij. Aquæ ammoniæ puræ, ʒij. For sprains and bruises.

EMBROCATIO AMMONIÆ ACETATIS. ℞. Liquoris ammoniæ acetatæ, solutionis saponis, sing. ℥j. M. For bruises with inflammation.

EMBROCATIO AMMONIÆ ACETATIS CAMPHORATA. ℞. Solutionis saponis cum camphora, liq. ammoniæ acetatæ, sing. ℥j. Aquæ ammoniæ puræ, ℥ss. For sprains and bruises. It is also frequently applied to disperse chilblains which have not suppurated. It is said to be the same as Steer's opodeldoc.

EMBROCATIO CANTHARIDIS CUM CAMPHORA. ℞. Tinct. cantharidis, spiritus camphoræ, sing. ℥j. M. This may be used in any case in which the object is to stimulate the skin. The absorption of cantharides, however, may bring on a strangury.

E'MBROCHE. See *Embrocatio*.

E'MBRYO. (*o, onis.* m.; from εμβρυω, to bud forth.) 1. The germ of a plant; called by Linnæus the *corculum*. See *Corculum*, and *Cotyledon*.

2. The *fœtus in utero* is so called before the fifth month of pregnancy, because its growth resembles that of the budding of a plant.

EMBRYON. See *Embryo*.

EMBRYOTHLA'STES. (From εμβρυον, the fœtus, and θλαω, to break.) *Embryorectes*. An instrument for breaking the bones of a dead fœtus to promote its delivery.

EMBRYO'TOMY. (*Embryotomia, æ.* f.; from εμβρυον, a fœtus, and τεμνω, to cut.) The separating of any part of the fœtus whilst *in utero*, to extract it.

EMBRYU'LCUS. (From εμβρυον, a fœtus, and ελκω, to draw.) The blunt hook or forceps, for drawing the child from the womb.

EMERALD. A beautiful genus of minerals, which contains two species: *the prismatic*, of a green and sky-blue colour, and is found in Peru and Brazil; and the *rhomboidal*, or green, and the baryl.

EMERSUS. (From *emergo*, to rise up or appear out of the water.) Raised above the water; as the upper leaves accompanying the flowers of the *Meriophyllum verticillatum*, while its lower ones are *demersa*.

E'MERUS. Scorpion senna. A laxative.

EMERY. A species of corundum, found in quantities in the isle of Naxor, and at Smyrna. Its fine powder, which is used for polishing hard minerals and metals, is made by trituration and elutriation.

EMESIA. (*a, æ.* f.; from εμεω, to vomit.) *Emesma*; *Emesis*. 1. The act of vomiting.

2. A medicine which causes vomiting.

EME'TIC. (*Emeticus, i.* m.; from εμεω, to vomit.) That which is capable of exciting vomiting, independently of any effect arising from the mere quantity of matter introduced

into the stomach, or of any nauseous taste or flavour.

The susceptibility of vomiting is very different in different individuals, and is often considerably varied by disease.

Emetics are employed in many diseases.

When any morbid affection depends upon, or is connected with, over-distension of the stomach, or the presence of acrid, indigestible matters, vomiting gives speedy relief. Hence its utility in impaired appetite, acidity in the stomach, in intoxication, and where poisons have been swallowed.

From the pressure of the abdominal viscera in vomiting, emetics have been considered as serviceable in jaundice, arising from biliary calculi obstructing the ducts.

The expectorant power of emetics, and their utility in catarrh and phthisis, have been ascribed to a similar pressure extended to the thoracic viscera.

In the different varieties of febrile affections, much advantage is derived from exciting vomiting, especially in the very commencement of the disease. In high inflammatory fever it is considered as dangerous, and in the advanced stage of typhus it is prejudicial.

Emetics given in such doses as only to excite nausea, have been found useful in restraining hæmorrhage.

Different species of dropsy have been cured by vomiting, from its having excited absorption. To the same effect, perhaps, is owing the dispersion of swelled testicle, bubo, and other swellings, which has occasionally resulted from this operation.

The operation of vomiting is dangerous, or hurtful, in the following cases: where there is determination of the blood to the head, especially in plethoric habits; in visceral inflammation; in the advanced stage of pregnancy; in hernia and prolapsus uteri; and wherever there exists extreme general debility. The frequent use of emetics weakens the tone of the stomach. An emetic should always be administered in the fluid form. Its operation may be promoted by drinking any tepid diluent, or bitter infusion.

The individual emetics may be arranged under two heads,—those derived from the vegetable, and those from the mineral kingdom. From the vegetable kingdom are numbered, ipecacuanha, scilla maritima, anthemis nobilis, sinapis alba, asarum europæum, nicotiana tabacum. From the mineral kingdom, antimony, the sulphates of zinc and copper, and the subacetate of copper. To these may be added ammonia and its hydro-sulphuret.

EMETIN. *Emetine.* Digest ipecacuan root, first in æther and then in alkohol. Evaporate the alkoholic infusion to dryness, redissolve in water, and drop in acetate of lead. Wash the precipitate, and then diffusing it in water, decompose by a current of sulphuretted hydrogene gas. Sulphuret of lead falls to the bottom, and the emetin remains in solution. By evaporating the water, this substance is obtained pure.

Emetin forms transparent brownish-red scales. It has no smell, but a bitter acrid taste. At a heat somewhat above that of boiling water, it is resolved into carbonic acid, oil, and vinegar. It affords no ammonia. It is soluble both in water and alkohol, but not in æther; and uncrystallisable. It is precipitated by protonitrate of mercury and corrosive sublimate, but not by tartar emetic. Half a grain of emetin acts as a powerful emetic, followed by sleep; six grains vomit violently, and produce stupor and death. The lungs and intestines are inflamed.—*Pelletier* and *Magendie.*

EMETOCATHA'RTIC. (*Emetico-catharticus*; from εμεω, to vomit, and καθαιρω, to purge.) That which acts both by vomit and stool.

EMINENTIA. An eminence: applied to some parts of animals and plants.

EMINE'NTIÆ QUADRIGEMINÆ. See *Tubercula quadrigemina.*

EMMENAGOGUE. (*Emmenagogus*; from εμμηνια, the menses, and αγω, to move.) Whatever possesses the power of promoting that monthly discharge by the uterus, which, from a law of the animal economy, should take place in certain conditions of the female system. The articles belonging to this class may be referred to four orders: —

1. *Stimulating emmenagogues*, as *hydrargyrine* and *antimonial preparations*, which are principally adapted for the young, and those with peculiar insensibility of the uterus.

2. *Irritating emmenagogues*, as *aloes*, *savine*, and *Spanish flies*: these are to be preferred in torpid and chlorotic habits.

3. *Tonic emmenagogues*, as *ferruginous preparations*, *cold bath*, and *exercise*, which are advantageously selected for the lax and phlegmatic.

4. *Antispasmodic emmenagogues*, as *assafœtida*, *castor*, and *pediluvia*: the constitutions to which these are more especially suited are the delicate, the weak, and the irritable.

EMME'NIA. (*a*, *æ*. f.; from εν, in, and μην, a month.) The menstrual flux.

EMO'LLIENT. (*Emolliens*; from *emollio*, to soften.) Possessing the power of relaxing the living and animal fibre, without producing that effect from any+ ~~mechanical~~ action.† The different articles belonging to this class of medicines may be comprehended under the following orders: —

1. *Humectant emollients*, as *warm water*, and *tepid vapours*, which are fitted for the robust and those in the prime of life.

2. *Relaxing emollients*, as *althæa*, *malva*, &c. These may be employed in all constitutions, while at the same time they do not claim a preference to others from any particular habit of body.

3. *Lubricating emollients*, as *bland oils*, *fat*, and *lard*. The same observation will hold of this order as was made of the last mentioned.

4. *Atonic emollients*, as *opium* and *pediluvia*. These are applicable to any constitution, but are to be preferred in habits where the effects

+ [illegible]

† [illegible] mechanical

[illegible]

of this class are required over the system in general.

EMPALEMENT. See *Calyx.*

EMPATHEMA. (*a, atis.* n. Εμπαθης; from παθημα, *passio, affectio.*) Ungovernable passion.

EMPEI'RIA. (From εν, and πειρω, to endeavour.) Professional experience.

EMPHERO'MENUS. (From εμφερω, to bear.) A substance which has a sediment.

EMPHLYSIS. (*is, is.* f.; from εν, in, and φλυσις, a vesicular tumour or eruption.) A vesicular tumour or eruption.

EMPHRA'CTIC. (*Emphraticus;* from εμφραττω, to obstruct.) A medicine which, applied to the skin, shuts up the pores.

EMPHYMA. A tumour originating below the integuments, and unaccompanied with inflammation, at least in its commencement, such as fleshy, bony, and other morbid growths.—*Good.*

EMPHYSE'MA. (*a, atis.* n.; from εμφυσαω, to inflate.) See *Pneumatosis.*

EMPIRIC. (*Empiricus.* Εμπειρικος; from εν, in, and πειρα, experience.) One who practises the healing art upon experience, and not theory. This is the true meaning of the word empiric; but it is now applied, in a very opposite sense, to those who deviate from the line of conduct pursued by scientific and regular practitioners, and vend nostrums, or sound their own praise in the public papers.

EMPLA'STICUS. (From εμπλασσω, to obstruct.) A medicine which, spread upon the skin, stops the pores.

EMPLA'STRUM. (*um, i.* n.; from εμπλασσω, to spread upon.) A plaster. Plasters are composed of unctuous substances, united either to powders or metallic oxides, &c. They ought to be of such a consistence as not to stick to the fingers when cold, but to become soft, so as to be spread out in a moderate degree of heat, and in that of the human body, to continue tenacious enough to adhere to the skin. They owe their consistence either to metallic oxides, especially those of lead, or to wax, resin, &c. They are usually kept in rolls wrapped in paper, and spread, when wanted for use, upon thin leather; if the plaster be not of itself sufficiently adhesive, it is to be surrounded at its margin by a boundary of resin plaster.

EMPLASTRUM ADHESIVUM. See *Emplastrum resinæ.*

EMPLASTRUM ALEXANDRIUM. An old plaster, called also *Emplastrum viride*, described by Celsus, and made of wax, alum, &c.

EMPLASTRUM AMMONIACI. Take of purified ammoniacum, five ounces; acetic acid, half a pint. Dissolve the ammoniacum in the acid, then evaporate the liquor in an iron vessel, by means of a water-bath, constantly stirring it, until it acquires a proper consistence. This plaster was but lately introduced into the London Pharmacopœia: it adheres well to the skin, without irritating it, and without producing inconvenience by its smell.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. Take of purified ammoniacum, a pound; purified mercury, three ounces; sulphuretted oil, a fluid drachm. Rub the mercury with the sulphuretted oil, until the globules disappear; then add by degrees the ammoniacum, previously melted, and mix the whole together. This composition is said to possess resolvent virtues; and the plaster is recommended with this view to be applied to nodes, tophs, indurated glands, and tumours.

EMPLASTRUM ANTIHYSTERICUM. See *Emplastrum assafœtidæ.*

EMPLASTRUM ASSAFŒTIDÆ. *Emplastrum antihystericum.* Plaster of assafœtida. Take of plaster of semi-vitrified oxide of lead, assafœtida, each two parts; galbanum, yellow wax, each one part. This plaster is said to possess anodyne and antispasmodic virtues. It is, therefore, occasionally directed to be applied to the umbilical region in hysterical cases.

EMPLASTRUM ATTRAHENS. See *Emplastrum ceræ.*

EMPLASTRUM CANTHARIDIS. Blistering-fly plaster. *Emplastrum vesicatorium.* Take of blistering flies, in very fine powder, a pound; wax plaster, a pound and a half; prepared fat, a pound. Having melted the plaster and fat together, and removed them from the fire, a little before they become solid, sprinkle in the blistering flies, and mix the whole together. See *Blister*, and *Cantharis.*

EMPLASTRUM CERÆ. Wax plaster. *Emplastrum attrahens.* Take of yellow wax, prepared suet, of each three pounds; yellow resin, a pound. Melt them together and strain. This is a gently-drawing preparation, calculated to promote a moderate discharge from the blistered surface, with which intention it is mostly used. Where the stronger preparations irritate, this will be found in general to agree.

EMPLASTRUM COMMUNE. See *Emplastrum plumbi.*

EMPLASTRUM CUMINI. Cumin plaster. Take of cumin-seeds, caraway-seeds, bay-berries, of each three ounces; dried pitch, three pounds; yellow wax, three ounces. Having melted the dried pitch and wax together, add the remaining articles previously powdered, and mix. A warm stomachic plaster, which, when applied to the stomach, expels flatulency. To indolent scrofulous tumours, where the object is to promote suppuration, this is an efficacious plaster.

EMPLASTRUM ELEPHANTINUM. A plaster described by Oribasius and Celsus.

EMPLASTRUM GALBANI COMPOSITUM. Compound galbanum plaster, formerly called *emplastrum lithargyri compositum*, and *diachylon magnum cum gummi.* Take of galbanum gum resin purified, eight ounces; lead plaster, three pounds; common turpentine, ten drachms; resin of the spruce fir, three ounces. Having melted the galbanum gum resin with the turpentine, mix in first the powdered resin of the spruce fir, and then the lead plaster, previously melted by a slow fire, and mix the whole. This plaster is used as a warm digestive and

suppurative, calculated to promote maturation of indolent or scirrhous tumours, and to allay the pains of sciatica, arthrodynia, &c.

Emplastrum hydrargyri. Mercurial plaster. *Emplastrum lithargyri cum hydrargyro.* Take of purified mercury, three ounces; sulphuretted oil, a fluid drachm; lead plaster, a pound. Rub the mercury with the sulphuretted oil, until the globules disappear; then add, by degrees, the lead plaster, melted, and mix the whole.

Emplastrum ladani compositum. Take of soft labdanum, three ounces; of frankincense, one ounce; cinnamon and expressed oil of mace, each half an ounce; essential oil of mint, one drachm: add to the frankincense, melted first, the labdanum a little heated, till it becomes soft, and then the oil of mace; afterwards mix in the cinnamon with the oil of mint, and beat them together into a mass, in a warm mortar, and keep it in a vessel well closed. This may be used with the same intentions as the cumin-plaster, to which it is in no way superior, though composed of more expensive materials. Formerly, it was considered as a very elegant stomach plaster, but is now disused.

Emplastrum lithargyri. See *Emplastrum plumbi.*

Emplastrum lithargyri compositum. See *Emplastrum galbani compositum.*

Emplastrum lithargyri cum hydrargyro. See *Emplastrum hydrargyri.*

Emplastrum lithargyri cum resina. See *Emplastrum resinæ.*

Emplastrum lyttæ. See *Emplastrum cantharidis.*

Emplastrum opii. Plaster of opium. Take of hard opium, powdered, half an ounce; resin of the spruce fir, powdered, three ounces; lead plaster, a pound. Having melted the plaster, mix in the resin of the spruce fir, and opium, and mix the whole. Opium is said to produce somewhat, though in a smaller degree, its specific effect when applied externally.

Emplastrum picis burgundicæ. See *Emplastrum picis compositum.*

Emplastrum picis compositum. Compound pitch plaster. *Emplastrum picis Burgundicæ.* Take of dried pitch, two pounds; resin of spruce fir, a pound; yellow resin, yellow wax, of each four ounces; expressed oil of nutmegs, an ounce. Having melted together the pitch, resin, and wax, add first the resin of the spruce fir, then the oil of nutmegs, and mix the whole together. From the slight degree of redness this stimulating application produces, it is adapted to gently irritate the skin, and thus relieve rheumatic pains. Applied to the temples, it is of use in pains of the head.

Emplastrum plumbi. Lead plaster. *Emplastrum lithargyri; Emplastrum commune; Diachylon simplex.* Take of semivitreous oxide of lead, in very fine powder, five pounds; olive oil, a gallon; water, two pints. Boil them with a slow fire, constantly stirring until the oil and litharge unite, so as to form a plaster. Excoriations of the skin, slight burns, and the like, may be covered with this plaster: but it is in more general use, as a defensive, where the skin becomes red from lying a long time on the part. This plaster is also of great importance, as forming the basis by addition to which many other plasters are prepared.

Emplastrum resinæ. Resin plaster. *Emplastrum adhæsivum; Emplastrum lithargyri cum resinâ.* Take of yellow resin, half a pound; lead plaster, three pounds. Having melted the lead plaster over a slow fire, add the resin in powder, and mix. This adhesive plaster is chiefly used for keeping on other dressings, and for retaining the edges of recent wounds together.

Emplastrum roborans. See *Emplastrum thuris compositum.*

Emplastrum saponis. Soap plaster. Take of hard soap sliced, half a pound; lead plaster, three pounds. Having melted the plaster, mix in the soap; then boil it down to a proper consistence. Discutient properties are attributed to this elegant plaster, with which view it is applied to indolent tumours. It forms an admirable defensive and soft application, spread on linen, to surround a fractured limb.

Emplastrum thuris compositum. Compound frankincense plaster. Take of frankincense, half a pound; dragon's blood, three ounces; litharge plaster, two pounds. To the melted lead plaster, add the rest powdered. This plaster is said to possess strengthening, as well as adhesive powers. By keeping the skin firm, it may give tone to the relaxed muscles it surrounds, but cannot, in any way, impart more strength than the common adhesive plaster.

Emplastrum vesicatorium. See *Emplastrum cantharidis.*

Empneumato'sis. (From εν, in, and πνεω, to blow.) An inflation of the stomach, or any other viscus.

EMPO'RIUM. (*um, i.* n.; from εμπορεω, to negotiate.) A mart. The brain is so called, as being the place where all rational and sensitive transactions are collected.

EMPRESMA. Dr. Good revives this term, used in its simple form both by Hippocrates and Galen, to express internal inflammation.

E'mprion. (From εν, and πριων, a saw.) Serrated. Formerly applied to a pulse, in which the artery at different times is unequally distended.

EMPROSTHO'TONOS. (*os, i.* m.; from εμπροσθεν, before, or forwards, and τεινω, to draw.) A spasm of several muscles, so as to keep the body in a fixed position and bent forward. See *Tetanus.*

E'MPTYSIS. (*is, is.* f.; from εμπτυω, to spit out.) A discharge of blood from the mouth.

EMPYE'MA. (*a, atis.* n.; from εν, within, and πυον, pus.) 1. In *Pathology,* a

collection of pus in the cavity of the thorax. It is one of the terminations of pleuritis. There is reason for believing that matter is contained in the cavity of the chest, when, after a pleurisy, or inflammation in the thorax, the patient has a difficulty of breathing, particularly on lying on the side opposite the affected one; and when an œdematous swelling is externally perceptible. It is occasionally cured by the operation of making an opening into the chest at the most painful or tender part, or between the sixth and seventh ribs.

2. In *Pharmacy*, a suppurating medicine.

EMPYESIS. (*is, is.* f.; from εμπυοω, or εμπυεω, *suppuro.*) Dr. Good has given this term (found in the fifth book of Hippocrates's aphorisms) to a genus of disease, characterised by phlegmonous pimples, which gradually fill with a purulent fluid; as small-pox.

Empyreal air. Scheele gave this name to oxygene gas.

EMPYREU'MA. (*a, atis.* n.: from εμπυρευω, to kindle.) A peculiar and offensive smell that distilled waters and other substances receive from being exposed to heat in closed vessels, or when burned under circumstances which prevent the accession of air to a considerable part of the mass.

EMPYREUMA'TIC. (*Empyreumaticus;* from εμπυρευω, to kindle.) Smelling as it were burnt: thus empyreumatic oils are those distilled with a great heat, and impregnated with a smell of the fire.

EMU'LGENT. (*Emulgens;* from *emulgeo*, to melt out: applied to the artery and vein which go from the aorta, and vena cava to the kidneys, because the ancients supposed they strained, and, as it were, milked the serum through the kidneys.) The vessels of the kidneys are so termed. The emulgent artery is a branch of the aorta. The emulgent vein evacuates its blood into the ascending cava.

Emulsio acaciæ. This is made in the same manner as the almond emulsion, only adding, while beating the almonds, two ounces of gum arabic. This cooling and demulcent emulsion, ordered in the Edinburgh Pharmacopœia, may be drank ad libitum to mitigate ardor urinæ, whether from the venereal virus or any other cause. In difficult and painful micturition, and strangury, it is of infinite service.

Emulsio amygdalæ. Almond emulsion. Take of almonds, one ounce; water, two pounds and a half. Beat the blanched almonds in a stone mortar, gradually pouring on them the water; then strain off the liquor. It possesses cooling and demulcent properties.

Emulsio camphorata. Take of camphire, one scruple; sweet almonds, blanched, two drachms; double refined sugar, one drachm; water, six ounces. This is to be made in the same manner as the common emulsion. It is an elegant way of administering a larger dose of camphire than is contained in the mistura camphoræ.

EMULSION. (*Emulsio, onis.* f.; from *emulgeo*, to milk.) An emulsion. A soft and somewhat oily medicine resembling milk. An imperfect combination of oil and water, by the intervention of some other substance capable of combining with both these substances.

Emulsion, almond. See *Emulsio amygdalæ.*

Emulsion, Arabic. See *Emulsio acaciæ.*

Emulsion of assafœtida. See *Mistura assafœtida.*

Emulsion, camphorated. See *Emulsio camphorata.*

Emulsion of gum-ammoniac. See *Mistura ammoniaci.*

EMU'NCTORY. (*Emunctorium, ii.* n.; from *emungo*, to drain off.) The excretory ducts of the body are so termed; thus the exhaling arteries of the skin constitute the great emunctory of the body.

Enæ'ma. (From εν, and αιμα, blood.) *Enæmos.* So Hippocrates and Galen call such topical medicines as are appropriated to bleeding wounds.

Enæore'ma. (From εν, and αιωρεω, to lift up.) The pendulous substance which floats in the middle of the urine.

ENA'MEL. See *Tooth.*

ENANTHE'SIS. (*is, is.* f.; from εν, *in, intra*, and ανθεω, *floreo*: efflorescence from within, or from internal affection.)

1. A rash: in opposition to *exanthesis*, an eruption on the skin, not connected with internal affection.—*Good.*

2. (From εν, and αντλαω, to meet.) The near approach of ascending and descending vessels.

ENARTHRO'SIS. (*is, is.* f.; from εν, in, and αρθρον, a joint.) The ball and socket-joint. A species of diarthrosis, or moveable connection of bones, in which the round head of one is received into the deeper cavity of another, so as to admit of motion in every direction; as the head of the os femoris with the acetabulum of the os innominatum. See *Articulation.*

ENCA'NTHIS. (*is, is.* f.; from εν, and κανθος, the angle of the eye.) A disease of the caruncula lachrymalis, of which there are two species: *Encanthis benigna*, and *Encanthis maligna seu inveterata.* The encanthis, at its commencement, is nothing more than a small, soft, red, and sometimes rather livid excrescence, which grows from the caruncula lachrymalis, and at the same time from the neighbouring semilunar fold of the conjunctiva. This excrescence, on its first appearance, is commonly granulated, like a mulberry, or is of a ragged and fringed structure. Afterwards, when it has acquired a certain size, one part of it represents a granulated tumour, while the rest appears like a smooth, whitish, or ash-coloured substance, streaked with varicose vessels, sometimes advancing as far over the conjunctiva, covering the side of the eye next to the nose, as where the cornea and sclerotica unite.

The encanthis keeps up a chronic oph-

thalmy, impedes the action of the eyelids, and prevents, in particular, the complete closure of the eye. Besides, partly by compressing and partly by displacing the orifices of the puncta lachrymalia, it obstructs the free passage of the tears into the nose. The inveterate encanthis is ordinarily of a very considerable magnitude; its roots extend beyond the caruncula lachrymalis and semilunar fold of the membraneous lining of one or both eyelids. The patient experiences very serious inconvenience from its origin and interposition between the commissure of the eyelids, which it necessarily keeps asunder on the side towards the nose. Sometimes the disease assumes a cancerous malignancy. This character is evinced by the dull red, and, as it were, leaden colour of the excrescence: by its exceeding hardness, and the lancinating pains which occur in it, and extend to the forehead, the whole eyeball, and the temple, especially when the tumour has been, though slightly, touched. It is also shown, by the propensity of the excrescence to bleed, by the partial ulcerations on its surface, which emit a fungous substance, and a thin and exceedingly acrid discharge.

ENCATALE'PSIS. (*is, is.* f.; from εν, and καταλαμβανω, to seize.) A catalepsy.

ENCATHI'SMA. (*a, atis.* n.; from εν, and καθιζω, to sit in.) A semicupium, or bath for half the body.

ENCAU'MA. (*a, atis.* n.; from εν, in, and καιω, to burn.) A burn. See *Burn.*

ENCAU'SIS. (*is, is.* f.; from εν, and καιω, to burn.) A burn. See *Burn.*

ENCEPHALOCE'LE. (*e, es.* f.; from εγκεφαλον, the brain, and κηλη, a tumour.) A rupture of the brain.

ENCE'PHALON. (*um, i.* n.; from εν, in, and κεφαλη, the head.) *Encephalum.* By some writers the cerebrum only is so called; and others express, by this term, the contents of the cranium.

Ence'ris. (From εν, and κηρος, wax.) A roll of wax for making plasters.

Encero'sis. (From εν, and κηροω, to wax.) The covering of a plaster with wax.

ENCHARA'XIS. (*is, is.* f.; from εν, and χαρασσω, to scarify.) A scarification.

ENCHEIRE'SIS. (*is, is.* f; from εν, and χειρ, the hand.) The word imports the manual treatment of any subject. Galen uses it as a part of the title to one of his works, which treats of dissection.

Enchei'ria. See *Encheiresis.*

Enchilo'ma. See *Enchyloma.*

Encho'ndrus. (From εν, and χονδρος, a cartilage.) A cartilage.

Enchri'stum. (From εγχριω, to anoint.) An ointment.

Enchylo'ma. (From εν, and χυλος, juice.) An inspissated juice. An elixir, according to Lemery.

E'NCHYMA. (*a, atis.* n.; from εν, and χεω, to infuse.) *Enchysis.* 1. An infusion. 2. A sanguineous plethora; an injection for the eyes and ears.

Enchymo'ma. (From εν, and χυω, to pour in.) In the writings of the ancient physicians, it is a word by which they express that sudden effusion of blood into the cutaneous vessels, which arises from joy, anger, or shame; and, in the last instance, is what we usually call blushing.

Enchymo'sis. Εγχυμωσις. 1. Blushing. 2. An extravasation of blood.

Enchysis. See *Enchyma.*

Encly'sma. (From εν, and κλυζω, to cleanse out.) A clyster.

ENCŒ'LIA. (From εν, within, and κοιλια, the belly.) The abdominal viscera.

Encolpi'smus. (From εγκολπεω, to insinuate.) An uterine injection.

ENCRA'NIUM. (From εν, within, and κρανιον, the skull.) The whole contents of the skull.

Encrasi'cholus. (From εν, in, κερας, the head, and χολη, bile; because it is said to have the gall in its head.) The anchovy. See *Clupea.*

E'ncris. Εγκρις. A cake of meal, oil, and honey.

E'ncymon. (From εν, and κυω, to conceive.) Pregnancy.

E'NCYSIS. (From εν, and κυω, to bring forth.) Parturition.

ENCY'STED. *Saccatus.* A term applied to those tumours which consist of a fluid or other matter, enclosed in a sac or cyst.

ENCY'STIS. (From εν, in, and κυστις, a bag.) An encysted tumour.

ENDE'MIC. (*Endemicus*; from εν, in, and δημος, people.) A disease is so termed that is peculiar to a certain class of persons, or country: thus, struma is endemial to the inhabitants of Derbyshire and the Alps; scurvy to seafaring people; and the plica polonica is met with in Poland.

E'ndesis. (From εν, and δεω, to tie up.) A ligature. A bandage.

ENDIVE. See *Cichorium.*

ENDI'VIA. (*a, æ.* f.; *quasi eundo via, quia passim nascitur:* named from the quickness of its growth.) See *Cichorium.*

E'ndosis. (From εν, and διδωμι, to give.) A remission, disorder.

ENECIA. (*a, æ.* f.; from ηνεκης, continued.) Continued: applied to fever.

Enella'gmenus. (From εναλλαττω, to interchange.) An epithet applied to the union of the joints of the vertebræ.

E'NEMA. (*a, atis.* n.; from ενιημι, to inject.) A glyster, or clyster. A liquid or gaseous form of medicine thrown into the rectum, mostly for the purpose of emptying the bowels of fæces. The objects for which glysters are administered, are several:—

1. For emptying the bowels of fæces, or as an aperient.

2. For relaxing the powers of the body, and producing fainting; as when tobacco fumes are sent into the rectum, in order to effect the reduction of a strangulated hernia.

3. For the purpose of killing worms that

are nidulating in the rectum; as the thread-worm.

4. For defending the bowels from the irritation of bile or acrimonious secretions.

5. For restraining a diarrhœa.

6. For nourishing the body, when aliment cannot be received or retained in the stomach.

7. For allaying spasms in various parts; as the intestines, the stomach, the lungs, kidneys, &c.

8. For allaying vomiting, caused by inverted peristaltic movements of the small intestines.

To answer these several purposes, the ingredients, of course, will be varied: — aloes, colocynth, senna, purging salts, and turpentine, and the like, with gruel, decoction of marshmallows, and linseed, are selected to procure motions, to bring the peristaltic movement of the bowels into its proper direction: these medicines will also kill worms. Tobacco infusion, or the smoke, will relax spasm, and produce syncope. Mild mucilage, and glutinous substances, will defend the irritated coats of the rectum; as decoctions of starch, gum acacia, isinglass, glue, &c., with opium; which are also likely to restrain diarrhœa, especially if logwood, catechu, or oak bark be combined with them. The shanks of mutton, veal, and beef, and glue, boiled into broth, will nourish the body. Opium, in some form so as remain up the bowels, is best calculated to allay spasms of the bowels, stomach, kidney, uterus, bladder, lungs, &c. The following forms are in general use: —

Enema anodynum. Take of starch jelly, half a pint; tincture of opium, forty to sixty drops. Mix. The whole to be injected by means of a clyster-syringe, in cases of dysentery or violent purging, and pain in the bowels.

Enema antispasmodicum. Take of tincture of assafœtida, half an ounce; tincture of opium, forty drops; gruel, half a pint. Mix. For spasmodic affections of the bowels.

Enema laxativum. Take of sulphate of magnesia, two ounces; dissolve in three quarters of a pint of warm gruel, or broth, with an ounce of fresh butter, or sweet oil.

Enema nicotianæ. Take of the infusion of tobacco from a half to a whole pint. Employed in cases of strangulated hernia.

Enema nutriens. Take of strong beef tea, twelve ounces; thicken with hartshorn shavings, or arrow-root.

Enema terebinthinæ. Take of common turpentine, half an ounce; the yolk of one egg, and half a pint of gruel. The turpentine being first incorporated with the egg, add to them the gruel. This clyster is generally used, and with great good effect, in violent fits of the stone.

Enerei'sis. (From ενερειδω, to adhere to a compression.) A tight ligature.

E'NERGY. (*Energia*, *æ*. f.; from ενεργεω, to act.) The degree of force exercised by any power: thus, nervous energy, muscular energy, &c.

ENERVATING. The act of destroying the force, use, or office of the nerves; either by cutting them, or breaking them by violence or abuse of the non-naturals.

ENERVIS. *Enervius.* Ribless: applied to leaves which are without lines or ribs.

Eneure'sis. See *Enuresis.*

Engala'ctum. (From εν, and γαλα, milk; so called, because it is eaten by nurses to increase their milk.) Most probably the *Salsoli kali* of Linnæus.

ENGASTRIMY'THUS. (*us*, *i*. m.; from εν, in, γαςηρ, the belly, and μυθεομαι, to discourse.) A ventriloquist; one who appears to speak from his belly. See *Ventriloquism.*

Engiso'ma. (From εγγιζω, to approach.) 1. An instrument for making the parts of a broken clavicle meet.

2. A fracture of the cranium.

ENGLISH. See *Anglicus.*

English mercury. See *Mercurialis.*

Englotto-gastor. (From εν, γλωττη, the tongue, and γαςηρ, the belly.) A ventriloquist.

ENGOMPHO'SIS. (*is*, *is*. m.; from εν, and γομφος, a nail.) That species of articulation which resembles a nail driven into wood, as a tooth in its socket.

Engo'nios. (From εν, and γωνια, an angle.) The flexure, or angle made by the bending of a joint.

Eni'xum paracelsi. The caput mortuum of the distillation of nitric acid, which is a super-sulphate of potash.

ENNEANDRIA. (*a*, *æ*. f.; from εννεα, nine, and ἀνηρ, a man.) The name of a class of plants in the sexual system, containing such as have hermaphrodite flowers with nine stamina.

Enneapha'rmacum. (From εννεα, nine, and φαρμακον, a medicine.) A medicine composed of nine simple ingredients.

ENNEAPHY'LLUM. (*um*, *i*. n.; from εννεα, nine, and φυλλον, a leaf: because its flower consists of nine leaves.) A name for helleboraster, or bear's-foot.

ENO'DIS. Without knots; without joints: jointless. Applied to stems of plants, as *Culmus enodis;* that is, a smooth culm, as in our common rushes.

Enry'thmus. (From εν, and ρυθμος, number.) A pulse in some respect regular.

ENS. An entity, or thing actually in existence. This word denoted, in ancient chemistry, the most efficacious part of any natural mixed body, whether animal, vegetable, or fossil, wherein all the qualities or virtues of the ingredients are comprehended in a small compass.

Ens martis. An oxide of iron.

Ens primum solare. Antimony.

Ens veneris. The muriate of copper.

Ensatæ. (From *ensis*, a sword.) The name of a natural order of plants, consisting of such as have sword-shaped leaves.

ENSATUS. (From *ensis*, a sword.) Shaped like a sword.

E'NSIFORM. (*Ensiformis;* from *ensis*,

a sword, and *forma*, resemblance.) Sword-shaped: sword-like. 1. In *Anatomy*, applied to some parts from their resemblance; as the ensiform cartilage. See *Cartilago ensiformis*.

2. In *Botany*, a leaf is called *folium ensiforme*, which has two edges, and tapers to a point, like a sword. See *Leaf*.

ENSTA'CTUM. (From εν, and ϛαζω, to instil.) A liquid medicine, which is applied *instillatim*, or drop by drop.

ENTASIA. (*a*, *æ*. f.; from εντασις, *intentio vehementia*.) The name applied by Dr. Good to a constrictive spasm, and embracing trismus, tetanus, priapism, &c. &c.

ENTATICUS. (From εντεινω, to strain.) A provocative, or whatever excites venereal inclination.

E'NTERON. (In the plural *entera*; from εντος, within.) 1. The bowels.

2. Hippocrates calls the bag in which medicines for fomentations were formerly enclosed by this name.

ENTERADE'NES. (From εντερον, an intestine, and αδην, a gland.) The intestinal glands.

ENTERE'NCHYTA. (From εντερα, the bowels, and εγχυω, to infuse into.) An instrument for administering clysters. A clyster-pipe.

ENTERIC. (*Entericus*; from εντερον, *intestinum*, *alvus*.) Appertaining to the intestines.

ENTERI'TIS. (*is*, *idis*. f.; from εντερον, an intestine.) Inflammation of the intestines. It is known by the presence of pyrexia, fixed pain in the abdomen, costiveness, and vomiting. The causes of enteritis are much the same as those of gastritis, being occasioned by acrid substances, indurated fæces, long-continued and obstinate costiveness, spasmodic colic, and a strangulation of any part of the intestinal canal; but another very general cause is the application of cold to the lower extremities, or to the belly itself. It is a disease which is most apt to occur at an advanced period of life, and is very liable to a relapse.

It comes on with an acute pain, extending in general over the whole of the abdomen; but more especially round the navel, accompanied with eructations, sickness at the stomach, a vomiting of bilious matter, obstinate costiveness, thirst, heat, great anxiety, and a quick and hard small pulse. After a short time, the pain becomes more severe, the bowels seem drawn together by a kind of spasm, the whole region of the abdomen is highly painful to the touch, and seems drawn together in lumpy contractions; invincible costiveness prevails, and the urine is voided with great difficulty and pain.

The inflammation continuing to proceed with violence, terminates at last in gangrene; or abating gradually, it goes off by resolution.

Enteritis is always attended with considerable danger, as it often terminates in gangrene in the space of a few hours from its commencement; which event is marked by the sudden remission of pain, sinking of the pulse, shrinking of the features, and distension of the belly; and it frequently proves fatal, likewise, during the inflammatory stage. If the pains abate gradually, if natural stools be passed, if an universal sweat, attended with a firm equal pulse, comes on, or if a copious discharge of loaded urine, with the same kind of pulse, takes place, a resolution and favourable termination may be expected.

Dissections of this disease show that the inflammation pervades the intestinal tube to a very considerable extent; that adhesions of the diseased portion to contiguous parts are formed; and that, in some cases, the intestines are in a gangrenous state, or that ulcerations have formed. They likewise show, that, besides obstinate obstructions, introsusception, constrictions, and twistings, are often to be met with; and that, in most cases, the peritonæum is more or less affected, and is perceived, at times, to be covered with a layer of coagulable lymph.

The treatment must be begun by taking blood freely from the arm, as far as the strength of the patient will allow: but the disease occurring more frequently in persons rather advanced in years, and of a constitution somewhat impaired, it becomes more important to limit this evacuation, and rely in a great measure on the effects of a number of leeches applied to the abdomen. Another very useful step is to put the patient into a hot bath, which may presently induce faintness; or, where this cannot be procured, fomenting the abdomen assiduously. When the symptoms are thus materially relieved, an ample blister should be applied. It becomes also of the first importance to clear out the bowels: a copious laxative clyster will evacuate the inferior part of the canal, and solicit the peristaltic motion downwards; and the milder cathartics, as castor oil, neutral salts, &c. in divided doses, may gradually procure a passage. But where the disease has been preceded by costiveness, more active articles will probably be necessary, as calomel, compound extract of colocynth, infusion of senna, with salts, &c. If the stomach be irritable, the effervescing saline draught may enable it to retain the requisite cathartics. Another plan, often very successful, is giving opium in a full dose, particularly in conjunction with calomel, taking care to follow it up by some of the remedies above mentioned, till the bowels are relieved; which effect it appears to promote by its soothing antispasmodic power. Afterwards we may endeavour to keep up diaphoresis, and recruit the strength of the patient by a mild nourishing diet; taking care to guard against accumulation of fæces, exposure to cold, or any thing else likely to occasion a relapse.

ENTERO'. (From εντερον, an intestine.) Names compounded of this word belong to things which resemble an intestine; or to parts connected with, or diseases of some part of, the intestine.

ENTEROCE'LE. (*e*, *es*. f.; from εντερον, an intestine, and κηλη, a tumour.) An intestinal rupture, or hernia. Every hernia may

be so called that is produced by the protrusion of a portion of intestine, whether it is in the groin, navel, or elsewhere.

Entero-epiplocele. (From *εντερον*, an intestine, *επιπλοον*, the epiploon, and *κηλη*, a tumour.) A rupture formed by the protrusion of part of an intestine, with a portion of the epiploon.

Entero-hydrocele. (From *εντερον*, an intestine, *υδωρ*, water, and *κηλη*, a tumour.) This must mean a common scrotal hernia, with a good deal of water in the hernial sac; or else a hernia congenita (in which the bowels descend into the tunica vaginalis testis), attended with a collection of fluid in the cavity of this membrane.

ENTEROLITHUS. (*us*, *i.* m.; from *εντερον*, an intestine, and *λιθος*, a stone.) Intestinal concretion. This term embraces all those concretions which resemble stones, or hardened substances like stones, generated in the stomach and bowels.

1. The *bezoardus*, or bezoar. See *Bezoar.*

2. The *intestinal calculus.* It is no uncommon thing to have calculi, formed in the gall bladder, arrested in their passage along the intestines, and there acquire a great increase of size. Sometimes there is every reason to believe that calculi are also formed within the bowels without having first been in the gall bladder; and these are the true enterolithi, or intestinal calculi. The present professor of anatomy in Edinburgh gives several instances of these formations, in his morbid anatomy of the gullet, stomach, and intestines.

ENTERO'MPHALUS. (*us*, *i.* m.; from *εντερον*, an intestine, and *ομφαλος*, the navel.) An umbilical hernia, produced by the protrusion of a portion of intestine.

ENTERO'PHYTUM. (*um*, *i.* n.; from *εντερον*, an intestine, and *φυτον*, a plant.) A plant which grows in the form of a gut; the sea-chitterling.

ENTERO'RAPHY. (*Enteroraphia*, *æ.* f.; from *εντερον*, an intestine, and *ραφη*, a suture.) A suture of the intestines, or the sewing together the divided edges of an intestine.

ENTEROSCHEOCE'LE. (*e*, *es.* f.; from *εντερον*, an intestine, *οσχεον*, the scrotum, and *κηλη*, a rupture.) A scrotal hernia, or rupture of the intestines into the scrotum.

Enthe'ma. (From *εντιθημι*, to put in.) An anti-inflammatory styptic. Obsolete.

E'nthlasis. A contusion with the impression of the instrument by which it happened.

ENTHUSIASM. (*Enthusiasmus*; from *ενθυσιαζω*, to rave.) Heated imagination.

ENTIRE. See *Integer.*

Entire leaf. See *Integerrimus.*

ENTROCHI. Extraneous fossils, made up of round joints, which, when separate and loose, are called *trochitæ.*

ENTRO'PIUM. (*um*, *i.* n.; from *εν*, and *τρεπω*, to turn.) A disease of the eyelids, occasioned by the eyelashes and eyelid being inverted towards the bulb of the eye.

Entypo'sis. (From *εντυποω*, to make an impression.) 1. The acetabulum.

2. The scapula, or concave bone of the shoulder.

E'NULA. (*a*, *æ.* f.; a corruption of *henula*, or *Helenium*, from *Helene*, the island where it grew.) See *Inula helenium.*

Enula campana. See *Inula helenium.*

Enu'lon. (From *εν*, and *ουλον*, the gums.) The internal flesh of the gums, or that part of them which is within the mouth.

ENURE'SIS. (*is*, *is.* f.; from *ενουρεω*, to make water.) An incontinency or involuntary flow of urine. This disease usually proceeds either from relaxation or a paralytic affection of the sphincter of the bladder, induced by various debilitating causes, as too free a use of spirituous liquors, manustupration, and excess in venery; or it arises from compression on the bladder, from a diseased state of the organ, or from some irritating substance contained in its cavity. Dr. Cullen makes two species: — 1. *Enuresis atonica*, the sphincter of the bladder having lost its tone from some previous disease.

2. *Enuresis ab irritatione, vel compressione vesicæ*, from an irritation or compression of the bladder.

It is often cured by the internal exhibition of the tinctura cantharidis, by tonics, and by stimulating the rectum with aloetic suppositories, and even blisters to the perinæum or near to the bladder. When symptomatic of stone, or any other disease, it requires the remedies for such complaint.

Epacma'sticus. (From *επι*, and *ακμαζω*, to increase.) A disease which is increasing in malignity: applied to a fever formerly.

Epa'cme. (From *επακμαζω*, to increase.) The increase, or exacerbation of a disease.

Epago'gium. (From *επαγω*, to draw over.) The præpuce.

Epanadido'ntes. (From *επαναδιδωμι*, to increase.) Increasing: applied formerly to fevers.

Epanadiplo'sis. (From *επαναδιπλοω*, to reduplicate.) Reduplication: applied to a fit of a semitertian fever; that is, the return of the cold fit before the hot fit is ended.

Epana'stasis. (From *επι*, and *ανιστημι*, to excite.) A tubercle, or small pustule.

Epancylo'tus. (From *επι*, and *αγκυλος*, crooked.) A sort of crooked bandage.

EPANETUS. (*us*, *i.* m.; from *επανιημι*, to return.) Remitting: applied to a fever.

Epa'rma. (From *επαιρω*, to elevate.) *Eparsis.* Any kind of tumour, but frequently applied to one of the parotid gland.

Epa'rsis. See *Eparma.*

Epasma'sticus. See *Epacmasticus.*

Epe'ncranis. (From *επι*, *εν*, in, and *κρανιον*, the skull.) The name of the cerebellum.

Ephebæ'um. (From *επι*, and *ηβη*, the groin.) The hair upon the pubes.

E'phedra. (From *εφεζομαι*, to sit upon.) *Ephedrana.* 1. The buttocks.

2. A species of horse-tail.

Ephe'drana. See *Ephedra.*

Ephe'lcis. (From *επι*, upon, and *ελκος*, an ulcer.) 1. The crust of an ulcer.

2. Hardened purulent expectoration.

EPHE'LIS. (*is, idos.* f.; from επι, and ηλιος, the sun.) This term denotes not only the freckles, or little yellow lentigines or spots, which appear on persons of fair skin, and the larger brown patches, which likewise arise from exposure to the direct rays of the sun, as the name imports; but also those large dusky patches, which are very similar in appearance, but occur on other parts of the surface which are constantly covered. The best application to this eruption is very dilute alkohol, mineral acids, and potash,—so dilute as just to be sensible to the tongue.

EPHE'MERA. (*a, æ.* f.; from επι, upon, and ημερα, a day.) A disease of a day's duration.

EPHE'MERIS. (*is, idis.* f.; from εφημερις, an almanack: so called because, like the moon's age, it may be foretold by the almanack.) A disease which returns at particular times of the moon.

EPHIA'LTES. (*es, is.* m.; from εφαλλομαι, to leap upon: so called because it was thought a dæmon leaped upon the breast.) Night-mare. Distressing sensations during sleep, mostly preceded by some fearful dream, in which some known or unknown enemy is in close pursuit, and from which the person who is affected cannot escape, and is unable to speak, though he is constantly endeavouring so to do; and in this struggle he feels a great oppression or weight on the chest, as if some dæmon were sitting upon him, and he attempts to cry out, but makes only a horrible noise: falling down precipices; bulls, lions, monsters, and phantoms appearing, and threatening the destruction of the dreamer; and a variety of other indescribable sights. The causes of this affection are mental irritation from fatigue, and a dyspeptic state of the stomach.

It sometimes originates in a large quantity of wind, or indigestible matter, in the stomach of those who eat suppers; which, pressing the stomach against the diaphragm, impede respiration, or render it short and convulsed. Inflated intestines may likewise produce similar effects, or mental perturbations.

There is another species of night-mare mentioned by authors, which has a more dangerous tendency; and this arises from an impeded circulation of blood in the lungs, when lying down, or too great relaxation of the heart and its impelling powers. Epilepsy, apoplexy, or sudden death, are sometimes amongst the consequences of this species of disturbed sleep. See *Oneirodynia.*

Ephia'ltia. (From *ephialtes*, the night-mare: so called because it was said to cure the night-mare.) The herb peony.

EPHIDRO'SIS. (*is, is.* f.; from εφιδροω, to perspire.) A violent and morbid perspiration. See also *Sudor Anglicanus.*

EPHI'PPIUM. (*um, ii.* n.) A saddle, which it is thought to resemble. See *Sella turcica.*

E'phodos. (From επι, and οδος, a way.) In Hippocrates it hath three significations:—

1. The ducts or passages, by which the excrements of the body are evacuated.

2. The periodical attack of a fever, from the common use of it to express the attack of thieves.

3. The access of similar or dissimilar things, which may be useful or hurtful to the body.

Epia'ltes. See *Ephialtes.*

Epi'alus. (From ηπιον, gently, and αλεαζω, to heat.) *Epialos.* An ardent fever, in which both heat and cold are felt in the same part at the same time. Galen defines it to be a fever in which the patient labours under a preternatural heat and a coldness at the same time. The ancient Latins call it *Quercera.*

Epi'bole. (From επιϐαλλω, to press upon.) The night-mare.

Epica'nthis. (From επι, and κανθος, the angle of the eye.) The angle of the eye.

Epica'rpium. (From επι, upon, and καρπος, the wrist.) A plaster, or any application to the wrist.

Epica'uma. (From επι, and καιω, to burn.) A burn.

Epicau'sis. A burn.

EPI'CERAS. (*as, atis,* n.; from επι, and κερας, a horn: so called because its pods are shaped like a horn.) See *Trigonella fœnum græcum.*

Epicera'sticus. (From επι, and κεραννυμι, to mix.) A medicine which, by mixing with acrimonious juices, tempers them and renders them less troublesome; as emollients.

Epicheire'sis. (From επι, and χειρ, the hand.) A manual operation.

Epi'cholus. (From επι, and χολη, the bile.) Bilious.

Epicho'rdis. (From επι, upon, and χορδη, a gut.) The mesentery.

Epicho'rios. (From επι, upon, and χωρα, a region.) The same as epidermis.

EPICHROSIS. (*is, is.* f.; from επιχρωσις, a coloured or spotted surface.) Macular skin, or simple discolouration of the surface.

Epicœlis. (From επι, upon, and κοιλις, the eyelid.) The upper eyelid.

EPICO'LIC. (*Epicolicus;* from επι, upon, and κωλον, the colon.) That part of the abdomen which lies over the head of the cœcum and the sigmoid flexure of the colon, is called the epicolic region.

Epicopho'sis. (From επι, and κωφος, deaf.) A total deafness.

EPICRA'NIUM. (*um, i.* n.; from επι, and κρανιον, the cranium.) The common integuments, aponeurosis, and muscular expansion which lie upon the cranium.

Epicra'nius. See *Occipito frontalis.*

EPI'CRASIS. (From επι, and κεραννυμι, to temper.) A critical evacuation of bad humours. When a cure is performed in the alterative way, it is called *per Epicrasin.*

EPICRISIS. (From επι, and κρινω, to judge from.) A judgment of the termination of a disease from present symptoms.

Epicte'nium. (From επι, about, and κτεις, the pubes.) The parts above and about the pubes.

Epicye'ma. (From επι, upon, and κυω, to conceive.) *Epicyesis.* Superfœtation.

Epicye'sis. See *Epicyema.*

EPIDE'MIC. (*Epidemicus;* from επι, upon, and δημος, the people.) A contagious disease, that attacks many people at the same season, and in the same place. Thus putrid fever, plague, dysentery, &c. are often epidemic.

EPIDE'NDRUM. (*um, i.* n.; from επι, upon, and δενδρον, a tree: because all this genus of plants grow parasitically on the trunk or branches of trees.) The name of a genus of plants in the Linnæan system. Class, *Gynandria;* Order, *Monandria.*

Epidendrum vanilla. The systematic name of the vanelloe plant; called also, *Vanilla*, *Banlia*, *Banilas*, and *Aracus aromaticus*. *Epidendrum—scandens, foliis ovato oblongis nervosis sessilibus caulinis, cirrhis spiralibus,* of Linnæus. The vanelloe is a long flattish pod, containing, under a wrinkled brittle shell, a reddish brown pulp, with small shining black seeds, which have an unctuous aromatic taste, and a fragrant smell, like that of some of the finer balsams heightened with musk. Although chiefly used as perfumes, they are said to possess aphrodisiac virtues.

Epi'deris. (From επι, and δερας, the skin.) The clitoris.

EPIDE'RMIS. (*is, idis.* f.; from επι, upon, and δερμα, the true skin.) The scarf-skin, or cuticle.

The epidermis is the external covering of the body. It is a thin, semi-transparent, membrane-like substance, adhering uniformly to the parts on which it is laid, and closely applied to all their inequalities. It does not possess any blood-vessels or nerves that can be detected; it exhibits no marks of sensibility; and seems to have but little connection with the vital powers of the system. It is frequently destroyed, from various accidents, and is quickly reproduced, without causing any material derangement, or any sensible change in the functions of the subjacent parts. With respect to its minute structure, we are informed that it consists of a thin expansion, in which no specific texture of any kind can be perceived; for the laminated or scaly appearance, which was thought by Leeuwenhoek, and some of the older writers, to be natural to it, appears to be the effect either of disease, or of mechanical violence. In some parts, indeed, where it is thicker than ordinary, it is capable of an imperfect division into layers; but these do not seem to possess any very distinct line of separation, and are irregular and not well defined. Some physiologists have considered it as a substance merely spread over the surface, like a crust or film, and supposed it to be formed by exudation from the cutaneous vessels; while both Bichât and Cuvier seem inclined to regard it as without any regular arrangement of its parts, and possessed of no visible organisation.

As the cutaneous perspiration issues from the greatest part of the surface of the body, it follows that the epidermis must be furnished with pores, or passages of some kind, for its transmission; yet, with the exception of Bichât, anatomists have confessed themselves unable to detect these passages. Indeed, one of the most remarkable properties of this part is its power of retaining fluids of all kinds, and preventing their escape from the surface. It is well known that it retains, for some time, the matter that is discharged from the cutis by a blister: and those who are conversant with dissections must have observed how much less rapidly the surface dries up when it is not deprived of the cuticle.

Epi'desis. (From επι, upon, and δεω, to bind.) A bandage to stop a discharge of blood.

Epide'smus. (From επι, upon, and δεω, to bind.) A bandage by which splints, bolsters, &c. are secured.

EPIDI'DYMIS. (*is, is.* m.; from επι, upon, and διδυμος, a testicle.) A hard, vascular, oblong substance, that lies upon the testicle, formed of a convolution of the *vas deferens.* It has a thick end, which is convex, and situated posteriorly; and a thin end, which is rather flat, and situated inferiorly. The epididymis adheres to the testicle by its two extremities only, for its middle part is free, forming a bag, to which the tunica vaginalis of the testicle is attached.

Epi'dosis. (From επιδιδωμι, to grow upon.) A preternatural enlargement of any part.

EPIDOTE. A compounded ore, containing silica, alumina, lime, oxide of iron, oxide of manganese found in primitive beds and veins, along with augite, hornblende, calcareous spar, &c.

Epi'drome. (From επιδρεμω, to run upon.) An afflux of humours.

EPIGA'STRIC. (*Epigastricus;* from επι, upon, or above, and γαστηρ, the stomach.) That part of the abdomen that lies over the stomach, is called the epigastric region; it reaches from the pit of the stomach to an imaginary line above the navel, supposed to be drawn from one extremity of the last of the false ribs to the other. Its sides are called hypochondria, and are covered by the false ribs, between which lies the epigastrium.

EPIGA'STRIUM. (*um, i.* n.; from επι, upon, or above, and γαστηρ, the belly.) The part immediately over the stomach.

EPIGENESIS. A name given by the ancients to that theory of generation which consists in regarding the fœtus as the joint production of matter afforded by both sexes.

EPIGENE'MA. (From επιγινομαι, to generate upon.) This term is applied in old writings, sometimes, to an adventitious symptom; at others, to any thing added, as fur upon the tongue.

EPIGENE'SIS. See *Epigenema.*

EPIGINO'MENA. (From επιγινομαι, to succeed or supervene.) Galen says, they are those symptoms which naturally succeed,

or may be expected in the progress of a disease; but Foësius says, they are accessions of some other affection, which never happen but in stubborn and malignant diseases.

EPIGLO'SSUM. (*um, i.* n.; from επι, upon, and γλωσσα, the tongue: so called because a lesser leaf grows above the larger in the shape of a tongue.) The Alexandrian laurel, a species of *Ruscus*.

EPIGLO'TTIS. (*is, idis.* or *is, is.* f.; from επι, upon, and γλωττις, the tongue.) The cartilage at the root of the tongue that falls upon the glottis, or superior opening of the larynx. Its figure is nearly oval; it is concave posteriorly, and convex anteriorly. Its apex, or superior extremity, is loose, and is always elevated upwards by its own elasticity. While the back of the tongue is drawn backwards in swallowing, the epiglottis is put over the aperture of the larynx: hence it shuts up the passage from the mouth into the larynx. The base of the epiglottis is fixed to the thyroid cartilage, the os hyoides, and the base of the tongue, by a strong ligament.

EPIGLO'TTUM. (*um, i.* n.; from επιγλωττις, the epiglottis, which it resembles in shape.) An instrument mentioned by Paracelsus for elevating the eyelids.

EPIGLOU'TIS. (From επι, upon, and γλουτος, the buttocks.) The superior parts of the buttocks.

EPIGO'NATIS. (From επι, upon, and γονυ, the knee.) The patella or knee-pan.

EPIGO'NIDES. (From επι, and γονυ, the knee.) About the knees: formerly applied to the muscles inserted into the knees.

EPI'GONUM. (From επιγινομαι, to proceed upon.) A superfœtation.

EPILE'MPSIS. See *Epilepsy*.

EPILEPSY. (*Epilepsia, æ.* f.; from επιλαμβανω, to seize upon: so called from the suddenness of its attack.) It is also called falling sickness, from the patient suddenly falling to the ground on an attack of this disease. By the ancients it was termed, from its affecting the mind, the most noble part of the rational creature, the sacred disease. It consists of convulsions, with sleep, and usually froth issuing from the mouth. Cullen divides the disease into three species:—

1. *Epilepsia cerebralis;* attacking suddenly, without manifest cause, and not preceded by any unpleasant sensation, unless, perhaps, some giddiness or dimness of sight.

2. *Epilepsia sympathica;* without manifest cause, but preceded by a sensation of an aura ascending from some part of the body to the head.

3. *Epilepsia occasionalis;* arising from manifest irritation, and ceasing on the removal of this. It comprehends several varieties:—

E. traumatica, arising from an injury of the head.

E. à dolore, from pain.

E. verminosa, from the irritation of worms.

E. à veneno, from poisons.

E. exanthematica, from the repulsion of cutaneous eruptions.

E. à cruditate ventriculi, from crudities of the stomach.

E. ab inanitione, from debility.

E. uterina, from hysterical affections.

E. ex onanismo, from onanism, &c.

This disease attacks by fits, and, after a certain duration, goes off, leaving the person most commonly in his usual state; but sometimes a considerable degree of stupor and weakness remain behind, particularly where the disease has frequent recurrences. It is oftener met with among children than grown persons, and boys seem more subject to its attacks than girls. Its returns are periodical, and its paroxysms commence more frequently in the night than in the day, being somewhat connected with sleep. It is sometimes counterfeited, in order to extort charity or excite compassion.

Epilepsy is properly distinguished into sympathic and idiopathic, being considered as sympathic, when produced by an affection in some other part of the body, such as acidities in the stomach, worms, teething, &c.; as idiopathic, when it is a primary disease, neither dependant on, nor proceeding from, any other.

The causes which give rise to epilepsy are blows, wounds, fractures, and other injuries done to the head by external violence, together with lodgments of water in the brain, tumours, concretions, and polypi. Violent affections of the nervous system, sudden frights, fits of passion, great emotions of the mind, acute pains in any part, worms in the stomach or intestines, teething, the suppression of long-accustomed evacuations, too great emptiness or repletion, and poisons received into the body, are causes which likewise produce epilepsy. Sometimes it is hereditary, and at others it depends on a predisposition arising from mobility of the sensorium, which is occasioned either by plethora, or a state of debility.

An attack of epilepsy is now and then preceded by a heavy pain in the head, dimness of sight, noise in the ears, palpitations, flatulency in the stomach and intestines, weariness, and a small degree of stupor, and, in some cases, there prevails a sense of something like a cold vapour or aura arising up to the head: but it more generally happens that the patient falls down suddenly without much previous notice; his eyes are distorted, or turned so that only the whites of them can be seen; his fingers are closely clinched, and the trunk of his body, particularly on one side, is much agitated; he foams at the mouth, and thrusts out his tongue, which often suffers great injury from the muscles of the lower jaw being affected; he loses all sense of feeling, and not unfrequently voids both urine and fæces involuntarily. The spasms abating, he recovers gradually; but, on coming to himself, feels languid and exhausted, and retains not the smallest recollection of what has passed during the fit.

When the disease arises from an hereditary disposition, or comes on after the age of pu-

berty, or where the fits recur frequently, and are of long duration, it will be very difficult to effect a cure: but when its attacks are at an early age, and occasioned by worms, or any accidental cause, it may in general be removed with ease. In some cases, it has been entirely carried off by the occurrence of a fever, or by the appearance of a cutaneous eruption. It has been known to terminate in apoplexy, and in some instances to produce a loss of the powers of the mind, and to bring on idiotism.

The appearances usually to be observed on dissection, are serous and sanguineous effusion, a turgid tense state of the vessels of the brain without any effusion, a dilatation of some particular part of the brain, excrescences, polypi, and hydatids adhering to it, and obstructing its functions, and likewise ulcerations.

During the epileptic paroxysm in general, little or nothing is to be done, except using precautions that the patient may not injure himself; and it will be prudent to remove any thing which may compress the veins of the neck, to obviate congestion in the head. Should there be a considerable determination of blood to this part, or the patient very plethoric, it may be proper, if you can keep him steady, to open a vein, or the temporal artery; and, in weakly constitutions, the most powerful antispasmodics might be tried in the form of clyster, as they could hardly be swallowed: but there is very seldom time for such measures. In the intervals the treatment consists: 1. In obviating the several exciting causes. 2. In correcting any observable predisposition. 3. In the use of those means which are most likely to break through the habit of recurrence.

I. The manner of fulfilling the first indication requires little explanation: after an injury to the head, or where there is disease of the bone, an operation may be necessary, to remove irritation from the brain; in children teething, the gums ought to be lanced; where the bowels are foul, or worms suspected, active purgatives should be exhibited, &c. In those instances, in which the aura epileptica is perceived; it has been recommended to destroy the part where it originates, or divide the nerve going to it, or correct the morbid action by a blister, &c.; such means would certainly be proper when there is any disease discoverable in it. Making a tight ligature on the limb above has sometimes prevented a fit; but, perhaps, only through the medium of the imagination.

II. Where a plethoric state appears to lay the foundation of the disease, which is often the case, the patient must be restricted to a low diet, frequent purges exhibited, and the other excretions kept up; and he should take regular moderate exercise, avoiding whatever may determine the blood to the head; and, to counteract such a tendency, occasional cupping, blisters, issues, &c. may be useful, as well as the shower-bath; but, in urgent circumstances, the lancet ought to be freely used. If, on the contrary, there are marks of inanition and debility, a generous diet, with tonic medicines, and other means of strengthening the system, will be proper. The vegetable tonics have not been so successful in this disease as the metallic preparations, particularly the sulphate of zinc, the nitrate of silver, and the ammoniated copper, but this cannot, perhaps, be so safely persevered in: where the patient is remarkably exsanguious, chalybeates may answer better; and, in obstinate cases, the arsenical solution might have a cautious trial. In irritable constitutions, sedatives are indicated, as digitalis, opium, &c.; but the free use of opium is restricted by a tendency to congestion in the head. Where syphilis appears to be concerned, a course of mercury is proper; in scrophulous habits, bark, or steel, with iodine, soda, and sea-bathing; and so on.

III. The third division of remedies comes especially in use, where the fits are frequent, or where their recurrence can be anticipated: emetics will often prevent them, or a full dose of opium; also other powerful antispasmodics, as æther, musk, valerian, &c.; or strong odours, and, in short, any thing producing a considerable impression on the system. Bark taken largely might perhaps be more successful on this principle. The disease has sometimes been cured, especially when originating from sympathy, by inspiring fear or horror; and many frivolous charms may, no doubt, have taken effect through the medium of the imagination. Also, long voyages have removed it, which might especially be hoped for at the age of puberty, particularly if a considerable change in the mode of life were made in other respects; those who had lived indolently being obliged to exert themselves, the diet properly adapted to the state of the system, &c.

On these several plans, the following observations should be attended to: — Colocynth, croton oil, camboge, sulphates of soda and magnesia, with senna and calomel, are the best purgatives; and, where worms are suspected, rectified oil of turpentine: which has also been found serviceable, in small doses, against epilepsy excited by other causes. When the purgative plan is determined on, whatever medicine may be selected, it will be necessary to give an active dose about twice a week. Many practitioners have found purgatives of great benefit; and the good appears to have resulted from removing, by their use, some visceral congestion. The *muscus agaricus*, or bug agaric, was once used as a purgative against epilepsy: but, in the present day, it is never thought of.

The *emetic* plan consists in giving a sulphate of zinc, or ipecacuanha, in effective doses early in the morning, when the stomach is empty, twice a week. De Haen gave a vomit every day, for a week or fortnight. In some, but few cases, this operation has emulged the liver, and seemed in this way to have contributed with other means to remove

the disease: but, in the generality, it has not done any good.

Sedatives and *tonics* are now very universally given, with a view of overcoming the irritability of the nervous system. Of these medicines, opium, conium, moschus, camphora, valeriana, hyosciamus, stramonium, and oleum cajeputæ, are selected in their turn, and given first singly, in full doses, and where they fail, which they too often do, in combination. The stramonium, a few years since, cured several patients at Stockholm, under the direction of Dr. Odhelius, who gave the extract and powder in pills. In this country it has not answered. Of the tonics, the *viscus quercinus*, or misletoe of the oak, at one time, and again in the present day, has been generally used, and even extolled, as a specific against epilepsy. It does not appear to signify from what tree it comes: the best way of exhibiting it is in full doses, from one to two drachms of the powder of the fruit three times a day, in any carminative distilled water, as peppermint or caraway. Peruvian bark, orange-peel, and orange-flowers, are to be given in full doses. From five to ten grains of the sulphate of quinine, with infusions of orange-peel or flowers, three times a day. Of less efficacy are cascarilla and the bitters. The metallic tonics are in very general use, especially preparations of steel, zinc, copper, arsenic, mercury, and silver. Mercury has been tried in almost every form, as an alterative, purgative, and sialagogue; but no essential benefit has resulted, except from the removal of some local disease. The sulphate of zinc is to be given in doses of from one to ten grains, three times a day: it is thought well of by many practitioners. If no good results from it when given alone, Peruvian bark, cascarilla, and other tonics, may also be given at the same time; and if they fail, the sedatives in their turn. The oxide of zinc, in the dose of from five to ten grains three times a day, frequently mitigates the violence of the fits, and renders them less frequent: it may, also, be given with other tonics and sedatives. Arseniate of potash has occasionally been found serviceable in the dose of from eight to twelve minims of the liquor arsenicalis, three times a day. The cuprum ammoniatum has been found not only to diminish the frequency of epilepsy, but also, in several instances, to effect a radical cure. The pilulæ cæruleæ, of the Edinburgh pharmacopœia is the simplest, and a good formula for its exhibition: the dose is from half a grain every night, to double the quantity, if the stomach will bear it. The nitrate of silver has been given in the dose of from one grain to two or three, in pill or solution, every six hours, in some cases of young persons, with decided benefit; but, like all the other medicines, in most cases without any advantage: and there is one singular effect of this medicine, which so frequently results from its use as almost to prevent its exhibition, namely, that of giving a dark or blue colour to the skin, which has vanished from some in a year or two, but never left others. The best preparations of steel are the compound mixture of the pharmacopœias of its sulphate with an alkali; the peroxide; the sulphate; and a solution of the muriate in æther.

All these plans seem to act by creating a new action in the nervous system, by which the tendency to that irregular action which constitutes the disease is destroyed.

EPILO'BIUM. (*um*, *ii*. n.; from επι λοβου ιον, a violet or beautiful flower, growing on a pod.) The name of a genus of plants in the Linnæan system. Class, *Octandria*; Order, *Monogynia*.

Epilobium angustifolium. Rose-bay-willow herb. The young tender shoots, cut in the spring and dressed as sallad, are little inferior to the lamb's lettuce.

EPIME'DIUM. (*um*, *i*. n.; from επιμυω, to close or shut up, because the leaves conceal the flowers; or from επι μηδια, because of its growing frequently in Media.) The name of a genus of plants in Class, *Tetrandria*; Order, *Monogynia*. Barren-wort.

Epimedium alpinum. The herb barren-wort: now fallen into disuse.

Epimo'rius. (From επι, and μειρω, to divide.) An obsolete term, formerly applied to an unequal pulse.

Epimy'lis. (From επι, and μυλη, the knee.) The patella or knee-bone.

Epineneu'cus. (From επινευω, to nod or incline.) An unequal pulse.

Epinephe'los. (From επι, and νεφελη, a cloud.) Cloudy: applied formerly to the urine.

Epino'tium. (From επι, upon, and νωτος, the back.) The shoulder-blade.

EPINY'CTIS. (*is*, *idis*. f.; from επι, and νυξ, night.) A pustule, containing a bloody sanies, which rises in the night, forming an angry tumour on the skin of the arms, hands, and thighs, of the size of a lupine, of a dusky red, and sometimes of a livid and pale colour, with great inflammation and pain. In a few days it breaks and sloughs.

Epipa'ctis. (From επιπακτοω, to coagulate.) A plant mentioned by Dioscorides; and so named because its juice was said to coagulate milk.

Epiparoxy'smus. (From επι, upon, and παροξυσμος, a paroxysm.) An unusual frequency of febrile exacerbation.

Epipa'stum. (From επι, upon, and πασσω, to sprinkle.) Any powdered drug sprinkled on the body. See *Catapasma*.

Epipe'chys. (From επι, above, and πηχυς, the cubit.) That part of the arm above the cubit.

Epipephycos. An old name of the tunica adnata of the eye.

Epiphlogi'sma. (From επι, upon, and φλογιζω, to inflame.) 1. Violent inflammation.

2. A name given by Hippocrates to the shingles. See *Erysipelas*.

EPI'PHORA. (*a*, *æ*. f.; from επιφερω,

to carry forcibly.) The watery eye. An involuntary flow of tears. A superabundant flowing of a serous or aqueous humour from the eyes. The humour which flows very copiously from the eye in epiphora, appears to be furnished, not only by the lachrymal gland, but from the whole surface of the conjunctive membrane, Meibomius's glands, and the caruncula lachrymalis; which increased and morbid secretion may be induced from any stimulus seated between the globe of the eye and lids, as sand, acrid fumes, and the like; or it may arise from the stimulus of active inflammation; or from the acrimony of scrophula, measles, small-pox, &c.; or from general relaxation. The disease may also arise from a more copious secretion of tears than the puncta lachrymalia can absorb, or, as is most common, from an obstruction in the lachrymal canal, in consequence of which the tears are prevented from passing freely from the eye into the nose.

EPIPHRAGMA. (*a, atis,* n.; from επι, upon, and φραγμα, the septum.) The slender membrane which sometimes shuts the peristoma of mosses, as is seen in *Polytricum.*

EPI'PHYSIS. (*is, is.* f.; from επι, upon, and φυω, to grow.) A portion of bone growing upon another, but separated from it by a cartilage. All the long bones, and many others, have epiphyses until the end of the juvenile period of life.

Epipla'sma. (From επι, upon, and πλασσαω, to spread.) 1. A poultice.

2. An application of wheat meal, boiled in hydrelæum, to wounds.

EPIPLO. (From επιπλοον, the omentum.) Names compounded of this word belong to parts connected with, or disease of, the epiploon.

EPIPLOCE'LE. (*e, es.* f.; from επιπλοον, the omentum, and κηλη, a tumour.) An omental hernia. A rupture produced by the protrusion of a portion of the omentum. See *Hernia omentalis.*

Epiplocomi'stis. (From επιπλοον, the omentum, and κομιζω, to carry.) One who has the omentum morbidly large.

EPIPLOIC. (*Epiploicus;* from επιπλοον, the omentum.) Appertaining to the epiploon or omentum.

Epiploic appendages. See *Appendiculæ epiploicæ.*

EPIPLOI'TIS. (*is, idis.* f.; from επιπλοον, the omentum.) Inflammation of the epiploon or omentum. See *Peritonitis.*

EPIPLOO'MPHALON. (*um, i.* n.; from επιπλοον, the omentum, and ομφαλος, the navel.) An omental hernia, protruding at the navel.

EPI'PLOON. (*on, i.* n.; from επιπλοω, to sail over, because it is mostly found floating, as it were, upon the intestines.) See *Omentum.*

EPIPLOSCHEOCE'LE. (*e, es.* f.; from επιπλοον, the omentum, οσχεον, the scrotum, and κηλη, a tumour or hernia.) A rupture in which the omentum descends into the scrotum, which is a scrotal hernia containing omentum.

Epipo'lasis. (From επιπολαζω, to swim on the top.) 1. A fluctuation of humours.

2. A species of chemical sublimation.

Epipo'ma. (From επι, upon, and πωμα, a lid.) An instrument to cover the shoulder in a luxation.

Epiporo'ma. (From επιπωρεω, to harden.) A hard tumour about the joints.

Epipty'xis. (From επιπτυσσω, to close up.) A spasmodic closing of the lips.

Epipyre'xis. (From επι, and πυρεττω, to be feverish.) A rapid exacerbation in a fever.

Epirige'sis. (From επι, and ριγεω, to become cold.) An unusual degree of cold, or repetition of rigors.

Epi'rrhoe. (From επι, upon, and ρεω, to flow.) An influx or afflux of humours to any part.

EPISARCI'DIUM. (*um, i.* n.; from επι, upon, and σαρξ, the flesh.) An anasarca, or dropsy, spread between the skin and flesh.

EPISCHE'SIS. (From επισχεω, to restrain.) A suppression of excretions.

Epischeses. An order in the class *Locales* of Cullen's Nosology.

EPI'SCHIUM. (*um, i.* n.; from επι, upon, and ισχιον, the hip-bone.) The os pubis.

EPISCOPA'L. (*Episcopalis,* from *episcopus,* a bishop, or mitred dignitary.) Of or belonging to a bishop: applied to a valve at the orifice, between the left auricle and ventricle of the heart. See *Mitral valve.*

Epispa'smus. (From επισπαω, to draw together.) A quick inspiration.

EPISPA'STIC. (*Epispasticus;* from επισπαω, to draw together.) Having the power of drawing together: applied to those substances which are capable, when applied to the surface of the body, of producing a thin serous fluid from the exhalants, which raises the cuticle, and forms the appearance of a vesicle or blister. See *Vesicatorius.*

Episphæ'ria. (From επι, and σφαιρα, a sphere: so called from the spherical shape of the brain.) The windings of the exterior surface of the brain; or the winding vessels upon it.

Epista'gmus. (From επι, and σταζω, to trickle down.) A catarrh.

Epistaphyli'nus. (From επι, and σταφυλη, the uvula.) See *Uvula.*

EPISTASIS. (From επι, and ιστημι, to stay.) 1. A suppression of proper excretions.

2. The superficies of urine, called *insidentia,* opposed to the *repostasis, subsidentia,* or sediment in urine. It is applied, in Hippocrates, to the beginning and increase of the fit.

EPISTA'XIS. (*is, is.* f.; from επισταζω, to distil from.) Bleeding at the nose.

Persons of a sanguine and plethoric habit, and not yet advanced to manhood, are very liable to be attacked with this complaint: females being much less subject to it than males, particularly after menstruation.

Epistaxis comes on at times without any previous warning; but at others, it is preceded by a pain and heaviness in the head, flushing in the face, heat and itching in the nostrils, a throbbing of the temporal arteries, and a quickness of the pulse. In some instances, a coldness of the feet, and shivering over the whole body, together with a costive belly, are observed to precede an attack of this hæmorrhage.

This complaint is to be considered as of little consequence, when occurring in young persons, being never attended with any danger; but when it arises in those who are advanced in life, flows profusely, and returns frequently, it indicates too great fulness of the vessels of the head, and not unfrequently precedes apoplexy, palsy, &c.; and therefore, in such cases, is to be regarded as a dangerous disease. When this hæmorrhage arises in any putrid disorder, it is to be considered as a fatal symptom.

In general, we need not be very anxious to stop a discharge of blood from the nose, particularly where there are marks of fulness of the vessels of the head: but if it occurs under a debilitated state of the system, or becomes very profuse, means must be employed to suppress it. These are chiefly of a local nature; applying pressure to the bleeding vessels, introducing astringents into the nostrils, as solutions of alum, sulphate of zinc, sulphate of copper, &c.; applying cold to the head, or to some very sensible part of the skin, as in the course of the spine, &c. At the same time the patient should be kept in the erect position. If the hæmorrhage be of an active character, the antiphlogistic regimen should be carefully observed: the patient kept cool and quiet; the saline cathartics, refrigerants, as nitrate of potash, and the acids, digitalis, diaphoretics, &c. administered internally; and blood may be taken from the temples by leeches, or even from the arm, if the patient be very plethoric. Sometimes, after the failure of other means, closing the posterior as well as anterior outlets from the nose, and preventing the escape of the blood for some time mechanically, has been successful; and this might be particularly proper, where it was discharged copiously into the fauces, so as to endanger suffocation, on the patient falling asleep.

EPISTHO'TONOS. (*os, i.* m.; from επισθεν, forwards, and τεινω, to extend.) A spasmodic affection of muscles, drawing the body forwards. See *Tetanus*.

Episto'mion. (From επι, upon, and ϛομα, a mouth.) 1. A stopper for a bottle.

2. A vent-hole of a furnace, called the register.

Epistro'phalus. See *Epistrophis*.

Epi'strophe. (From επιϛρεφω, to invert.) 1. An inversion of any part, as when the neck is turned round.

2. The return of a disorder.

EPI'STROPHEUS. (*us, i.* m.; from επιϛροφαω, to turn round, because the head is turned upon it.) The second cervical vertebra. See *Dentatus*.

EPI'STROPHIS. (*is, is.* m.; from επι, upon, and ϛρεφω, to turn about: so called because it turns about on the second vertebra, as upon an axis.) *Epistrophalus. Epistrophia.* The first vertebra of the neck.

Epi'tasis. (From επι, and τεινω, to extend.) The beginning and increase of a paroxysm or disease.

EPITHE'LIUM. (*um, ii.* n.) The cuticle on the red part of the lips.

EPITHE'MA. (*a, atis.* n.; from επι, upon, and τιθημι, to apply.) A lotion, fomentation, or any external application.

Epithema'tium. The same.

Epi'thesis. (From επι, and τιθημι, to cover, or lay upon.) The rectification of crooked limbs by means of instruments.

EPITHY'MUM. (*um, i.* n.; from επι, upon, and θυμος, the herb thyme.) See *Cuscuta epithymum*.

Epo'de. (From επι, over, and ωδη, a song.) *Epodos.* The method of curing distempers by incantation.

Epo'mis. (From επι, upon, and ωμος, the shoulder.) The acromion, or upper part of the shoulder.

Epompha'lium. (From επι, upon, and ομφαλος, the navel.) An application to the navel.

EPSOM. The name of a village in Surrey, about eighteen miles from London, in the neighbourhood of which is a considerable mineral spring, called Epsom water. *Aqua Epsomensis.* This water, evaporated to dryness, leaves a residuum, the quantity of which has been estimated from an ounce and a half in the gallon, to five drachms and one scruple. Of the total residuum, by far the greater part, about four or five sixths, is sulphate of magnesia mixed with a very few muriates, such as that of lime, and probably magnesia, which render it very deliquescent, and increase the bitterness of taste, till purified by repeated crystallisations. There is nothing sulphureous or metallic ever found in this spring. The diseases in which it is employed are similar to those in which we use Seidlitz water. There are many other of the simple saline springs that might be enumerated, all of which agree with that of Epsom, in containing a notable proportion of some purging salt, which, for the most part, is either sulphate of magnesia, or sulphate of soda, or often a mixture of both; such as Acton, Kilburn, Bagnigge Wells, New Bedlam, &c.

Epsom salt. A purging salt, formerly obtained by boiling down the mineral water found in the vicinity of Epsom, in Surrey. See *Magnesiæ sulphas*.

EPU'LIS. (*is, idis.* f.; from επι, and ουλα, the gums.) A small swelling on the gums.

EPULO'TIC. (*Epuloticus*; from επουλοω, to cicatrize.) That which promotes the formation of skin.

EQUISE'TUM. (*um, i.* n.; from *equus*,

a horse, and *seta*, a bristle: so named from its resemblance to a horse's tail.) 1. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Filices.*

2. The pharmacopœial name of the mare's tail. See *Hippuris vulgaris.*

Equisetum arvense. See *Hippuris.*

EQUITANS. Equitant: applied to leaves which are disposed in two opposite rows, and clasp each other by their compressed base; being, as it were, laminated, or folded one upon another; as in *Narthecium ossifragum.*

EQUITATIO. Riding. An excellent exercise, which particularly strengthens the bowels by the gentle agitation of those parts; and is extremely serviceable in most cases of torpid secretion of bile.

EQUIVALENT. A term introduced into chemistry by Dr. Wollaston, to express the system of definite ratios, in which the corpuscular objects of this science reciprocally combine, referred to a common standard, reckoned unity. See *Atomic system.*

E'QUUS. (*us, i.* m.) The name of a genus of animals of the order *Belluæ.* The horse.

Equus asinus. The systematic name of the animal called an ass; the female affords a light and nutritious milk. See *Milk, asses'.*

Era'nthemus. (From ηρ, the spring, and ανθεμος, a flower: so called because it flowers in the spring.) A spring flower: applied to a species of chamomile.

ERASIS'TRATUS. A celebrated Greek physician, said to have been born in the island of Ceos, and to have been the most distinguished pupil of Chrysippus, of the Cnidian school. He was the first, in conjunction with Herophilus, to dissect human bodies, anatomy having been before studied only in brutes; but the Ptolemies having allowed them to examine malefactors, they were enabled to make many important discoveries. Celsus notices a very improbable report, that they opened the bodies of those persons alive, to observe the internal motions: if this had been the case, they could hardly have maintained, that the arteries and left ventricle do not naturally contain blood, but air only. The works of Erasistratus, which were numerous, are lost; but, from the account of Galen, he appears to have very accurately described the brain, which he considered as the common sensorium; also the heart and large vessels; and pointed out the office of the liver and kidneys; but he supposed digestion was performed by trituration. He imagined inflammation and fever to arise from the blood being forced through the minute veins into the corresponding arteries. Being tormented with an ulcer in the foot, at an extreme old age, he is said to have terminated his existence by poison.

Erate'va marmelos. The plant so called is a native of several parts of India; it affords a fruit about the size of an orange, covered with a hard bony shell, containing a yellow viscous pulp, of a most agreeable flavour, which, when scooped out and mixed with sugar and orange, is brought to the tables of the grandees in India, who eat it as a great delicacy. It is also esteemed as a sovereign remedy against dysentery.

Erebi'nthus. Ερεβινθος. The vetch.

ERE'CTOR. (*or, oris.* m.) That which raises any thing up: applied to several muscles, the office of which is to raise up the part into which they are inserted.

Erector clitoridis. First muscle of the clitoris, of Douglas. *Ischio-cavernosus,* of Winslow. A muscle of the clitoris that draws it downwards and backwards, and serves to make the body of the clitoris more tense, by squeezing the blood into it from its crus. It arises from the tuberosity of the ischium, and is inserted into the clitoris.

Erector penis. *Ischio-cavernosus,* of Winslow. A muscle of the penis that drives the urine or semen forwards, and, by grasping the bulb of the urethra, pushes the blood towards the corpus cavernosum and the glans, and thus distends them. It arises from the tuberosity of the ischiun, and is inserted into the sides of the cavernous substance of the penis.

ERECTUS. Upright. A term very generally applied in natural history: in *Botany,* it expresses the direction of the stem, branches, leaves, petals, stamens, pistils, &c.; as *Caulis erectus,* an upright stem, as in *Lysimachia vulgaris; folium erectum,* forming an acute angle with the stem, as in *Juncus articulatus,* &c. The petals of the *Brassica erecta.*

ERETHI'SMUS. (*us, i.* m.; from ερεθιζω, to excite or irritate.) Increased sensibility and irritability. A term variously applied by modern writers. Mr. Pearson has described a state of the constitution produced by mercury acting on it as a poison. He calls it the mercurial erethismus, and mentions that it is characterised by great depression of strength, anxiety about the præcordia, irregular action of the heart, frequent sighing, trembling, a small quick, sometimes intermitting pulse, occasional vomiting, a pale contracted countenance, a sense of coldness; but the tongue is seldom furred, nor are the vital and natural functions much disturbed. In this state any sudden exertion will sometimes prove fatal.

Eretrius. (From *Eretria,* in the Negropont, the place whence it came.) Dioscorides and Galen describe two kinds of *terra Eretria,* which were much esteemed as alkaline and absorbent earths.

Ereugmos. (From ερευγω, to belch.) *Ereuxis.* An eructation.

Ergaste'rium. (From εργον, work.) A laboratory: that part of the furnace in which is contained the matter to be acted upon.

Ergot. See *Secale cornutum.*

ERI'CA. (*a, æ.* f.; from ερεικω, to break: so named from its fragility, or because it is broken into rods to make besoms of.) The name of a genus of plants in the Linnæan system. Class, *Octandria;* Order, *Monogynia.* Heath.

Erice'rum. (From ερεικη, heath.) A medicine in which heath is an ingredient.

ERI'GERON. (*um, i.* m. Ηριγερων, of the ancient Greeks; from ηρ, the spring, and γερων, an old man: because, in the spring, it has a white hoary blossom, like the hair of an old man.) 1. The name of a genus of plants. Class, *Syngenesia*; Order, *Polygamia superflua*.

2. The common chick-weed is so called in old books. See *Senecio vulgaris*.

Erigeron acre. This is most probably the *conyza cerula* of old pharmacopœias.

ERIGERUM. See *Senecio vulgaris*.

ERINACEUS. (*us, i.* m.) The name of a genus of the order *Feræ*. The hedge-hog tribe.

Erinaceus europeus. The hedge-hog. The flesh, which is difficult of digestion, was once considered a delicacy.

ERO'SION. (*Erosio*; from *erodo*, to gnaw off.) This word is very often used in the same sense as ulceration, viz. the formation of a breach or chasm in the substance of parts, by the action of the absorbents.

EROSUS. Jagged; gnawed. A leaf is called *folium erosum*, the margin of which is irregularly cut or notched, especially when otherwise divided besides; as in *Senecio squalidus*.

EROTIA'NUS, the author of a Glossary, containing an explanation of the terms in Hippocrates, lived in the reign of Nero. The work was printed at Venice, in 1566; and is also annexed to Foësius's edition of Hippocrates.

EROTOMA'NIA. (*a, æ.* f.; from ερως, love, and μανια, madness.) That melancholy, or madness, which is the effect of love.

E'rpes. (From ερπω, to creep: so named from their gradually increasing in size.) See *Herpes*.

ERRA'TIC. (*Erraticus*; from *erro*, to wander.) Wandering; irregular. A term occasionally applied to pains, or any disease which is not fixed, but moves from one part to another; as gout, rheumatism, &c.

E'RRHINE. (*Errhinus*; ερρινα, from εν, in, and ριν, the nose.) By errhines are to be understood those medicines which, when topically applied to the internal membrane of the nose, excite sneezing, and increase the secretion, independent of any mechanical irritation. The articles belonging to this class may be referred to two orders:—

1. *Sternutatory errhines*; as *nicotiana, helleborus, euphorbium*, which are selected for the torpid, the vigorous, but not plethoric, and those to whom any degree of evacuation would not be hurtful.

2. *Evacuating errhines*; as *asarum*, &c. which are calculated for the phlegmatic and infirm.

E'RROR LOCI. Boerhaave introduced this term, from the opinion that the vessels were of different sizes, for the circulation of blood, lymph, and serum, and that when the larger sized globules were forced into the lesser vessels, they became obstructed, by an *error of place*.

ERU'CA. (*a, æ.* f.; from *erugo*, to make smooth: so named from the smoothness of its leaves, or from *uro*, to burn, because of its biting quality.) See *Brassica eruca*.

Eruca syl'vestris. The wild rocket. See *Brassica eruca*.

ERUCTATION. (*Eructatio, onis.* f.) Belching. See *Flatulency*.

ERUPTION. *Eruptio*. A discolouration, or spots on the skin; as the eruption of small-pox, measles, nettle-rash, &c.

Eruthema. (From ερυθω, to make red.) A fiery red tumour on the skin.

E'RVUM. (*um, i.* n.; *quasi arvum*, a field, because it grows wild in the fields; or from *eruo*, to pluck out, because it is diligently plucked from corn.) The tare. 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

2. The pharmacopœial name of tare. See *Ervum ervilia*.

Ervum ervilia. The seeds of this plant, which is the *Orobus* of many writers, and the *Ervum ervilia—germinibus undato-plicatis, foliis imparipinnatis*, of Linnæus, have been made into bread in times of scarcity, which is not the most salubrious. The meal was formerly amongst the resolvent remedies by way of poultice.

Ervum lens. The systematic name of the lentil. *Lens*. Φακος of the Greeks. *Ervum—pedunculis subbifloris; seminibus compressis, convexis*, of Linnæus. There are two varieties; the one with large, the other with small seeds. They are eaten in many places as we eat peas, than which they are more flatulent, and more difficult to digest. A decoction of these seeds is used as a lotion to the ulcerations after small-pox, and, it is said, with success.

ERY'NGIUM. (*um, i.* n.; from ερυγγανω, to eructate.) Eryngo, or sea-holly.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

2. The pharmacopœial name of the sea-holly. See *Eryngium maritimum*.

Eryngium campestre. The root of this plant, *Eryngium—foliis radicalibus, amplexicaulibus, pinnato-lanceolatis*, of Linnæus, is used in many places for that of the sea-eryngo. See *Eryngium*.

Eryngium maritimum. The systematic name of the sea-holly or eryngo. *Eryngium—foliis radicalibus subrotundis, plicatis spinosis, capitulis pedunculatis, paleis tricuspidatis*, of Linnæus. The root of this plant is directed for medicinal use. It has no particular smell, but to the taste it manifests a grateful sweetness; and, on being chewed for some time, it discovers a light aromatic warmth or pungency. It was formerly celebrated for its supposed aphrodisiac powers, but it is now very rarely employed.

ERYNGO. See *Eryngium*.

Eryngo, sea. See *Eryngium*.

Eryngo-leaved lichen. See *Lichen*.

ERY'SIMUM. (*um, i.* n.; from ερυω, to draw, so called from its power of drawing and producing blisters. Others derive it απο του ερεικειν, because the leaves are much cut; others from εριτιμον, precious.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliquosa.*

2. The pharmacopœial name of the hedge mustard. See *Erysimum officinale.*

Erysimum alliaria. The systematic name of Jack in the hedge, Sauce alone, or stinking hedge-mustard; which is also called, *Alliaria, Camelina,* and *Chamæplion,* by Oribasius. The plant to which these names are given, is the *Erysimum foliis cordatis,* of Linnæus; it is sometimes exhibited in humid asthma and dyspnœa, with success. Its virtues are powerfully diaphoretic, diuretic, and antiscorbutic.

Erysimum barbarea. The systematic name of the *barbarea* of the shops. The leaves of this plant, *Erysimum—foliis lyratis, extimo subrotundo,* of Linnæus, may be ranked among the antiscorbutics. They are seldom used in practice.

Erysimum officinale. The systematic name of the hedge-mustard. *Erysimum—siliquis spicæ adpressis, foliis runcinatis,* of Linnæus. It was formerly much used for its expectorant and diuretic qualities, which are now forgotten. The seeds are warm and pungent, and very similar to those of mustard in their sensible effects.

ERYSI'PELAS. (*as, atis.* n.; from ερυω, to draw, and πελας, adjoining: named from the neighbouring parts being affected by the eruption.) St. Anthony's fire. It is known by a redness or inflammation on some part of the skin, attended by fever mostly inflammatory, but occasionally typhoid.

1. *Erysipelas phlegmonodes.* This form of it most frequently occurs in the face, affecting usually one side of it only: sometimes it attacks one of the extremities; and in both cases it is ushered in by a smart feverish attack. The colour is higher than in the other species, and the burning heat and tingling in the part are exceedingly distressing. The swelling generally appears on the second night, or third day of the fever; the vesications rise on the fourth and fifth, and break or subside on the fifth or sixth, when the redness changes to a yellowish hue, and the swelling and fever begin to diminish, and on the eighth day both disappear: on the tenth, the new cuticle is commonly left exposed, the old one having separated, and the brownish or dark scab, which had formed where the fluid of the vesications had been discharged, having fallen off. The progress of the disease, however, is more rapid, and its duration shorter, in young and sanguine habits, than in those more advanced in life: in the former, the tumefaction is sometimes fully formed on the second day, and the whole terminates on the sixth or seventh; while in the latter, it may be protracted to the tenth or twelfth, and the desquamation may not be completed before the fourteenth day. The vesications, in the latter instances, are often succeeded by a profuse discharge of acrimonious lymph, for several days, so that scabs do not form. Suppuration now and then occurs in this species of erysipelas, especially in the eyelids and scalp.

2. The *Erysipelas œdematodes* is less severe in its attack: the tumour is more gradual in its rise and extension, is of a paler red, or of a yellowish brown colour, and is accompanied by less heat and local distress: its surface is smooth and shining; and, if it be strongly pressed with the finger, a slight pit remains for a short time. Vesications, which are smaller, less elevated, and more numerous than in the former species, appear on the third or fourth day from the commencement of the swelling; and are succeeded, in two or three days, by thin dark-coloured scabs, giving an appearance not unlike the confluent small-pox, from the edges of which a clear lymph exudes. The whole face is much enlarged, so that the form of the features is scarcely recognised, and the appearance is not unaptly compared by Dr. Willan to that of a bladder distended with water.

This species of erysipelas is attended with considerable danger, when it affects the face as above described; for the disorder of the functions increases with the advancement of the external disease. Vomiting, rigors, and delirium, followed by coma, take place about the height of the disorder, and often terminate fatally on the seventh or eighth day; while, in other cases, the symptoms continue undiminished, and death occurs at a later period; or a slow and tedious convalescence ensues.

This form of erysipelas most commonly affects persons of debilitated constitution, dropsical persons, and those who have long been subject to other chronic maladies, or live in habitual intemperance. It is not attended with danger, however, when it affects one of the extremities. In some unfavourable cases, matter is formed, which is liable to make its way through the cellular substance, producing irregular sinuses between the muscles, which it often materially injures, and prolonging the sufferings of the patient for many weeks.

3. The *Erysipelas gangrænosum* commences sometimes like the one and sometimes like the other of the foregoing species, and most commonly occurs in the face, neck, or shoulders. It is accompanied with symptoms of low fever, and with delirium, which is soon followed by coma, which remains through the subsequent course of the disease. The colour of the affected part is a dark red; and scattered phlyctænæ, with a livid base, appear upon the surface, which frequently terminate in gangrenous ulcerations. Even when it terminates favourably, suppuration and gangrene of the muscles, tendons, and cellular substance, often take place, producing little caverns and sinuses, which contain an ill-conditioned pus, together with sloughs of the mortified parts, which are ultimately evacuated from the ulcers. It is always a tedious and precarious disease, and irregular in the period of its termination.

A peculiar variety of gangrenous erysipelas occasionally occurs in infants, a few days after birth, especially in lying-in hospitals, and is often fatal. Sometimes, indeed, infants have been born with livid patches, vesications, and even gangrene already advanced. It most frequently commences about the umbilicus or the genitals, and extends upwards or downwards, affecting the parts which it reaches with moderate swelling, and slight hardness; the skin puts on a dark red colour, and vesications with livid bases break out, terminating in sphacelus, which, if the child is not speedily cut off, nearly destroys some of the fingers, or toes, or even the genitals. In the milder cases, when the extremities alone are affected, suppurations take place rapidly about the joints of the hands and feet. The *Erysipelas infantum*, however, often terminates favourably in ten or twelve days.

4. In the *Erysipelas erraticum* the morbid patches appear, one after another, on different parts of the body: in some cases, those which appeared first remain till the whole eruption be completed; in others, the first patches decline, as fresh ones appear. Sometimes the disease thus travels progressively from the face downwards to the extremities. It commonly terminates favourably, however, in a week or ten days.

It has been the subject of some discussion, whether erysipelas is not sometimes propagated by contagion. The disease has been noticed, in several hospitals, to prevail in certain wards, among patients admitted with different complaints; but has seldom been known to spread in private houses.

Erysipelas is mostly an inflammatory affection of the skin, and then it is apparent and known: but it also affects internal parts, especially the mucous membrane of the throat, primæ viæ, and air passages. It is more liable to attack women and children, and those of an irritable habit, than those of a plethoric and robust constitution.

It is remarkable that erysipelas sometimes returns periodically, attacking the patient once or twice a year, or oftener, and then by its repeated attacks it often gradually exhausts the strength, especially if he be old and of a bad habit.

When the inflammation is a mere blush, and is not attended by much affection of the system, it is called *erythema*; but when the system is affected, it is named erysipelas.

Every part of the body is equally liable to it, but it more frequently appears on the face, legs, and feet than any where else when seated externally; and it occurs oftener in warm climates than phlegmonous inflammation.

It may be occasioned by a certain matter generated within the body, and thrown out on its surface. A particular state of the atmosphere seems sometimes to render it epidemical.

In slight cases, where it attacks the extremities, it makes its appearance with a roughness, heat, pain, and redness of the skin, which becomes pale when the finger is pressed upon it, and again returns to its former colour, when it is removed. There prevails likewise a small febrile disposition, and the patient is rather hot and thirsty. If the attack is mild, these symptoms will continue only for a few days, the surface of the part affected will become yellow, the cuticle or scarf-skin will fall off in scales, and no further inconvenience will perhaps be experienced; but if the attack has been severe, and the inflammatory symptoms have run high, then there will ensue pains in the head and back, great heat, thirst, and restlessness; the part affected will slightly swell; the pulse will become small and frequent; and, about the fourth day, a number of little vesicles, containing a limpid, and, in some cases, a yellowish fluid, will arise. In some instances, the fluid is viscid, and instead of running out, as generally happens when the blister is broken, it adheres to and dries upon the skin.

In unfavourable cases, these blisters sometimes degenerate into obstinate ulcers, which now and then become gangrenous. This, however, does not happen frequently; for although it is not uncommon for the surface of the skin, and the blistered places, to appear livid or even blackish, yet this usually disappears with the other symptoms.

The period at which the vesicles show themselves is very uncertain. The same may be said of the duration of the eruption. In mild cases, it often disappears gradually, or is carried off by spontaneous sweating. In some cases it continues without showing any disposition to decline for twelve or fourteen days, or longer.

The trunk of the body is sometimes attacked with erysipelatous inflammation, but less frequently so than the extremities. It is not uncommon, however, for infants to be attacked in this manner a few days after birth; and in these it makes its appearance about the genitals. The inflamed skin is hard, and apparently very painful to the touch. The belly often becomes uniformly tense, and sphacelated spots sometimes are to be observed. From dissections made by Dr. Underwood, it appears, that the disease frequently spreads to the abdominal viscera.

That form of erysipelatous inflammation, which most usually attacks the trunk of the body, is vulgarly known by the name of *shingles*. Instead of appearing an uniform inflamed surface, it consists of a number of little pimples extending round the body a little above the umbilicus, which have vesicles formed on them in a short time. Little or no danger ever attends this species of erysipelas.

When erysipelas attacks the face, it comes on with chilliness, succeeded by heat, restlessness, thirst, and other febrile symptoms, with a drowsiness, or tendency to coma or delirium, and the pulse is very frequent and full. At the end of two or three days, a fiery redness appears on some part of the face, and this extends at length to the scalp,

and then gradually down the neck, leaving a tumefaction in every part the redness has occupied. The whole face at length becomes turgid, and the eyelids are so much swelled as to deprive the patient of sight. When the redness and swelling have continued for some time, blisters of different sizes, containing a thin colourless acrid liquor, arise on different parts of the face, and the skin puts on a livid appearance in the blistered places; but in those not affected with blisters, the cuticle, towards the close of the disease, falls off in scales.

No remission of the fever takes place on the appearance of the inflammation on the face; but, on the contrary, it is increased as the latter extends, and both will continue probably for the space of eight or ten days. In the course of the inflammation, the disposition to coma and delirium are sometimes so increased as to destroy the patient between the seventh and eleventh days of the disease. When the complaint is mild, and not leading to a fatal event, the inflammation and fever generally cease gradually without any evident crisis.

If the disease arises in a bad habit of body, occupies a part possessed of great sensibility, is accompanied with much inflammation, fever, and delirium, and these take place at an early period, we may suppose the patient exposed to imminent danger. Where translations of the morbid matter take place, and the inflammation falls on either the brain, lungs, or abdominal viscera, we may entertain the same unfavourable opinion. Erysipelas seldom terminates in suppuration, unless combined with some degree of phlegmonous inflammation, which is sometimes the case; but, in a bad habit, it is apt to terminate in gangrene, in which case there will be also great danger. When the febrile symptoms are mild, and unaccompanied by delirium or coma, and the inflammation does not run high, we need not be apprehensive of danger.

Where the disease has occupied the face, and proves fatal, inflammation of the brain and its consequences are, in some cases, met with on dissection.

The treatment of erysipelas must proceed on the antiphlogistic plan, varied, however, in its activity according to the type of the disease. When it occurs in robust plethoric constitutions, partaking of the phlegmonous character, with severe synochal fever, it will be proper to begin by taking a moderate quantity of blood; then direct cooling saline purgatives, antimonial diaphoretics, a light vegetable diet, &c. When the disorder attacks the face, it may be better to use cupping behind the neck, and keep the head somewhat raised. But if the disease exhibits rather the typhoid type, and particularly where there is a tendency to gangrene, the patient's strength must be supported: after clearing out the primæ viæ, and endeavouring to promote the other secretions by mild evacuants, when the pulse begins to fail, a more nutritious diet, with a moderate quantity of wine, and the decoction of bark with sulphuric acid, or other tonic medicine, may be resorted to; nay, even the bark in substance, and the more powerful stimulants, as ammonia, &c. ought to be tried, if the preceding fail. Should the inflammation, quitting the skin, attack an internal part, a blister, or some rubefacient, may help to relieve the patient; and stimulants to the lower extremities will likewise be proper, where the head is severely affected. To the inflamed part of the skin applications must not be too freely made: where there is much pain and heat, cooling it occasionally with plain water, is perhaps best; and where an acrid discharge occurs, washing it away from time to time with warm milk and water. Should suppuration happen, it is important to make an early opening for the escape of the matter, to obviate the extensive sloughings otherwise apt to follow; and where gangrene occurs, the fermenting cataplasm may be applied.

ERYSIPELATOID. (*Erysipelatodes*: from *erysipelas*, and εἶδος, resembling.) Like unto the erysipelas.

ERYTHE'MA. (*a, atis.* n.; from ἐρυθρος, red.) 1. Simple redness. — *Hippocrates.*

2. Rash, or inflammatory blush without fever. — *Cullen.*

3. A lesser degree of erysipelas. — *Callisen.*

4. A nearly continuous redness of some portion of the skin, attended with disorder of the constitution, but not contagious. — *Willan.*

Dr. Willan has described six varieties, which will include all the ordinary forms of the efflorescence. In some of them, as will appear from their titles, the surface is more or less elevated at some period of its course, approximating to the papular or tubercular tumours: but these are obscurely formed, and soon subside, leaving the redness undiminished.

1. *Erythema fugax*, consists of red patches, of an irregular form and short duration, resembling the redness produced from pressure. These patches appear successively on the arms, neck, breast, and face, in various febrile diseases, and in bilious diarrhœa, generally denoting, as Hippocrates and the ancients have observed, a tedious and dangerous disease. They sometimes occur in chronic affections, especially those in which the primæ viæ are deranged; as in dyspepsia, hysteria, hemicrania, &c.

2. The *Erythema læve* exhibits an uniformly smooth, shining surface, and chiefly appears on the lower extremities, in confluent patches, and is generally accompanied by anasarca. It affects young persons, who are sedentary, with slight fever, and terminates gradually, after an uncertain period, in extensive desquamation, as soon as the anasarca has disappeared. Exercise, with diuretics and corroborants, contributes to shorten its duration in this class of patients. It occurs also in elderly persons, labouring under anasarca (especially in those accustomed to excessive

drinking), and is liable to terminate in gangrenous ulcers. Indeed, under whatever circumstances anasarca occurs, so as to stretch the skin greatly, this erythema is liable to be produced, and is often chequered with patches and streaks of a dark red or purple hue. Relief is afforded by the horizontal posture of the limbs, by the internal use of diuretics and bark, and also by a weak spirituous lotion applied to the surface.

It sometimes occurs without œdema, when the bowels have been much disordered; and occasionally, in women, at the menstrual periods.

3. The *Erythema marginatum* occurs in patches, which are bounded on one side by a hard, elevated, tortuous, red border, in some places obscurely papulated: but the redness has no regular boundary on the open side. The patches appear on the extremities and loins, in old people, and remain for an uncertain time, without producing any irritation in the skin. They are connected with some internal disorder, and their occurrence is to be deemed unfavourable.

4. The *Erythema papulatum* occurs chiefly on the arms, neck, and breast, in extensive irregular patches, of a bright red hue, presenting not an inelegant painted appearance. For a day or two, before the colour becomes vivid, the surface is rough, or imperfectly papulated. The redness afterwards continues for about a fortnight; and, as the eruption declines, it assumes a blueish hue, especially in the central parts of the patches. This eruption is sometimes attended with great disorder of the constitution, especially with a frequent, small pulse, total anorexia, and extreme depression of strength and spirits, and with acute pains and great tenderness of the limbs: but the general disorder is often trifling. Light diet, with diaphoretics, and the mineral acids, and an attention to the state of the bowels, comprise all that is necessary in the treatment of this disorder.

5. *Erythema tuberculatum* resembles the last variety in the large irregular patches of red efflorescence which it exhibits; but there are small slightly elevated tumours interspersed through the patches, which subside in about a week, leaving the erythema, which becomes livid and disappears in about a week more. It commences with fever, and is accompanied with great languor, irritability, and restlessness, and succeeded by hectic. In the only three cases of this erythema, which had occurred to Dr. Willan, the medicines employed did not appear to alleviate the symptoms, or to prevent the subsequent hectic.

6. The *Erythema nodosum*, which is a more common and milder complaint, seems to affect females only, and occurs on the fore part of the legs. It is preceded by slight febrile symptoms for a week or more, which generally abate when the erythema appears. It shows itself in large oval patches, the long diameter of which is parallel with the tibia, and which slowly rise into hard and painful protuberances, and as regularly soften and subside, in the course of nine or ten days; the red colour turning blueish on the eighth or ninth day, as if the leg had been bruised. It has always gone through its course mildly, under the use of laxatives, followed by the mineral acids, and other tonics.

Erythema mercuriale. See *Eczema*.

ERYTHRO'DANUM. (From ερυθρος, red: so called, from the colour of its juice.) See *Rubia tinctorum*.

ERYTHROEI'DES. (From ερυθρος, red, and ειδος, a likeness: so called, from its colour.) Of a red colour: applied formerly to the tunica vaginalis testis.

ERYTHRO'NIUM. (From ερυθρος, red: so called, from the red colour of its juice.) *Dens canis*. A species of satyrion.

ERYTHRO'XYLUM. (*um, i.* n.; from ερυθρος, red, and ξυλον, wood: so named, from its colour.) See *Hæmatoxylum*.

E'rythrus. (From ερυθρος, red: so named, from the red colour of its juice.) The sumach. See *Rhus coriaria*.

E'saphe. (From εσαφαω, to feel.) The touch; or feeling the mouth of the womb, to ascertain its condition.

E'SCHAR. (*Eschara, æ.* f. Εσχαρα; from εσχαροω, to scab over.) *Eschara*. The portion of flesh that is destroyed by the application of a caustic, and which sloughs away.

ESCHARO'TIC. (*Escharoticus*; from εσχαροω, to scab over.) A substance which possesses a power of destroying the texture of the various solid parts of the animal body to which it is directly applied. The articles of this class of substances may be arranged under two orders: —

1. *Eroding escharotics*; as blue vitriol, *alumen ustum*, &c.

2. *Caustic escharotics*; as *potassa pura, argenti nitras, acidum sulphuricum, nitricum*, &c.

ESCULENT. *Esculentus*. An appellation given to such animals, fishes, and plants, or any part of them, that may be eaten for food.

E'SOX. (*ox, ocis.* m.) The name of a genus of fishes. Class, *Pisces*; Order, *Abdominales*.

Esox lucius. The systematic name of the pike fish, from the liver of which an oil is separated spontaneously, which is termed, in some pharmacopœias, *oleum lucii piscis*. It is used in some countries, by surgeons, to destroy spots of the transparent cornea.

E'SSENCE. (*Essentia, æ.* f.) Several of the volatile or essential oils are called by this name.

ESSENTIAL. *Essentialis*. Something that is necessary to constitute a thing, or that has such a connection with the nature of a thing, that is found wherever the thing itself is; thus the heart, brain, spinal marrow, lungs, stomach, &c. are parts essential to life.

In *Natural History*, it is applied to those circumstances which mark or distinguish an animal or plant from all others in the same order or genus.

Essential oil. See *Oil.*

E'SSERA. (*a, æ.* f.; from *Eshera*, an Arabian word literally meaning *papulæ.*) A species of cutaneous eruption, distinguished by broad, shining, smooth, red spots, mostly without fever, and differing from the nettle rash in not being elevated. It generally attacks the face and hands.

Esthiomenos. (From εσθιω, to eat.) A term formerly applied to any disease which rapidly destroyed, or, as it were, ate away the flesh; as some forms of herpes, lupus, cancer.

E'SULA. (*a, æ.* f.; from *esus*, eaten, because it is eaten by some as a medicine.) Spurge.

Esula major. See *Euphorbia palustris.*

Esula minor. See *Euphorbia cyparissias.*

E'THER. See *Æther.*

Ether, acetic. Acetic naphtha. An etherial fluid, drawn over from an equal admixture of alkohol and acetic acid, distilled with a gentle heat from a glass retort in a sand-bath. It has a grateful smell, is extremely light, volatile, and inflammable.

Ether, muriatic. Marine æther. Muriatic æther is obtained by mixing and distilling alkohol with extremely concentrated muriate of tin. It is stimulant, antiseptic, and diuretic.

Ether, nitrous. Nitric naphtha. This is only a stronger preparation than the spiritus ætheris nitrici of the London Pharmacopœia. It is produced by the distillation of two parts of alkohol to one part and a half of fuming nitric acid.

Ether, sulphuric. See *Æther.*

Ether, vitriolic. See *Æther.*

ETHERIAL. (*Etherialis;* from *æther.*) A term applied to any highly rectified essential oil or spirit. See *Oleum æthereum.*

Ethiops, antimonial. See *Æthiops.*

Ethiops, martial. The protoxide, or black oxide, of iron. See *Iron.*

Ethiops, mineral. See *Hydrargyrum.*

Ethiops per se. See *Hydrargyrum.*

ETHMOID. (*Ethmoides;* from εθμος, a sieve, and ειδος, form: because it is perforated like a sieve.) Sieve-like.

Ethmoid bone. *Os ethmoideum. Os æthmoides.* Cribriform bone. A bone of the head. This is, perhaps, one of the most curious bones of the human body. It appears almost a cube, not of solid bone, but exceedingly light, spongy, and consisting of many convoluted plates, which form a network, like a honeycomb. It is curiously enclosed in the os frontis, betwixt the orbitary processes of that bone. One horizontal plate receives the olfactory nerves, which perforate that plate with such a number of small holes, that it resembles a sieve; whence the bone is named cribriform, or ethmoid bone. Other plates, dropping perpendicularly from this one, receive the divided nerves, and give them an opportunity of expanding into the organ of smelling; and these bones, upon which the olfactory nerves are spread out, are so much convoluted as to extend the surface of this sense very greatly, and are named spongy bones. Another flat plate lies in the orbit of the eye; and being very smooth, by the rolling of the eye, it is named the os planum, or smooth bone. So that the ethmoid bone supports the fore-part of the brain, receives the olfactory nerves, forms the organ of smelling, and makes the chief part of the orbit of the eye: and the spongy bones, and the os planum, are neither of them distinct bones, but parts of this ethmoid bone.

The *cribriform plate* is exceedingly delicate and thin; lies horizontally over the root of the nose; and fills up neatly the space betwixt the two orbitary plates of the frontal-bone. The olfactory nerves, like two small flat lobes, lie out upon this plate, and adhering to it, shoot down like many roots through this bone, so as to perforate it with numerous small holes, as if it had been dotted with the point of a pin, or like a nutmeg-grater. This plate is horizontal; but its processes are perpendicular, one above, and three below.

1. The first perpendicular process is what is called *crista galli;* a small perpendicular projection, somewhat like a cock's comb, but exceedingly small, standing directly upwards from the middle of the cribriform plate, and dividing that plate into two; so that one olfactory nerve lies upon each side of the crista galli; and the root of the falx, or septum, betwixt the two hemispheres of the brain, begins from this process. The foramen cæcum, or blind hole of the frontal bone, is formed partly by the root of the crista galli, which is very smooth, and sometimes it is said to be cellular.

2. Exactly opposite this, and in the same direction with it, *i. e.* perpendicular to the ethmoid plate, stands out the *nasal plate* of the ethmoid bone. It is sometimes called azygous, or single process of the ethmoid, and forms the beginning of that septum, or partition, which divides the two nostrils. This process is thin but firm, and composed of solid bone; it is commonly inclined a little to one side, so as to make the nostrils of unequal size. The azygous process is united with the vomer, which forms the chief part of the partition; so that the septum, or partition of the nose, consists of the azygous process of the ethmoid bone above, of the vomer below, and of the cartilage in the fore or projecting part of the nose; but the cartilage rots away, so that whatever is seen of the septum in the skull must be part either of the ethmoid bone or vomer.

3. Upon either side of the septum, there hangs down a *spongy bone,* one hanging in each nostril. They are each rolled up like a scroll of parchment; they are very spongy; are covered with a delicate and sensible membrane; and, when the olfactory nerves depart from the cribriform plate of the ethmoid bone, they attach themselves to the septum, and to these upper spongy bones, and expand upon them, so that the convolutions of these bones are of material use in expanding the organ of

smelling, and detaining the odorous effluvia, till the impression be perfect. Their convolutions are more numerous in the lower animals, in proportion as they need a more acute sense. They are named spongy or turbinated bones, from their convolutions resembling the many folds of a turban.

The spongy bones have a great many honeycomb-like cells connected with them, which belong also to the organ of smell, and which are useful, perhaps, by detaining the effluvia of odorous bodies, and also by reverberating the voice. Thus, in a common cold, while the voice is hurt by an affection of these cells, the sense of smelling is almost lost.

4. The *orbitary plate* of the ethmoid bone is a large surface, consisting of a very firm plate of bone, of a regular square form, exceedingly smooth and polished: it forms a great part of the socket for the eye, lying on its inner side. When we see it in the detached bone, we know it to be just the flat side of the ethmoid bone; but while it is incased in the socket of the eye, we should believe it to be a small square bone: and from this, and from its smoothness, it has got the distinct name of os planum.

The cells of the ethmoid bone, which form so important a share of the organ of smell, are arranged in great numbers along the spongy bone. They are small, neat cells, much like a honeycomb, and regularly arranged in two rows, parted from each other by a thin partition; so that the os planum seems to have one set of cells attached to it, while another regular set of cells belongs in like manner to the spongy bones. There are thus twelve in number opening into each other, and into the nose.

These cells are frequently the seat of venereal ulcers; and the spongy bones are the surface where polypi often sprout up. And from the general connections and forms of the bone, we can easily understand how the venereal ulcer, when deep in the nose, having got to these cells, cannot be cured, but undermines all the face; how the venereal disease, having affected the nose, soon spreads to the eye; and how even the brain itself is not safe. We see the danger of a blow upon the nose, which, by a force upon the septum, or middle partition, may depress the delicate cribriform plate, so as to oppress the brain with all the effects of a fractured skull, and without any operation which can give relief. And we also see the danger of pulling away polypi, which are firmly attached to the upper spongy bone.

ETHMOI'DES. See *Ethmoid.*

ETMULLER, Michael, was born at Leipsic in 1644, and died in 1683. He was a very voluminous writer, and his works were considered to have sufficient merit to be translated into most European languages.

E'tron. (From εδω, to eat, as containing the receptacles of the food.) The hypogastrium.

Eua'nthemum. (From ευ, well, and ανθεμος, a flower: so named from the beauty of its flowers.) The chamomile.

Eua'phium. (From ευ, well, and αφη, the touch: so called because its touch was supposed to give ease.) A medicine for the piles has received this name.

EUCHLORE. (*Euchlorus;* from ευ, fine, and χλωρος, green.) Bright green.

EU'CHLORINE. (*Euchlorium, ii.* n.; from ευ, fine, and *chlorium:* so called because the tinct is more lively than chlorine.) See *Chlorous oxide.*

EUCLASE. The prismatic emerald.

EUDIALITE. A brownish red-coloured mineral, belonging to the tessular system of Molis.

EUDIOMETER. (*Eudiometrum, i.* n.; from ευς, good, and μετρον, a measure: so called because it determines the quantity of pure or good air.) Oxymeter. An instrument by which the quantity of oxygene and nitrogene in atmospherical air can be ascertained. Several methods have been employed, all founded upon the principle of decomposing common air by means of a body which has a greater affinity for the oxygene. See *Eudiometry.*

EUDIOMETRY. The method of ascertaining the purity of atmospheric air.

No sooner was the composition of the atmosphere known, than it became an enquiry of importance to find out a method of ascertaining, with facility and precision, the relative quantity of oxygene gas contained in a given bulk of atmospheric air. Several of these instruments have been invented: those which have been approved are Priestley's, Scheele's, and Seguin's; but that of Sir Humphrey Davy has superseded them all. It is portable, simple, and convenient.

Take a small glass tube, graduated into one hundred equi-distant parts; fill this tube with the air to be examined, and plunge it into a bottle, or any other convenient vessel, containing a concentrated solution of green muriate or sulphate of iron, strongly impregnated with nitrous gas. All that is necessary to be done is to move the tube in the solution a little backwards and forwards. Under these circumstances, the oxygene gas contained in the air will be rapidly absorbed, and condensed by the nitrous gas in the solution, in the form of nitrous acid.

The air of London, examined by means of Davy's eudiometer, was found, in all the different seasons of the year, to contain 0·21 of oxygene; and the same was the case with air taken at Islington and Highgate, in the solitary cells in Cold-Bath-Fields prison, and on the river Thames. But the quantity of water contained in a given bulk of air from these places, differed considerably.

EUGALENUS, Severinus, a physician of Doccum, in Friesland, the author of *A Treatise on the Scurvy,* in 1604, which once maintained a considerable character: but the publication of Dr. Lind, pointing out its numerous errors, has entirely superseded it.

EUGE'NIA. (*a, æ.* f.; so named by Micheli, in compliment to Prince Eugene of Savoy, who sent him from Germany almost all the plants described by Clusius.) The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Monogynia.*

EUGENIA CARYOPHYLLATA. The systematic name of the tree which affords the clove. *Caryophyllus aromaticus.* It grows in the East Indies, the Moluccas, &c. The clove is the unexpanded flower, or rather the calyx; it has a strong agreeable smell, and a bitterish, hot, not very pungent, taste. The oil of cloves, commonly emt with in the shops, and received from the Dutch, is highly acrimonious and sophisticated. Clove is accounted the hottest and most acrid of the aromatics; and, by acting as a powerful stimulant to the muscular fibres, may, in some cases of atonic gout, paralysis, &c. supersede most others of the aromatic class; and the foreign oil, by its great acrimony, is also well adapted for several external purposes: it is directed by several pharmacopœias, and the clove itself enters many officinal preparations.

EUGENIA JAMBOS. The systematic name of the Malabar plum-tree. The fruit smells, when ripe, like roses. On the coast of Malabar, where the trees grow plentifully, these plums are in great esteem. They are not only eaten fresh off the trees, but are preserved in sugar, in order to have them eatable all the year. Of the flowers, a conserve is prepared, which is used medicinally as a mild astringent.

EUGE'US. (From ευ, well, and γη, the earth: so called because of its fertility.) The uterus.

EUKAIRITE. A mineral, composed of silver, selenium, copper, and alumina, found in the copper mine of Skrickerum, in Swisserland.

EU'LE. (From ευλαζω, to putrefy.) A worm bred in foul and putrid ulcers.

EUNU'CHIUM. (From ευνουχος, an eunuch: so called, because it was formerly said to render those who eat it impotent like an eunuch.) 1. An eunuch, or a man deprived of his testes.

2. See *Lactuca sativa.*

EUPATORIOPHA'LACRON. (From ευπατωριον, agrimony, and φαλακρος, bald.) A species of agrimony with naked heads.

EUPATO'RIUM. (*um, i.* n.; from *Eupator*, its discoverer: or, *quasi hepatorium*, from ηπαρ, the liver; because it was said to be useful in diseases of the liver.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

2. The pharmacopœial name of the *Eupatorium.* See *Eupatorium cannabinum.*

EUPATORIUM ARABICUM. See *Eupatorium cannabinum.*

EUPATORIUM CANNABINUM. The systematic name of the hemp agrimony. *Eupatorium; Eupatorium arabicum.* The juice of this very bitter and strong-smelling plant, *Eupatorium—foliis digitatis,* of Linnæus, proves violently emetic and purgative, if taken in sufficient quantity, and promotes the secretions generally. It is recommended in dropsies, jaundices, agues, &c. and is in common use in Holland, amongst the lower orders, as a purifier of the blood in old ulcers, scurvy, and anasarca.

EUPATORIUM MESUES. See *Achillea.*

EUPE'PSIA. (*a, æ.* f.; from ευ, well, and πεπτω, to concoct.) A good digestion.

EUPE'PTIC. (*Eupepticus;* from ευ, good, and πεπτω, to digest.) That which is of easy digestion.

EUPHODITE. A species of rock, composed of felspar and diallage.

EUPHO'RBIA. (*a, æ.* f.; from *Euphorbus*, the physician to king *Juba*, in honour of whom it was named.) The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Trigynia.*

EUPHORBIA ANTIQUORUM. The systematic name of a plant supposed to produce the *Euphorbium.*

EUPHORBIA CANARIENSIS. In the Canary islands this species of spurge affords the gum euphorbium.

EUPHORBIA CYPARISSIAS. The systematic name of the cypress spurge; called also *Esula minor*, and *Tithymalus cyparissius.* This, like most of the spurges, is very acrimonious, inflaming the eyes and œsophagus after touching them. It is now fallen into disuse, whatever were its virtues formerly, which no doubt, amongst some others, was that of opening the bowels; for, amongst rustics, it was called poor man's rhubarb.

EUPHORBIA LATHYRIS. The systematic name of the plant which affords the lesser cataputia seeds. *Cataputia minor. Euphorbia—umbella quadrifida, dichotoma, foliis oppositis integerrimis,* of Linnæus. The seeds possess purgative properties; but if exhibited in an over-dose, prove drastic and poisonous: a quality peculiar to all the *Euphorbiæ.*

EUPHORBIA OFFICINARUM. The systematic name of the plant which affords the euphorbium in the greatest abundance. Euphorbium is an inodorous gum-resin, in yellow tears, which have the appearance of being worm-eaten; said to be obtained from several species of euphorbiæ, but principally from the *Euphorbia officinarum—aculatea nuda multangularis, aculeis geminatis,* of Linnæus: it is imported from Ethiopia, Libya, and Mauritania. It contains an active resin, and is very seldom employed internally, but, as an ingredient, it enters into many resolvent and discutient plasters.

EUPHORBIA PALUSTRIS. The systematic name of the greater spurge. The officinal plant ordered by the name, *Esula major*, in some pharmacopœias, is the *Euphorbia palustris—umbella multifida, bifida, involucellis ovatis, foliis lanceolatis, ramis sterilibus,* of Linnæus. The juice is exhibited in Russia as a common purge; and the plant is given, in some places, in the cure of intermittents.

EUPHORBIA PARALIAS. *Tithymalus paralios.*

Sea-spurge. Every part of this plant is violently cathartic and irritating, inflaming the mouth and fauces. It is seldom employed in the practice of this country; but where it is used, vinegar is recommended to correct its irritating power.

EUPHO'RBIUM. See *Euphorbia*.

EUPHRA'SIA. (*a, æ.* f.; corrupted from *Euphrosyne*, ευφροσυνη, from ευφρων, joyful: so called because it exhilarates the spirits.)

1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Angiospermia.*

2. The pharmacopœial name of eye-bright. See *Euphrasia officinalis.*

Euphrasia officinalis. The systematic name of the eye-bright. This beautiful little plant, *Euphrasia—foliis ovatis, lineatis, argute dentatis,* of Linnæus, has been greatly esteemed by the common people, as a remedy for all diseases of the eyes; yet, notwithstanding this, and the encomiums of some medical writers, is now wholly fallen into disuse. It is an ingredient in the British herb-tobacco.

Eustachian tube. *Tuba eustachiana.* The tube so called was discovered by the great Eustachius. It begins, one in each ear, from the anterior extremity of the tympanum, and runs forwards and inwards in a bony canal, which terminates with the petrous portion of the temporal bone. It then goes on, partly cartilaginous, and partly membraneous, gradually becoming larger, and at length ends behind the soft palate. Through this tube the air passes to the tympanum.

Eustachian valve. See *Valvula Eustachii.*

EUSTACHIUS, Bartholomew, one of the most celebrated anatomists of the 16th century, was born in Italy. He was author of several works, many of which are lost, especially his treatise "*De Controversiis Anatomicorum*," which is much regretted. He made several discoveries in anatomy; having first described the renal capsules, and the thoracic duct; also the passage from the throat to the internal ear, named, after him, the Eustachian tube. A series of copper-plates, to which he alludes in his "*Opuscula*," were recovered by Lancisi, and published in the beginning of the 18th century. He edited the *Lexicon of Erotian*, with a commentary.

Euthypo'ria. (From ευθυς, straight, and πορος, a passage.) *Euthyporos.* An extension made in a straight line, to put in place a fracture, or dislocation.

EVAPORA'TION. (*Evaporatio, onis.* f.) A chemical operation, usually performed by applying heat to any compound substance, in order to dispel the volatile parts. "It differs from distillation in its object, which chiefly consists in preserving the more fixed matters, while the volatile substances are dissipated and lost: and the vessels are accordingly different; evaporation being commonly made in open shallow vessels, and distillation in an apparatus nearly closed from the external air.

The degree of heat must be duly regulated in evaporation. When the fixed and more volatile matters do not greatly differ in their tendency to fly off, the heat must be very carefully adjusted; but in other cases this is less necessary.

As evaporation consists in the assumption of the elastic form, its rapidity will be in proportion to the degree of heat, and the diminution of the pressure of the atmosphere. A current of air is likewise of service in this process.

Barry has lately obtained a patent for an apparatus, by which vegetable extracts for the apothecary may be made at a very gentle heat, and *in vacuo*." See *Medico-Chirurgical Transactions*, vol. x., for 1819.

EVEN. *Levis.* Level; regular: applied in *Botany*, in opposition to scored, furrowed, or other inequalities occasioned by deficiency of substance, or by the presence of hairs.

Evergreen. See *Sempervirens.*

Everriculum. (From *everro*, to sweep away.) A sort of spoon, used to clear the bladder from gravel.

EXACERBATION. (*Exacerbatio;* from *exacerbo*, to become violent.) An increase of the force or violence of the symptoms of a disease. The term is generally applied to an increase of febrile symptoms.

EXÆ'RESIS. (From εξαιρεω, to remove.) The removal of parts. One of the divisions of surgery adopted by the old surgeons.

Exa'lma. (From εξαλλομαι, to leap out.) Hippocrates applies it to the starting of the vertebræ out of their places.

EXAMBLO'MA. (From εξαμβλοω, to miscarry.) An abortion.

EXAMBLO'SIS. An abortion.

Exanastomo'sis. (From εξαναστομοω, to relax, or open.) The opening of the mouths of vessels, to discharge their contents.

EXANGIA. (*a, æ.* f.; from *ex*, and αγγειον, a vessel.) A genus of diseases in some writings; as aneurism and varix, which arise from a diseased condition of their vessels.

EXANIA. (*a, æ.* f.; from *ex*, out of, and *anus*.) A falling down of the bowels. See *Procidentia.*

EXANTHE'MA. (*a, atis.* n.; from εξανθεω, *effloresco*, to effloresce, or break forth on the surface.) *Exanthisma.* 1. An eruption of the skin, called a rash. The Greek writers employed this term in a very general sense, as we do the word eruption.

2. In the present day, nosologists have limited it to an eruption or rash which is accompanied with fever, and which has its regular periods of efflorescence and decline. In Dr. Willan's arrangement, it is appropriated solely to those appearances which are usually called rashes; namely, to patches of superficial redness of the skin, of various extent and intensity, occasioned by an unusual determination of blood into the cutaneous vessels, sometimes with partial extravasation: it has no reference, therefore, to the existence of fever or contagion. It comprehends mea-

sles, scarlet fever, nettle-rash, rose-rash, purples, and erythema.

Exanthe'mata. (The plural of *exanthema.*) The name of an order of diseases, of the class *Pyrexiæ*, in Cullen's Nosology.

EXANTHEMATIC. *Exanthematicus.* Eruptive.

EXANTHESIS. (*is, is.* f.; from εξ, *extra*, and ανθεω, *floreo.*) Cutaneous efflorescence, or eruption, not connected with internal affection.—*Good.* See *Enanthesis.*

Exanthi'sma. See *Exanthema.*

Exanthro'pia. (From εξ, without, and ανθρωπος, a man; *i. e.* having lost the faculties of a man.) A species of melancholy, in which the patient fancies himself some kind of brute.

Exara'gma. (From εξαρατ]ω, to break.) A fracture.

Exa'rma. (From εξαιρω, to lift up.) A tumour or swelling.

Exarte'ma. (From εξαρ]αω, to suspend.) A charm, hung round the neck.

Exarthre'ma. (From εξαρθροω, to put out of joint.) *Exarthroma; Exarthrosis.* A dislocation, or luxation.

Exarthro'ma. See *Exarthrema.*

Exarthro'sis. See *Exarthrema.*

EXARTICULA'TIO. (From *ex*, out of, and *articulus*, a joint.) A luxation, or dislocation of a bone from its socket.

Excæaria agallocha. See *Lignum aloes.*

Exci'pulum. (From *excipio*, to receive.) A chemical receiver.

EXCITABI'LITY. (*Excitabilitas;* from *excito*, to excite.) That condition of living bodies wherein they can be made to exhibit the functions and phænomena which distinguish them from inanimate matter, or the capacity of organised beings to be affected by various agents called *exciting powers.*

Much confusion seems to have arisen in medical controversies from the application of the word *stimuli*, to denote the means necessary to the support of life; and particularly by Brown, in his celebrated attempt to reduce the varied and complicated states of the system to the reciprocal action of the exciting powers upon the excitability. By this hypothesis, instead of regarding life as a continued series of actions, which cannot go on without certain agents constantly ministering to them, we are to suppose a substance or quality, called *excitability*, which is superadded or assigned to every being upon the commencement of its living state. The founder of the Brunonian school considers that this substance or quality is expanded by the incessant action of the exciting powers. These are—air, food, and drink, the blood and the secretions, as well as muscular exertion, sensation, thought, and passions, or emotion, or other functions of the system itself; and these powers, which exhaust the excitability or produce *excitement* (according to the language of the school), are strangely enough called *stimuli.* We are told, that it is in the due balance between the exciting powers and the excitability that health consists: for if the exciting powers be in excess, *indirect debility* is produced; and where, on the other hand, the stimuli are deficient, and the excitability accumulated, there ensues a state of *direct debility.*

EXCITATION. (*Excitatio;* from *excito*, to excite.) The act of awakening, rousing, or producing some power or action; thus we say, the excitation of motion, excitation of heat, excitation of the passions, &c. In *Natural Philosophy*, it is principally used in the subjects of action of living parts, and in electricity and heat.

EXCI'TEMENT. According to the opinion of Brown, excitement is the continual exhaustion of the *matter of life*, or excitability by certain agents, which have received the name of *stimuli* or exciting powers. The due degree of this expension or excitement is the condition necessary to health: the excessive action of stimuli causing indirect debility, and generating *sthenic* diseases; while the opposite state of deficient excitement produces direct debility, and gives birth to *asthenic* diseases: and death is said to result equally from complete exhaustion of the excitability, and from total absence of the exciting powers. Excitement is in this view equivalent to that *forced* state which is supposed, by the Brunonian school, to constitute life.

It has been objected to this hypothesis, that by simplifying too much the varied phænomena of healthy functions and of diseases, it necessarily classed together conditions of the system which have been considered as widely different, and of opposite tendencies, by the more patient observer. And though gladly caught at by many, as pointing out, in a few general rules, the mode of cure in all diseases, namely, by restoring the proper equilibrium between excitability and the action of stimuli, the Brunonian theories seem now to be considered, by those who are suspicious of bold classifications, as an example of the observation, "that the most ingenious way of becoming foolish is by a system; and the surest way to prevent truth, is to set up something in the room of it."

EXCITING. That which has the power of impressing, so as to alter the action of a part or organ.

Exciting cause. That which, when applied to the body, excites a disease.

EXCORIA'TION. (*Excoriatio, onis.* f.; from *excorio*, to take off the skin.) An abrasion of the skin.

E'XCREMENT. (*Excrementum, i.* n.; from *excerno*, to separate from.) The alvine fæces.

EXCRE'SCENCE. (*Excrescentia, æ.* f.; from *excresco*, to grow from.) Any preternatural formation of flesh on any part of the body; as wens, warts, &c.

EXCRESCENTIAL. *Excrescentialis.* Of the nature of an excrescence.

EXCRE'TION. (*Excretio, onis.* f.; from *excerno*, to separate from.) This term is applied to the separation of those fluids from the

blood of an animal that are supposed to be useless; as the urine, perspiration, and alvine fæces. The process is the same with that of secretion, except with the alvine fæces; but the term excretion is applied to those substances which, when separated from the blood, are not applied to any useful purposes in the animal economy.

EXCRETORY. (*Excretorius; from excerno,* to purge, sift, &c.) This name is applied to certain little ducts or vessels in the fabric of glands; thus, the tubes which convey the secretion out of the testicle into the vesiculæ seminales are called the excretory ducts.

EXERCISE. See *Gestation.*

EXFOLIA'TION. (*Exfoliatio;* from *exfolio,* to cast the leaf.) The separation of a dead piece of bone from the living.

Exfoliati'vum. (From *exfolio,* to shed the leaf.) A raspatory, or instrument for scraping exfoliating portions of bone.

Exi'schios. (From εξ, out of, and ισχιον, the ischium.) A luxation of the thigh-bone.

Exitu'ra. (From *exeo,* to come from.) A running abscess.

E'xitus. (From *exeo,* to come out.) A prolapsus, or falling down of a part of the womb or bowel.

E'xochas. (From εξω, without, and εχω, to have.) *Exoche.* A tubercle on the outside of the anus.

E'xoche. See *Exochas.*

Exocy'ste. See *Exocystis.*

Exocy'stis. (From εξω, without, and κυστις, the bladder.) *Exocyste.* A prolapsus of the inner membrane of the bladder.

EXO'MPHALUS. (*us, i.* m.; from εξ, out of, and ομφαλος, the navel.) *Exomphalos.* See *Hernia umbilicalus.*

Exoncho'ma. (From εξ, and ογχος, a tumour.) A large prominent tumour.

EXOPHTHA'LMIA. (*a, æ.* f.; from εξ, out, and οφθαλμος, the eye.) A swelling or protrusion of the bulb of the eye, to such a degree that the eyelids cannot cover it. It may be caused by inflammation, when it is termed *exophthalmia inflammatoria;* or from a collection of pus in the globe of the eye, when it is termed the *exophthalmia purulenta;* or from a congestion of blood within the globe of the eye, *exophthalmia sanguinea.*

EXORMIA. (*a, æ.* f. Εξορμια; from εξορμαω, to break out.) An eruption, or breaking out on the skin.

EXOSTO'SIS. (*is, is.* m.; from εξ, and οστεον, a bone.) *Hyperostosis.* A morbid enlargement, or hard tumour of a bone. The bones most frequently affected with exostosis, are those of the cranium, the lower jaw, sternum, humerus, radius, ulna, bones of the carpus, the femur, and tibia. There is, however, no bone of the body which may not become the seat of this disease. It is not uncommon to find the bones of the cranium affected with exostosis in their whole extent. The ossa parietalia sometimes become an inch thick.

Exostosis, however, mostly rises from the surface of the bone, in the form of a hard round tumour; and venereal exostoses, or nodes, are observed to arise chiefly on compact bones, and such of these as are only superficially covered with soft parts; as, for instance, the bones of the cranium, and the front surface of the tibia.

EXOTIC. (*Exoticus;* from εξω, without.) That which is from a foreign country.

EXPANDING. *Patens.* Spreading. In general use, in *Natural History,* to express the course of a thing standing in a direction between upright and horizontal; as the stems of the *Atriplex portulacoides, Veronica beccabunga,* &c.

EXPANSION. The increase of surface, or of bulk, to which natural bodies are susceptible.

EXPE'CTORANT. (*Expectorans;* from *expectoro,* to discharge from the breast.) That which increases the discharge of mucus from the lungs. The different articles referred to this class may be divided into the following orders:—

1. *Nauseating expectorants;* as squill, ammoniacum, and garlic, which are to be preferred for the aged and phlegmatic.

2. *Stimulating expectorants;* as marrubium, which is adapted to the young and irritable, and those easily affected by expectorants.

3. *Antispasmodic expectorants;* as vesicatories, pediluvium, and watery vapours: these are best calculated for the plethoric and irritable, and those liable to spasmodic affections.

4. *Irritating expectorants;* as fumes of tobacco and acid vapours. The constitutions to which these are chiefly adapted, are those past the period of youth, and those in whom there are evident marks of torpor, either in the system generally, or in the lungs in particular.

"Expectorants," says Dr. Good, "are those medicines which rather promote the separation of the viscid phlegm with which the bronchiæ are loaded, than simply inviscate or dilute it; though these are also treated of as expectorants by many writers. The list of the proper expectorants employed formerly was very voluminous; in the present day they are comparatively few; and this proscription has, perhaps, been carried too far. The principle upon which they act is, in some degree, doubtful. The simplest way of accounting for it, is by means of a specific determination to the lungs: for as there are pretty clear proofs of medicines operating specifically on other organs, as that of mercury on the salivary glands, and cinchona on the irritable fibre, there is no reason why we should not expect a like operation on the viscera of the chest. Dr. Cullen is quite at a loss on this subject, from not admitting of specific medicines, or a specific action on any organ. As a general rule, he supposes expectorants to operate on the bronchiæ merely by a diaphoretic power, or that of increasing the flow of the superficial exhalents at large, and consequently the exhalents of the lungs, by which the mucus present in the follicles may be poured out in a

less viscid form, and hence in a state to be more easily thrown up by the trachea. But this is a very unsatisfactory view of the question. For, first, admitting there are medicines that act directly upon exhalents of the skin, a specific power is hereby immediately conceded to one set of organs: and, if such a power exist in respect to one set, there is no reason why it may not in respect to fifty. Next, we see evident proofs of an expectorant power in many medicines, as in gum-ammoniac, where we have no proof whatever of increased exhalation from the surface of the body; and, further, the general explanation gives us no clew to the different operations of particular expectorants. It is possible that in all these cases there is a particular stimulus; but whether this depends upon any sensible quality they possess, we cannot easily determine: for though many of them are more pungent to the taste than others, their degree of expectorant power does not, in every instance, keep pace with their degree of pungency."

EXPECTORATION. (*Expectoratio, onis.* f.; from *expectoro*, to throw out of the chest.) That which is thrown from the chest by spitting: thus, when an abscess bursts in the lungs, or a vessel ruptures, we say the expectoration is purulent or sanguineous. See *Sputum.*

EXPELLENT. (*Expellens;* from *expello*, to drive out.) That which drives out morbid humours from the body.

EXPERIENCE. (*Experientia, æ.* f.) A kind of knowledge acquired by long use without any teacher. Experience consists in the ideas of things we have seen or read, which the judgment has reflected on, to form for itself a rule or method.

EXPERS. Wanting; destitute. The trivial name of some diseases.

EXPIRA'TION. (*Expiratio;* from *expiro*, to breathe.) That part of respiration in which the air is thrust out from the lungs. See *Respiration.*

EXPLORA'TIO. (From *exploro*, to search out.) Exploration, or probing a wound or ulcer.

Expressed oil. An oil obtained by pressing the substance containing it; as the olive, which gives out olive oil; the almond, &c.

EXPRESSION. (*Expressio, onis.* f.; from *exprimo*, to press out.) A mechanical operation by which the juices of plants, and oil of seeds, are obtained; as the *succus conii, oleum amygdalæ*, &c.

EXSER'TUS. Protruding: opposed, in *Botany*, to enclosed.

EXSICCATION. (*Exsiccatio;* from *exsicco*, to dry up.) Drying. A pharmaceutical and chemical operation, by which plants, chemical preparations, &c. are deprived of their juices and humidity. This is done by exposure to the sun, or to the fire, on dry or absorbent substances.

Exsucca'tio. (From *ex*, out of, and *succus*, humour.) An extravasation of humours, under the integuments.

EXTE'NSOR. (*or, oris.* m.; from *extendo*, to stretch out.) A term given to those muscles the office of which it is to extend any part; the term is in opposition to flexor.

Extensor brevis digitorum pedis. A muscle of the toes situated on the foot. *Extensor brevis*, of Douglas. It arises fleshy and tendinous from the fore and upper part of the os calcis, and soon forms a fleshy belly, divisible into four portions, which send off an equal number of tendons that pass over the upper part of the foot, under the tendons of the extensor longus digitorum pedis, to be inserted into its tendinous expansion. Its office is to extend the toes.

Extensor carpi radialis brevior. An extensor muscle of the wrist, situated on the fore-arm. *Radialis externus brevior*, of Albinus. *Radialis secundus*, of Winslow. It arises tendinous from the external condyle of the humerus, and from the ligament that connects the radius to it, and runs along the outside of the radius. It is inserted by a long tendon into the upper and back part of the metacarpal bone of the middle finger. It assists in extending and bringing the hand backward.

Extensor carpi radialis longior. An extensor muscle of the carpus, situated on the fore-arm, that acts in conjunction with the former. *Radialis externus longior*, of Albinus. *Radialis externus primus*, of Winslow. It arises thin, broad, and fleshy, from the lower part of the external ridge of the os humeri, above its external condyle, and is inserted by a round tendon into the posterior and upper part of the metacarpal bone that sustains the fore-fingers.

Extensor carpi ulnaris. *Ulnaris externus*, of Albinus and Winslow. It arises from the outer condyle of the os humeri, and then receives an origin from the edge of the ulna: its tendon passes in a groove behind the styloid process of the ulna, to be inserted into the inside of the basis of the metacarpal bone of the little finger.

Extensor digitorum communis. A muscle situated on the fore-arm, that extends all the joints of the fingers. *Extensor digitorum communis manus*, of Douglas and Winslow. *Extensor digitorum communis, seu digitorum tensor*, of Cowper. *Cum extensore proprio auricularis*, of Albinus. It arises from the external protuberance of the humerus; and at the wrist it divides into three flat tendons, which pass under the annular ligament, to be inserted into all the bones of the fore, middle, and ring fingers.

Extensorm digitorulongus. See *Extensor longus digitorum pedis.*

Extensor indicis. See *Indicator.*

Extensor longus digitorum pedis. A muscle situated on the leg, that extends all the joints of the four small toes. *Extensor digitorum longus.* It arises from the upper part of the tibia and fibula, and the interosseous ligament; its tendon passes under the annular ligament, and then divides into five, four of which are inserted into the second and third

phalanges of the toes, and the fifth goes to the basis of the metatarsal bone. This last Winslow reckons a distinct muscle, and calls it *Peroneus brevis.*

Extensor longus pollicis pedis. See *Extensor proprius pollicis pedis.*

Extensor magnus. See *Gastrocnemius.*

Extensor major pollicis manus. See *Extensor secundi internodii.*

Extensor minor pollicis manus. See *Extensor primi internodii.*

Extensor ossis metacarpi pollicis manus. An extensor muscle of the wrist, situated on the fore-arm. *Abductor longus pollicis manus,* of Albinus. *Extensor primi internodii,* of Douglas. *Extensor primus pollicis,* of Winslow. *Extensor primi internodii pollicis,* of Cowper. It arises fleshy from the middle and posterior part of the ulna, from the posterior part of the middle of the radius, and from the interosseous ligament, and is inserted into the os trapezium, and upper part of the metacarpal bone of the thumb.

Extensor pollicis primus. See *Extensor primi internodii.*

Extensor pollicis secundus. See *Extensor secundi internodii.*

Extensor primi internodii. A muscle of the thumb, situated on the hand, that extends the first bone of the thumb obliquely outwards. *Extensor minor pollicis manus,* of Albinus. This muscle, and the *Extensor ossis metacarpi pollicis manus,* are called *Extensor pollicis primus,* by Winslow; *Extensor secundi internodii,* by Douglas; *Extensor secundi internodii ossis pollicis,* of Cowper. It arises fleshy from the posterior part of the ulna, and from the interosseous ligament, and is inserted tendinous into the posterior part of the first bone of the thumb.

Extensor proprius pollicis pedis. An exterior muscle of the great toe, situated on the foot. *Extensor longus,* of Douglas. *Extensor pollicis longus,* of Winslow and Cowper. It arises by an acute, tendinous, and fleshy beginning, some way below the head and anterior part of the fibula, along which it runs to near its lower extremity, connected to it by a number of fleshy fibres, which descend obliquely, and form a tendon, which is inserted into the posterior part of the first and last joint of the great toe.

Extensor secundi internodii. A muscle of the thumb, situated on the hand, that extends the last joint of the thumb obliquely backwards. *Extensor major pollicis manus,* of Albinus. *Extensor pollicis secundus,* of Winslow. *Extensor tertii internodii,* of Douglas. *Extensor internodii ossis pollicis,* of Cowper. It arises tendinous and fleshy from the middle part of the ulna, and interosseous ligament; it then forms a tendon, which runs through a small groove at the inner and back part of the radius, to be inserted into the last bone of the thumb. Its use is to extend the last phalanx of the thumb obliquely backwards.

Extensor secundi internodii indicis proprius. See *Indicator.*

Extensor tarsi minor. See *Plantaris.*

Extensor tarsi suralis. See *Gastrocnemius internus.*

Extensor tertii internodii indicis. See *Prior indicis.*

Extensor tertii internodii minimi digiti. See *Abductor minimi digiti manus.*

EXTENUATIO. See *Leanness.*

Externus mallei. See *Laxator tympani.*

EXTIPULATUS. Without stipulæ: applied to stems of plants.

EXTIRPATION. (*Extirpatio; from extirpo,* to eradicate.) The complete removal or destruction of any part, either by cutting instruments, or the action of caustics.

E'XTRACT. (*Extractum, i.* n.; from *extraho,* to draw out.) 1. When chemists use this term, they generally mean the product of an aqueous decoction.

2. In *Pharmacy,* it includes all those preparations from vegetables which are separated by the agency of various liquids, and afterwards obtained from such solutions, in a solid state, by evaporation of the menstruum. It also includes those substances which are held in solution by the natural juices of fresh plants, as well as those to which some menstruum is added at the time of preparation. Now, such soluble matters are various, and mostly complicated; so that chemical accuracy is not to be looked for in the application of the term. Some chemists, however, have affixed this name to one peculiar modification of vegetable matter, which has been called *extractive,* or extractive principle; and, as this forms one constituent part of common extracts, and possesses certain characters, it will be proper to mention such of them as may influence its pharmaceutical relations. The extractive principle has a strong taste, differing in different plants: it is soluble in water, and its solution speedily runs into a state of putrefaction, by which it is destroyed. Repeated evaporations and solutions render it at last insoluble, in consequence of its combination with oxygene from the atmosphere. It is soluble in alkohol, but insoluble in æther. It unites with alumine, and if boiled with neutral salts thereof, precipitates them. It precipitates with strong acids, and with the oxides from solutions of most metallic salts, especially muriate of tin. It readily unites with alkalies, and forms compounds with them, which are soluble in water. No part, however, of this subject has been hitherto sufficiently examined.

In the preparation of all the extracts, the London Pharmacopœia requires that the water be evaporated as speedily as possible, in a broad, shallow dish, by means of a water-bath, until they have acquired a consistence proper for making pills; and, towards the end of the inspissation, that they should be constantly stirred with a wooden rod. These general rules require minute and accurate attention, more particularly in the immediate evaporation of the solution, whether prepared by expression or decoction, in the manner as

well as the degree of heat by which it is performed, and the promotion of it by changing the surface by constant stirring, when the liquor begins to thicken, and even by directing a strong current of air over its surface, if it can conveniently be done. It is impossible to regulate the temperature over a naked fire, or, if it be used, to prevent the extract from burning; the use of a water-bath is, therefore, absolutely necessary, and not to be dispensed with, and the beauty and precision of extracts so prepared will demonstrate their superiority.

EXTRAC'TION. (*Extractio*; from *extraho*, to draw out.) The taking extraneous substances out of the body. Thus bullets and splinters are said to be *extracted* from wounds; stones from the urethra or bladder. Surgeons also sometimes apply the term *extraction* to the removal of tumours out of cavities; as, for instance, to the taking of cartilaginous tumours out of the joints. They seldom speak of extracting any diseased original part of the body; though they do so in one example, viz. the cataract.

EXTRA'CTIVE. See *Extract*.

EXTRA'CTUM. (From *extraho*, to draw out.) An extract. See *Extract*.

Extractum aconiti. Extract of aconite. Take of aconite leaves, fresh, a pound: bruise them in a stone mortar, sprinkling on a little water; then press out the juice, and, without any separation of the sediment, evaporate it to a proper consistence. The dose is from one grain to five grains. For its virtues, see *Aconitum*.

Extractum aloes purificatum. Purified extract of aloes. Take of extract of spike aloe, powdered, half a pound; boiling water, four pints. Macerate for three days, in a gentle heat; then strain the solution, and set it by, that the dregs may subside. Pour off the clear solution, and evaporate it to a proper consistence. The dose, from five to fifteen grains. See *Aloes*.

Extractum anthemidis. Extract of chamomile, formerly called extractum chamæmeli. Take of chamomile flowers, dried, a pound; water, a gallon: boil down to four pints, and strain the solution while it is hot, then evaporate it to a proper consistence. The dose is ten grains to a scruple. For its virtues, see *Anthemis nobilis*.

Extractum belladonnæ. Extract of belladonna. Take of deadly night-shade leaves, fresh, a pound. Bruise them in a stone mortar, sprinkling on a little water; then press out the juice, and, without any previous separation of the sediment, evaporate it to a proper consistence. The dose is from one to five grains. For its virtues, see *Atropa belladonna*.

Extractum cinchonæ. Extract of bark. Take of lance-leaved cinchona bark, bruised, a pound; water, a gallon: boil down to six pints, and strain the liquor, while hot. In the same manner, with an equal quantity of water, four times boil down, and strain. Lastly, consume all the liquors, mixed together, to a proper consistence. This extract should be kept soft, for making pills, and hard to be reduced to powder.

Extractum cinchonæ resinosum. Resinous extract of bark. Take of lance-leaved cinchona bark, bruised, a pound; rectified spirit, four pints: macerate for four days, and strain. Distil the tincture in the heat of a water-bath, until the extract has acquired a proper consistence. This is considered by many as much more grateful to the stomach, and, at the same time, producing all the effects of bark in substance; and by the distillation of it, it is intended that the spirit which passes over shall be collected and preserved. The dose is from ten grains to half a drachm. See *Cinchona*.

Extractum colocynthidis. Extract of colocynth. Take of colocynth pulp, a pound; water, a gallon: boil down to four pints, and strain the solution while it is hot, and evaporate it to a proper consistence. The dose is from five to thirty grains. For its virtues, see *Cucumis colocynthis*.

Extractum colocynthidis compositum. Compound extract of colocynth. Take of colocynth pulp, sliced, six drachms; extract of spike aloe, powdered, an ounce and half; scammony gum-resin, powdered, half an ounce; cardamom seeds, powdered, a drachm; proof spirit, a pint. Macerate the colocynth pulp in the spirit, for four days, in a gentle heat: strain the solution, and add it to the aloes and scammony; then, by means of a water-bath, evaporate it to a proper consistence, constantly stirring, and about the end of the inspissation mix in the cardamom-seeds. The dose from five to thirty grains.

Extractum conii. Extract of hemlock, formerly called succus cicutæ spissatus. Take of fresh hemlock, a pound. Bruise it in a stone mortar, sprinkling on a little water; then press out the juice, and, without any separation to the sediment, evaporate it to a proper consistence. The dose from five grains to a scruple.

Extractum elaterii. Extract of elaterium. Cut the ripe wild cucumbers into slices, and pass the juice, very gently expressed, through a very fine hair sieve, into a glass vessel; then set it by for some hours, until the thicker part has subsided. Pour off, and throw away the thinner part, which swims at the top. Dry the thicker part which remains in a gentle heat. The dose from half a grain to three grains. For its virtues, see *Momordica elaterium*.

Extractum gentianæ. Extract of gentian. Take of gentian root, sliced, a pound; boiling water, a gallon: macerate for twenty-four hours, then boil down to four pints; strain the hot liquor, and evaporate it to a proper consistence. Dose from ten to thirty grains. See *Gentiana*.

Extractum glycyrrhizæ. Extract of liquorice. Take of liquorice root, sliced, a pound; boiling water, a gallon: macerate for

twenty-four hours, then boil down to four pints; strain the hot liquor, and evaporate it to a proper consistence. Dose, from one drachm to half an ounce. See *Glycyrrhiza.*

EXTRACTUM HÆMATOXYLI. Extract of logwood, formerly called extractum ligni campechensis. Take of logwood, powdered, a pound; boiling water, a gallon: macerate for twenty-four hours; then boil down to four pints: strain the hot liquor, and evaporate it to a proper consistence. Dose, from ten grains to half a drachm. For its virtues, see *Hæmatoxylon campechianum.*

EXTRACTUM HUMULI. Extract of hops. Take of hops, four ounces; boiling water, a gallon: boil down to four pints; strain the hot liquor, and evaporate it to a proper consistence. This extract is said to produce a tonic and sedative power combined; the dose is from five grains to one scruple. See *Humulus lupulus.*

EXTRACTUM HYOSCYAMI. Extract of henbane. Take of fresh henbane leaves, a pound: bruise them in a stone mortar, sprinkling on a little water; then press out the juice, and, without separating the fæculencies, evaporate it to a proper consistence. Dose, from five to thirty grains. For its virtues, see *Hyoscyamus.*

EXTRACTUM JALAPÆ. Extract of jalap. Take of jalap-root, powdered, a pound; rectified spirit, four pints; water, ten pints: macerate the jalap-root in the spirits for four days, and pour off the tincture; boil the remaining powder in the water, until it be reduced to two pints; then strain the tincture and decoction separately, and let the former be distilled and the latter evaporated, until each begins to grow thick. Lastly, mix the extract with the resin, and reduce it to a proper consistence. Let this extract be kept in a soft state, fit for forming pills, and in a hard one, so that it may be reduced to powder. The dose from ten to twenty grains. For its virtues, see *Convolvulus jalapa.*

EXTRACTUM OPII. Extract of opium, formerly called extractum thebaicum. Opium colatum. Take of opium, sliced, half a pound; water, three pints: pour a small quantity of the water upon the opium, and macerate it for twelve hours, that it may become soft; then, adding the remaining water gradually, rub them together until the mixture be complete. Set it by, that the fæculencies may subside; then strain the liquor, and evaporate it to a proper consistence. Dose, from half a grain to five grains.

EXTRACTUM PAPAVERIS. Extract of white poppy. Take of white poppy capsules bruised, and freed from the seeds, a pound; boiling water, a gallon. Macerate for twenty-four hours, then boil down to four pints; strain the hot liquor, and evaporate it to a proper consistence. Six grains are about equivalent to one of opium. For its virtues, see *Papaver album.*

EXTRACTUM RHEI. Extract of rhubarb. Take of rhubarb root, powdered, a pound; proof spirit, a pint; water, seven pints. Macerate for four days in a gentle heat; then strain and set it by, that the fæculencies may subside. Pour off the clear liquor, and evaporate to a proper consistence. This extract possesses the purgative properties of the root, and the fibrous and earthy parts are separated; it is, therefore, a useful basis for pills, as well as given separately. Dose, from ten to thirty grains. See *Rheum.*

EXTRACTUM SARSAPARILLÆ. Extract of sarsaparilla. Take of sarsaparilla root, sliced, a pound; boiling water, a gallon: macerate for twenty-four hours, then boil down to four pints; strain the hot liquor, and evaporate it to a proper consistence. In practice, this is much used, to render the common decoction of the same root stronger and more efficacious. Dose, from ten grains to a drachm. For its virtues, see *Smilax sarsaparilla.*

EXTRACTUM SATURNI. See *Plumbi acetatis liquor.*

EXTRACTUM TARAXACI. Take of dandelion root, fresh and bruised, a pound; boiling water, a gallon: macerate for twenty-four hours; boil down to four pints, and strain the hot liquor; then evaporate it to a proper consistence. Dose, from ten grains to a drachm. For its virtues, see *Leontodon taraxacum.*

EXTRAFOLIACEUS. *Extrafoliatus.* Underneath the leaf: applied to stipulæ, which are below the footstalk, and external with respect to the leaf; as in *Astragalus onobrichis.*

EXTRAVASA'TION. (*Extravasatio;* from *extra,* without, and *vas,* a vessel.) A term applied, by surgeons, to fluids which are out of their proper vessels or receptacles. Thus, when blood is effused on the surface, or in the ventricles of the brain, it is said that there is an extravasation. When blood is poured from the vessels into the cavity of the peritonæum, in wounds of the abdomen, surgeons call this accident *extravasation.* The urine is also said to be *extravasated,* when, in consequence of a wound, or of sloughing, or ulceration, it makes its way into the cellular substance, or among the abdominal viscera. When the bile spreads among the convolutions of the bowels, in wounds of the gall-bladder, it is also a species of extravasation.

EXTREMITY. *Extremitas.* This term is applied to the limbs, as distinguishing them from the other divisions of the animal, the head and trunk. The extremities are four in number, divided, in man, into upper and lower; in other animals, into anterior and posterior. Each extremity is divided into four parts: the upper, into the shoulder, the arm, the fore-arm, and the hand; the lower, into the hip, the thigh, the leg, and the foot.

EXULCERATION. (*Exulceratio, onis.* f.; from *exulcero,* to cause ulcers.) Mostly applied to the commencement of ulceration.

EXUVIÆ. (*iæ, arum.* pl. f.; from *exuo,* to strip off.) Applied to the skins of serpents, *anguium senectæ,* which they cast of yearly. They were formerly boiled in wine, and used as a cure for deafness, &c.

EYE. *Oculus.* I. The eye of an animal,

fish, or insect. The parts which constitute the human eye, are divided into external and internal. The external parts are, —

1. The eyebrows, or *supercilia*, which form arches of hair above the orbit, at the lower part of the forehead. Their use is to prevent the sweat falling into the eyes, and for moderating the light above.

2. The eyelashes, or *cilia*, are the short hairs that grow on the margin of the eyelids; they keep external bodies out of the eyes, and moderate the influx of light.

3. The eyelids, or *palpebræ*, of which one is superior, or upper, and the other inferior, or under; where they join outwardly, it is called the *external canthus*; inwardly, towards the nose, the *internal canthus*: they cover and defend the eyes.

The margin of the eyelids, which is cartilaginous, is called *tarsus*.

In the *tarsus*, and internal surface of the eyelids, small glands are situated, called *glandulæ Meibomianæ*, because Meibomius discovered them; they secrete an oily or mucilaginous fluid, which prevents the attrition of the eyes and eyelids, and facilitates their motions.

4. The lachrymal glands, or *glandulæ lachrymales*, which are placed near the external canthus, or corner of the eyes, in a little depression of the os frontis.

From these glands six or more canals issue, which are called lachrymal ducts, or *ductus lachrymales*, and they open on the internal surface of the upper eyelid.

5. The lachrymal caruncle, or *caruncula lachrymalis*, which is situated in the internal angle, or canthus of the eyelids.

6. *Puncta lachrymalia*, are two callous orifices or openings, which appear at the internal angle of the tarsus of the eyelids; the one in the superior, the other in the inferior eyelid.

7. The *canales lachrymales*, or lachrymal ducts, are two small canals, which proceed from the lachrymal points into the lachrymal sac.

8. The *saccus lachrymalis*, or lachrymal sac, is a membraneous sac, which is situated in the internal canthus of the eye.

9. The *ductus nasalis*, or nasal duct, is a membraneous canal, which goes from the inferior part of the lachrymal sac through the bony canal below, and a little behind, into the cavity of the nose, and opens under the inferior spongy bone into the nostril.

10. The *membrana conjunctiva*, or conjunctive membrane, which, from its white colour, is called also *albuginea*, or white of the eye, is a membrane which lines the internal superficies of the eyelids, and covers the whole fore-part of the globe of the eye: it is very vascular, as may be seen in inflammations.

The bulb, or globe of the eye, is composed of eight membranes, or coverings, two chambers, or *cameræ*, and three humours, improperly so called.

The membranes of the globe of the eye, are, *four* in the hinder or posterior part of the bulb, or globe, viz. *sclerotica*, *choroidea*, *retina*, and *hyaloidea*, or *arachnoidea*; *four* in the fore or anterior part of the bulb, viz. *cornea transparens*, *iris*, *uvea*, and *capsule of the crystalline lens*.

The *membrana sclerotica*, or the sclerotic or horny membrane, is the outermost. It begins from the optic nerve, forms the spherical or globular cavity, and terminates in the circular margin of the transparent cornea.

The *membrana choroidea*, or *choroides*, is the middle tonic of the bulb, of a black colour, beginning from the optic nerve, and covering the internal superficies of the sclerotica, to the margin of the transparent cornea. In this place it secedes from the cornea, and deflects transversely and inwardly, and in the middle forms a round foramen. This circular continuation of the choroidea in the anterior surface is called *iris*; in the posterior superficies, *uvea*.

The round opening in the centre is called the *pupil*, or *pupilla*. This foramen, or round opening, can be dilated or contracted by the moving powers of almost invisible muscular fibres.

The *membrana retina*, is the innermost tunic, of a white colour and similar to mucus, being an expansion of the optic nerve, chiefly composed of its medullary part. It covers the inward surface of the choroides, to the margin of the crystalline lens, and there terminates.

The *chambers*, or *cameræ*, of the eyes are,

1. *Camera anterior*, or fore-chamber; an open space, which is formed anteriorly, by the hollow surface of the *cornea transparens*, and posteriorly, by the surface of the *iris*.

2. *Camera posterior*: that small space which is bounded anteriorly by the *tunica uvea*, and *pupilla*, or pupil; posteriorly by the anterior surface of the crystalline lens.

Both these chambers are filled with an aqueous humour. The humours of the eye, as they are called, are in number three: —

1. The *aqueous humour*, which fills both chambers.

2. The *crystalline lens*, or humour, is a pellucid body, about the size of a lentil, which is included in an exceedingly fine membrane, or *capsula*, and lodged in a concave depression of the vitreous humour.

3. The *vitreous humour*, is a pellucid beautifully transparent substance, which fills the whole bulb of the eye behind the crystalline lens. Its external surface is surrounded with a most pellucid membrane, which is called *membrana hyaloidea*, or *arachnoidea*. In the anterior part is a fovea, or bed, for the crystalline lens.

The connection of the bulb is made anteriorly, by means of the conjunctive membrane, with the inner surface of the eyelids, or *palpebræ*; posteriorly, by the adhesion of six muscles of the bulb and the optic nerve, with the orbit.

The optic nerve, or *nervus opticus*, per-

forates the sclerotica and choroides, and then constitutes the retina, by spreading itself on the whole posterior part of the internal globe of the eye.

The muscles by which the eye is moved in the orbit, are six; much fat surrounds them, and fills up the cavities in which the eyes are seated. The arteries are the internal orbital, the central, and the ciliary arteries. The veins empty themselves into the external jugulars. The nerves are the optic, and branches from the third, fourth, fifth, and sixth pair.

The use of the eye is to form the organ of vision. See *Vision.*

Externally, the globe of the eye and the transparent cornea are moistened with a most limpid fluid, called *lachrymæ*, or tears; the same pellucid subtile fluid exactly fills all the pores of the transparent cornea: for, deprived of this fluid, and being exposed to the air, that coat of the eye becomes dry, shrivelled, and cloudy, impeding the rays of light.

II. The external scar upon a seed. See *Hilum.*

EYE-BRIGHT. See *Euphrasia.*

EYEBROW. *Supercilium.* See *Eye.*

EYELID. *Palpebra.* See *Eye.*

Eye-tooth. The fangs of the two upper cuspidati are very much larger than those on each side, and extend up near to the orbit, on which account they have been called eye-teeth. See *Teeth.*

F.

F. or ft. In a prescription these letters are abbreviations of *fiat*, or *fiant*, let it, or them be made; thus, *f. bolus*, let the substance or substances prescribed be made into a bolus.

FA'BA. (*a, æ.* f. By the Falisci, a people in *Hetruria*, the bean was called *haba*; and from thence, perhaps, *faba*. Martinus derives it from ϖαω, to feed.) See *Bean.*

Faba crassa. See *Sedum telephium.*

Faba ægyptiaca. See *Nymphæa.*

Faba febrifuga. See *Ignatia amara.*

Faba indica. See *Ignatia amara.*

Faba major. See *Bean.*

Faba minor. It differs no otherwise from the garden bean than in being less.

Faba pechurim. *Faba pichurim. Faba pechuris.* Brasilian bean. An oblong oval, brown, and ponderous seed, supposed to be the produce of a *Laurus*, brought from the Brazils. Their smell is like that of musk, between it and the scent of sassafras. They are exhibited as carminatives in flatulent colics, diarrhœas, and dysenteries.

Faba purgatrix. See *Ricinus.*

Faba sancti ignatii. See *Ignatia.*

Faba suilla. See *Hyoscyamus.*

Fabaginea. See *Zygophyllum.*

Fabago. See *Zygophyllum.*

Faba'ria. (From *faba*, a bean, which it resembles.) See *Sedum telephium.*

FABRARUM AQUA. (From *faber*, a smith.) Forge water. Water in which red-hot iron has been quenched. This is a good chalybeate, and too much neglected.

FABRICIUS, Hieronymus, born at *Aquapendente*, in Italy, 1537, and died at the advanced age of eighty-two. He is thought to have been the first to notice the valves of the veins, which he demonstrated in 1574. But his surgical works obtained him most reputation; indeed he has been called the Father of modern surgery. His first publication, in 1592, contained five *Dissertations on Tumours, Wounds, Ulcers, Fractures*, and *Dislocations.* He afterwards added another part, treating of all the diseases which are curable by manual operation. This work passed through seventeen editions in different languages.

Fabricius, James, was born in 1577; died in 1652. He has left several tracts on medical subjects.

Fabricius, Philip Conrad, was author of several useful works in anatomy and surgery. His first treatise, *Idea Anatomes Practicæ*, 1741, contained some new directions in the Art of Injection, and described several branches of the Portio Dura, &c. In another work he has some good observations on the Abuse of Trepanning.

Fabricius, William, better known by the name of *Hildanus*, from Hilden, in Switzerland, where he was born in 1560. He published five *Centuries of Observations*, which present many curious facts, as also several instruments invented by him.

FACE. *Facies.* The lower and anterior part of the cranium, or skull.

FA'CIAL. *Facialis.* Belonging to the face; as facial nerve, &c.

Facial nerve. *Nervus facialis. Portio dura* of the auditory nerve. These nerves are two in number, and are properly the eighth pair; but are commonly called the seventh, being reckoned with the auditory, which is the portio mollis of the seventh pair. They arise from the fourth ventricle of the brain, pass through the petrous portion of the temporal bone to the face, where they form the pes anserinus, which supplies the integuments of the face and forehead.

FA'CIES. See *Face.*

Facies hippocratica. That particular disposition of the features which immediately precedes death; so called, because it has been so admirably described by Hippocrates. The nose is sharp, the eyes hollow, the temples sunk, the ears cold and contracted, and their lobes inverted; the skin about the forehead hard, tense, and dry; the countenance pale, greenish, or dark.

Facies rubra. See *Gutta rosacea.*

FACTI'TIOUS. *Factitius.* A term applied to any thing which is made by art, in opposition to that which is native, or found already made in nature.

FA'CULTY. (*Facultas, atis.* f.) The power or ability by which any action is performed. See *Actio.*

Faculty, mental. See *Mens.*

Fæ'ces. The plural of *fæx.* The alvine excretions.

FÆCULA. (*a, æ.* f.; diminutive of *fæx.*) A substance obtained by bruising or grinding certain vegetables in water. It is that part which, after a little, falls to the bottom. The fæcula of plants differs principally from gum or mucus in being insoluble in cold water, in which it falls with wonderful quickness. There are few plants which do not contain fæcula; but the seeds of gramineous and leguminous vegetables, and all tuberose roots, contain it most plentifully.

FÆX. (*Fæx, æcis.* f.; an excretion.)

1. The sediment of any fermented liquor; as beer, wine, &c.

2. The alvine excretions are called *fæces.*

FAGA'RA. (*a, æ.* f.; from *fagus,* the beech, which it resembles.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.*

Fagara major. See *Fagara plerota.*

Fagara octandra. The systematic name of the plant which affords *Tacamahaca,* which is a resinous substance that exudes both spontaneously, and when incisions are made into the stem of this tree: *Fagara foliolis tomentosis,* of Linnæus, and not, as was formerly supposed, from the *Populus balsamifera.* Two kinds of a tacamahaca are met with in the shops. The best, called, from its being collected in a kind of gourd shell, tacamahaca in shells, is somewhat unctuous and soft, of a pale yellowish or greenish colour, a bitterish aromatic taste, and a fragrant delightful smell, approaching to that of lavender and ambergris. The more common sort is in semi-transparent grains, of a whitish, yellowish, brownish, or greenish colour, and of a less grateful smell than the former. Tacamahaca was formerly in high estimation as an ingredient in warm stimulating plasters; and although seldom used internally, it may be given with advantage as a corroborant and astringent balsamic.

Fagara plerota. *Fagara major. Castana Luzonis.* This plant is found in the Philippine islands. Its berries resemble, in their virtues, the cubebs; they are aromatic, and, according to Avicenna, heating, drying, good for cold, weak stomachs, and astringent to the bowels. See *Piper cubeba.*

FAGOPY'RUM. (*um, i.* n.; from φαγος, the beech, and πυρος, wheat: because its seeds were supposed to resemble the mast, *i. e.* fruit of beech.) See *Polygonum fagopyrum.*

FAGOTRI'TICUM. (*um, i.* n.; from *fagus,* the beech, and *triticum,* wheat.) See *Fagopyrum.*

FA'GUS. (*us, i.* f.; from φαγω, to eat: its nut being one of the first fruits used by man.)

1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Polyandria.*

2. The pharmacopœial name of the beech. See *Fagus sylvatica.*

Fagus castanea. The systematic name of the chestnut tree; called also, *Castanea, Lopima, Mota, Glans Jovis Theophrasti.* Jupiter's acorn, and Sardinian acorn. The fruit of this plant, *Fagus—foliis lanceolatis, acuminato-serratis, subtus nudis,* of Linnæus, are much esteemed as an article of luxury after dinner. Toasting renders them more easy of digestion; but, notwithstanding, they must be considered as improper for weak stomachs. They are moderately nourishing, as containing sugar, and much farinaceous substance.

Fagus sylvatica. The systematic name of the beech-tree; called also, *Fagus, Oxya, Balanda,* and *Valanida.* The fruit and interior bark of this tree, *Fagus—foliis ovatis, obsolete serratis,* of Linnæus, are occasionally used medicinally, the former in obstinate headache, and the latter in the cure of hectic fever. The oil expressed from beech-nuts is supposed to destroy worms; a child may take two drachms of it night and morning; an adult an ounce. The poor people of Silesia use this oil instead of butter.

FAHLUMITE. A sub-species of octohedral corundum.

FAINTING. See *Syncope.*

FAIRBURN. The name of a village in the county of Ross, in North Britain, where there is a sulphureous spring.

FA'LCIFORM. (*Falciformis;* from *falx,* a scythe, and *forma,* resemblance.) Resembling a scythe.

Falciform process. The falx. A process of the dura mater, that arises from the crista galli, separates the hemispheres of the brain, and terminates in the tentorium.

FALCO. (*o, nis.* m.; from *falco,* to hook: so called from the hooked form of its bill.) A genus of birds, of the order *Accipitres.* The eagle.

Falde'lla. Lint, used as a compress.

Falling of the uterus. See *Prolapsus uteri.*

Falling-sickness. See *Epilepsia.*

Fallopian ligament. See *Poupart's ligament.*

Fallopian tube. See *Tuba Fallopiana.*

FALLOPIUS, Gabriel, was born about the year 1523. He distinguished himself, not only as an anatomist, but also in medicine and surgery. He has the merit of recovering many of the observations of the ancients, which had fallen into oblivion. His "*Observationes Anatomicæ,*" published in 1561, was one of

the best works of the 16th century; in this, some of the errors, which had escaped his master, Vesalius, are modestly pointed out. Many other publications, ascribed to him, were printed after his death; some of which are evidently spurious.

FALSE. Spurious; bastard. 1. In *Pathology*, a term frequently used under the name of nothus and pseudes, to express a disease which has the appearance and some of the symptoms of one which it really is not: thus, *peripneumonic notha* is applied to a catarrhal and infarcted condition of the lungs, the symptoms of which resembled those of inflammation of these viscera.

2. In *Botany*, the word *pseudo* is more frequently applied to a plant which resembles another; as *pseudo-cassia*, &c.

False sight. See *Pseudoblepsis.*

FALX. (*Falx, cis.* f.) A scythe. See *Falciform process.*

FA'MES. Hunger. See *Hunger.*

Fames canina. See *Bulimia.*

Famigerati'ssimum emplastrum. (From *famigeratus*, renowned; from *fama*, fame, and *gero*, to bear: so named from its excellence.) A plaster used in intermittent fevers, made of aromatic, irritating substances, and applied to the wrists.

FAMILY. *Familia.* A term used by naturalists to express a certain order of natural productions, agreeing in the principal characters, and containing numerous individuals, not only distinct from one another, but in whole sets, several members being to be collected out of the same family, all of which have the family character, and all some subordinate distinction peculiar to that whole number; or, though found in every individual of it, not found in those of any others.

It has been too common to confound the words, class, family, order, &c., in natural history; but the determinate meaning of the word family seems to be that larger order of creatures under which classes and orders are subordinate distinctions.

FANATICISM. See *Alusia.*

FARCIMINALIS. (From *farcimen*, stuffing, or sausage-meat.) See *Allantoid.*

FARCTUS. Filled; crammed.

FA'RFARA. (*a, æ.* f.; from *farfarus*, the white poplar: so called because its leaves resemble those of the white poplar.) See *Tussilago farfaro.*

FARI'NA. (*a, æ.* f.; from *far*, corn, of which it is made.) Meal, or flour. A term given to the pulverulent and glutinous part of wheat, and other seeds, which is obtained by grinding and sifting. It is highly nutritious, and consists of gluten, starch, and mucilage. See *Triticum.*

FARINA'CEOUS. (*Farinaceus*; from *farina*, flour.) A term given to all articles of food which contain *farina*; those substances called *cerealia*, *legumina*, and *nuces oleosæ.* See *Farina.*

Farina'rium. See *Alica.*

Fa'rreus. (From *far*, corn.) Scurfy. An epithet of urine, where it deposits a branny sediment.

FA'SCIA. (*a, æ.* f.; from *fascis*, a bundle: because, by means of a band, materials are collected into a bundle.) 1. A bandage, fillet, or roller.

2. The tendinous expansions of muscles, which bind parts together, are termed *fasciæ.* See *Aponeurosis.*

Fascia lata. A thick and strong tendinous expansion, sent off from the back, and from the tendons of the glutei and adjacent muscles, to surround the muscles of the thigh. It is the thickest on the outside of the thigh and leg, but towards the inside of both becomes gradually thinner. A little below the trochanter major, it is firmly fixed to the linea aspera; and, further down, to that part of the head of the tibia that is next the fibula, where it sends off the tendinous expansion along the outside of the leg. It serves to strengthen the action of the muscles, by keeping them firm in their proper places when in action, particularly the tendons that pass over the joints where this membrane is thickest.

FASCIAL. (*Fascialis*; from *fascia*, a fillet.) Of or belonging to a fascia.

Fascia'tio. (From *fascia*, a fillet.) The binding up any diseased or wounded part with bandages.

FASCICULARIS. (From *fascis*, a bundle.) Fascicular: bundled. Applied to roots which are sessile at their base, and consist of bundles of finger-like processes; as the root of the *Ophris nidus avis.*

FASCICULATUS. Fasciculate: bundled or clustered. Applied to nerves, stems of plants, leaves, &c.

FASCI'CULUS. (From *fascis*, a bundle.) 1. In *Pharmacy*, a handful.

2. In *Botany*, a fascicule is applied to flowers on little stalks, variously inserted and subdivided, collected into a close bundle, level at the top; as in sweet-william. It differs from,

1. A *corymb*, in the little stalks coming only from about the apex of the peduncle, and not from its whole length.

2. An *umbel*, from the stalks not coming from a common point.

3. A *cyme*, in not having its principal division umbellate.

FASCIOLA. (*a, æ.* f.; diminutive of *fascia.*) The name of a genus of worms, in some arrangements, that inhabit the interior of animals.

Fasciola hepatica. See *Distoma hepaticum.*

FASTIGIATUS. Flat-topped: applied to umbelliferous flowers and others when there are many together which rise to the same height, so as to form a flat surface at the top.

FASTING. A want of the supply of food to the stomach. When produced by a want of appetite, without any other apparent affection of the stomach, this often arises from too great fatigue, or protracted fasting; from violent passions of the mind; and from

habit, or other cause, enabling the system to sustain almost total abstinence for a long time. The newspapers, and even medical journals of different nations, and the transactions of learned societies, abound with examples of persons having fasted for a term of time so apparently extravagant as to exceed credibility. In most of these cases, and probably in all, if they had been critically investigated, water, tea, or some other fluid, would have been found to have been occasionally taken.

FAT. See *Adeps.*

FATU'ITY. (*Fatuitas*; from *fatuus*, silly.) Fatuity or foolishness.

FAU'CES. (The plural of *faux*.) A cavity behind the tongue, palatine arch, uvula, and tonsils: from which the pharynx and larynx proceed.

FAU'FEL. Terra japonica, or catechu.

FAUX. (*Faux, cis.* f.; in the plural, *fauces.*) 1. In *Anatomy*, the gorge, or mouth, or opening of the gullet.

2. In *Botany*, applied to the mouth, or opening of the tube of a monopetalous corol. See *Corolla.*

FAVA'GO AUSTRALIS. (From *favus*, a honeycomb; from its resemblance to a honeycomb.) A species of bastard sponge.

FAVOSUS. (From *favus*, a honeycomb.) Favose: honeycomb-like. Applied to, 1. Some eruptive diseases; as *porrigo favosa*, which is covered with a honeycomb-like gummy secretion.

2. Parts of plants; as the receptacle of the onopordium, which has cells like a honeycomb.

FAVUS. (*us, i.* m.; a honeycomb.) A pustule larger than the *acor*, flatter, and not acuminated. It contains a more viscid matter than the acor; its base, which is often irregular, is slightly inflamed; and it is succeeded by a yellow, semi-transparent, and sometimes cellular scab, like a honeycomb; whence its name.

Feathered. See *Plumosus.*

FE'BRES. (The plural of *febris.*) An order in the class *Pyrexiæ* of Cullen, characterised by the presence of pyrexia, without primary local affection.

FEBRI'CULA. (*a, æ.* f.; dim. of *febris*, a fever.) A slight degree of symptomatic fever.

FEBRI'FUGA. (*a, æ.* f.; from *febrem fugare*, to drive away a fever.) The plant fever-few; lesser centaury, &c.

FE'BRIFUGE. (*Febrifugus*; from *febris*, a fever, and *fugo*, to drive away.) That which possesses the property of abating the violence of any fever.

FEBRIFUGUM CRENII. Regulus of antimony.

FEBRIFUGUM OLEUM. Febrifuge oil. The flowers of antimony, made with sal-ammoniac and antimony sublimed together, and exposed to the air, when they deliquesce.

FEBRIFUGUS. See *Febrifuge.*

FEBRIFUGUS PULVIS. Febrifuge powder. The Germans give this name to the pulvis stypticus Helvetii. In England, a mixture of oculi cancrorum and emetic tartar, in the proportion of half a drachm and two grains, has obtained the same name; in fevers, it is given in doses of gr. iii. to iv.

FEBRIFUGUS SAL. A muriate of potash.

FE'BRIS. (*is, is.* f.; from *ferveo*, to burn.) *Pyrexia.* A fever. A disease, of all to which we are subject, perhaps, the most difficult to define, although an extremely common one, and one which, when formed, is not likely to be mistaken for any other. Almost every writer on diseases has given a different definition of fevers, so that no one seems to have been satisfied with that of his predecessors. From the names which have been applied to the disease, it is evident that *heat of the body* has been always an essential symptom. *Pyrexia* in the Greek means heat; *febris* of the Latins means heat; and when, under any circumstance, a person is hot, we say he *burns* as if he had a *fever.* This symptom, though present in most cases of fever, is not in all; for we occasionally have fevers go through their course without any increase of temperature. Another symptom, which pathologists have dwelt on very much, is an *accelerated* pulse, which, like the former, though generally present, is not observed in every instance; for some of the worst, and even fatal cases, go through their course, without the pulse being increased in velocity. In general, fevers are ushered in with chilliness; the pulse soon after becomes frequent, and the heat of the body is increased, and, with these symptoms, several of the functions of the body are impaired, and the strength of the limbs is diminished, with more or less of mental disturbance, and no local disease.

An attack of fever is mostly announced by languor and debility, a sluggishness of motion, and some uneasiness in attempting it. The face and extremities become pallid; the features seem sunk, the bulk diminished, and the skin is contracted. A sensation of cold next is experienced down the back, as if a cold wind or cold fluid were descending along it; and this feeling gradually extends over the whole body, so that the person feels cold, and expresses himself so, while, to the by-stander, he is perhaps morbidly warm. Horripilation frequently attends, and the coldness perhaps increases to a rigor or shivering. In this early stage, the mind is often unsteady, confused, and the person very fidgetty and forgetful. In some cases, stupor sets in, though in a trifling degree. In such cases as have these chilly symptoms, the pulse is decidedly smaller in diameter, and weaker in power, but constantly increased in number. The appetite departs on the approach of fever, nausea quickly following, and in many cases there is frequent vomitings, and that which is thrown off the stomach is vitiated gastric mucus or secretion, and often it is bilious. The breathing is agitated, irregular, and perhaps laboured. With these symptoms, there are also wandering pains about the joints and

limbs, which are tensive and dull, except a fixed one in the small of the back, which is often acute, and gives great distress. The secretions universally are diminished: the mouth is dry and parched, causing thirst; the skin shrivelled and dry; the urine scanty; the bowels confined. These symptoms are, sooner or later, changed into flushings of the face, the skin fills out, and becomes more natural; the skin now feels universally hot, and the mind perhaps wanders. The pulse is now more frequent, more full, and has more energy. These two sets of symptoms, distinguishable very readily by the patient and the by-standers as hot and cold stages, alternate very quickly, and are attended by more or less well-marked fears, horrors, chills, rigors, and deliriousness; and, sooner or later, they are succeeded by a perspiration, under which their force abates, and the symptoms of the cold stage vanish, the urine and other secretions become more free, and a considerable sediment is noticed in the urine after it has stood and become cold.

The physiognomy, at the commencement of fever, is often well marked; so much so, indeed, that the disease is often known to be a fever by it alone, before any knowledge of the disease or its other symptoms is acquired. With more or less of the symptoms enumerated, the fever becomes determined and fixed. The period in which it may be said to be forming is uncertain, seldom more than twenty-four hours. Under an increase of their violence, mostly towards evening, the fever is said to exacerbate, and this period of increased violence is called the *exacerbation*: it lasts several hours, and then the symptoms somewhat abate, but they retain a greater degree of force than they had before the exacerbation; and then, again, once or twice in the twenty-four hours, they exacerbate, and so the fever continues and increases in violence. Such a fever is called a *continued* one. At an uncertain time, many days, perhaps, and mostly so, a *crisis* takes place, when it shows a disposition to diminish or prove fatal.

Such are the phænomena of fevers, in their acute, regular, and distinct forms.

If the symptoms very much *diminish*, after four, six, eight, or twelve hours, and, having so diminished in force, return again as violently, or more so than before, it is said to remit, and the fever is called a *remittent*: the time of the diminished force, or when the fever seems going off, is termed the interval of *remission*; the other time, the *paroxysm*.

If the symptoms, after having continued several hours, wholly *vanish*, and having left the patient from six to seventy-two hours, one, two, or three days, should return again, then the fever is called an *intermittent*, and the fevered period is called the *paroxysm* or fit, and the well period, the *intermission*.

Most nosologists, in arranging fevers into genera, have taken the line of demarcation from the character of their duration: as limited to a single paroxysm; as composed of numerous paroxysms, with intervals of intermission, or perfect apyrexy; as composed of numerous exacerbations, with intervals of remission, or imperfect apyrexy; and as composed of a single series of increase and decrease, with a mere tendency to intervals of remission, without perfect apyrexy at any time. Other nosologists have drawn their generic distinctions from other circumstances; as their inclination to vigour and violence, or weakness and debility, of action; or their disposition or indisposition to putridity; or their tendency to a sporadic or epidemic character.

Physicians, in every age, have been anxious to discover the immediate or proximate cause of the singular appearances of fever; but, as collecting all the theories which have appeared would be attended with no advantage, we shall only give those which have been particularly distinguished. "Upon this subject," says Dr. Good (from whom this article is principally taken and contracted), "a great deal of learned dust has been raised, and a great deal of valuable time consumed. Ancient speculations have been overthrown, and modern speculations, in vast abundance, erected upon their ruins; which, in rapid succession, have also had their day, and expired. It is an enquiry, therefore, not likely to prove very productive; yet, as forming a part of medical science of which no student should be altogether ignorant, it seems necessary to extend it to a brief survey of the most popular doctrines which have been advanced upon the subject in different ages.

Fevers, then, in respect to their proximate cause, have been conjectured to originate from a morbid change, either in the composition of the blood, or in the tone or power of the living fibre. The first view has given rise to various hypotheses, that rank under the common division of the *humoral pathology*. The second has given rise to other hypotheses appertaining to the common division of the *fibrous* or *nervous pathology*.

The hypotheses derived from the one or the other of these sources, that are chiefly entitled to attention, are the following, of which the first two belong to the former division, and the remainder to the latter:—

I. That of the Greek schools, founded on the doctrine of a concoction and critical evacuation of morbific matter.

II. That of Boerhaave, founded on the doctrine of a peculiar viscosity, or lentor of the blood.

III. That of Stahl, Hoffman, and Cullen, founded on the doctrine of a spasm on the extremities of the solidum vivum, or living fibre.

IV. That of Brown and Darwin, founded on the doctrine of accumulated and exhausted excitability or sensorial power.

V. To which we may add that fevers have, by some physiologists, as Dr. Clutterbuck, and Professor Marcus, been identified with inflammation; and their proximate cause

been ascribed to increased action in some particular organ.

I. It was the opinion of Hippocrates, that fever is an effort of nature to expel something hurtful from the body, either ingenerated, or introduced from without. Beholding a violent commotion in the system, followed by an evacuation from the skin and kidneys, with which the paroxysm terminated, he ascribed the commotion to a *fermentation, concoction,* or *ebullition,* by which the noxious matter was separated from the sound humours; and the evacuation to a despumation or scum which such separation produced, or rather to the discharge of this morbid scum from the emunctories that open externally. Galen supported this view with all the medical learning of his day; and it is the only explanation of fever to be met with in medical writings, through the long course of three thousand years; in fact, till the time of Sydenham, who still adhered to it, and whose pages are full of the language to which it naturally gave birth. It blended itself almost insensibly with the language of the chemists of the day.

And hence, the supposed despumation was contemplated as possessed, according to different circumstances, of different chemical qualities and characters; and particularly as being acid, alkaline, effervescent, or charged with some other acrimonious principle, too highly exalted, or in too great a proportion.

This doctrine, considered merely hypothetically, is not only innocent, but highly ingenious and plausible. It is in unison with several of the phænomena of febrile diseases; and derives a strong collateral support from the general history of eruptive fevers, in which we actually see a peccant matter, producing general commotion, multiplying itself as a ferment, and at length separated and thrown off at the surface by a direct depuration of the system.

So far, therefore, as relates to eruptive fevers, the opinion is sufficiently correct. But the moment it is brought forward as the proximate cause of fever, properly so called, in which there is no specific eruption, it completely fails.

For, first, no explanation is here given as to the means by which any such concoction or fermentation, or multiplication of morbific matter in any way takes place. Next, there are many fevers produced evidently by cold, fear, and other excitements, as well mental as corporeal, in which, most certainly, there is no morbific matter introduced, and wherein we have no reason to conceive there is any generated internally; while the disease, limited perhaps to a single paroxysm, closes nevertheless with an evacuation from the skin or the kidneys. And, thirdly, we sometimes behold fevers suddenly cured, as Dr. Cullen has observed, by a hæmorrhage so moderate, as, for example, a few drops of blood from the nose, as to be incapable of carrying out any considerable portion of a matter diffused over the whole mass of the blood; while we are equally incapable of conceiving how such diffused morbific matter could collect itself at a focal point, or pass off at a single outlet; or of tracing in the discharge, after the minutest examination, any properties different from those of blood in a state of full health.

II. The acute and penetrating mind of Boerhaave, who was born in 1668, was sufficiently sensible of this danger; and the discoveries which were now taking place in chemistry and physiology, led him progressively to the construction of a new theory, which, in a few years, became so popular as to obtain a complete triumph over that of the Greek schools.

Leeuwenhoeck, by a delicate and indefatigable application of the microscope to animals of a transparent skin had endeavoured to establish it as a fact, that the constituent principles of the blood consist of globular corpuscles; but that these corpuscles differ in size in a regular descending series, according to the constituent principles themselves; and that each set of principles has its peculiar blood-vessels, possessing a diameter just large enough to admit the globules that belong to it, and consequently incapable, without force, of allowing an entrance of those of a larger magnitude; and hence that the blood-vessels possess a descending series as well as the particles of the blood.

It was upon this supposed fact, that Boerhaave built his hypothesis. He conceived that almost all diseases may be resolved into an introduction of any given series of particles of blood into a series of vessels to which they do not properly belong; and he distinguished such introduction by the name of *error loci.* He conceived still farther, that this heterogeneous admixture is very frequently taking place; and that its chief cause consists in a disproportion of one or more sets of the sanguineous principles to the rest, by which their globular form is occasionally broken down and destroyed, and rendered either too thin and serous, or too gross and viscid. The viscidity of the blood he distinguished by the name of *lentor;* and to a prevalence of this lentor, or viscidity, he ascribed the existence of fever; maintaining that the general disturbance which constitutes fever proceeds from an *error loci* of the viscid blood, whose grosser corpuscles, from their undue momentum as well as superabundance, press forcibly into improper series of vessels, and stagnate in the extremities of the capillaries; whence the origin of the cold stage, and consequently of the stages that succeed it, to which the cold stage gives rise.

The system of Boerhaave, therefore, consisted of an elegant and artful combination of both the earlier and later doctrines of corpuscular physiology.

The most triumphant fact in favour of the Boerhaavian hypothesis is, that the crust on the blood, in inflammatory fever, is often found peculiarly dense. But as fevers (and

certainly the greater number) are found without any such crust; and as a similar crust, though perhaps not quite so dense, exists under other and very different states of body, as in pregnancy and scurvy, even this leading appeal has long lost its power of conviction: whilst the abruptness with which fevers make their assault, from sudden occasional causes, and in constitutions of every diversity, forbid the supposition that, in such cases, a lentor or sizy crasis of the blood can have time to be produced, however it may exist occasionally, and be perhaps the source of other disorders.

III. To this period of time, in the production of fever, and indeed of all other diseases, the human body was regarded as almost entirely passive, a mere organic machine operated upon by some *autocrateia*, as *Nature*, or a *vis medicatrix*, but in the same manner as other machines, and mostly by similar laws. Its muscles were contemplated as mechanical levers, and its vessels as hydraulic tubes, whose powers were calculated upon the common principles of mechanics and hydronamics; and were only supposed to be interfered with by the internal changes perpetually taking place in the fluids they had to convey. A new era, however, at length began to dawn upon the world; a more comprehensive spirit to pervade medical study: the animal frame was allowed to exhibit pretensions superior to the inanimate, and not only to be governed by powers of its own, but by powers which are continually and systematically, from a given point, operating to a preservation of health, where it exists, and to a restoration of health, where it has been lost or injured. Stahl, who was contemporary with Boerhaave, and in the university of Halle in 1694, first started this loftier and more luminous idea,—more luminous, though the light was still struggling with darkness—made the mind the controlling principle, and the *solidum vivum*, or nervous system, the means by which it acted. Fever, on his hypothesis, consisted in a constrictive or *tonic spasm*, in his own language, *spasmus tonicus*, produced by a torpor or inertness of the brain, at the extremity of the nerves, and counteracted by the remedial exertions of the mind, the *vires medicatrices* of his hypothesis, labouring to throw off the assailing power; whence the general struggle and commotion by which the febrile paroxysm is characterised. Hoffman, who was a colleague of Stahl, took advantage of this new view; followed up the crude and primary ideas of Stahl with much patient and laborious investigation; and soon presented to the world a more correct system, in a more attractive style, but apparently with a disingenuous concealment of the source from which he had borrowed his first hints. He omitted the metaphysical part of the Stahlian hypothesis, took from the mind the conservative and remedial power over the different organs with which Stahl had so absurdly endowed it; seated this power as a law of life in the general organisation; separated the nervous from the muscular fibres, the latter of which were regarded as only the extremities of the former by Stahl; allowed a wider range and longer term to the constrictive spasm of fever; and changed its name from spasmus *tonicus* to spasmus *periphericus*: giving, also, to the moving power of the muscular or irritable fibres the name of *vis insita*, as that of the nervous fibre was called *vis nervea*.

It is highly to the credit of Boerhaave, that his mind, in the latter part of his life, was so fully open to the merits of this hypothesis, that he admitted the agency of the nervous power, though a doctrine that struck at the root of his own system.

Dr. Cullen, about the year 1760, boldly ventured upon a new attempt for the purpose of simplifying and facilitating the pathology of fever. As his basis he took the hypothesis of Stahl, as modified and improved by Hoffman: and on this basis erected his stately and elaborate structure, so well known to the medical world, full of ingenuity and daring genius, and which, if it be at this moment crumbling into decay, certainly is not falling prostrate before any fabric of more substantial materials, or more elegant architecture. Cullen has been accused of the same want of ingenuousness towards Hoffman, as Hoffman is chargeable with towards Stahl; and of having introduced his system to the public with little or no acknowledgement of the sources from which he has drawn. But surely no one can bring forward such an accusation, who has read with any degree of attention the preface to his Practice of Physic, in which he gives a full account of Dr. Hoffman's system in his own words, and pays complete homage to his merits.

According to the more elaborated principles of the Cullenian system, the human body is a congeries of organs, regulated by the laws not of inanimate matter, but of life, and superintended by a mobile and conservative power or energy, seated in the brain, but distinct from the mind or soul; acting *wisely*, but *necessarily*, for the general health; correcting deviations, and supplying defects, not from a knowledge and choice of the means, but by a pre-established relation between the changes produced, and the motions required for the restoration of health; and operating, therefore, through the medium of the moving fibres, upon whose healthy or unhealthy state depends the health or unhealthiness of the general frame: which fibres he regarded, with Stahl, as simple nerves, the muscular filaments being nothing more than their extremities, and by no means possessed of an independent *vis insita*.

The brain, therefore, upon this hypothesis, is the *primum mobile*, but it closely associates in its action with the heart, the stomach, and the extreme vessels. The force of the heart gives extension to the arteries, and the growth of the body depends upon such extension in conjunction with the nutritious fluid fur-

nished by the brain, and deposited by the nerves in the interstices of their own fibres; the matter of which fibres is a solid of a peculiar kind, whose parts are united by chemical attraction. All nervous power commences in the encephalon; it 'consists in a motion beginning in the brain, and propagated from thence into the moving fibres, in which a contraction is to be produced. The power by which this motion is propagated, we name,' says Dr. Cullen, 'the *energy* of the brain; and we therefore consider every modification of the motions produced as modifications of that energy.' He further lays it down, as a law of the economy, that the energy of the brain is alternately excited and collapsed, since every fibrous contraction is succeeded by a relaxation: whence spasms and convulsions are *motus abnormes*, and consist in an irregularity of such alternation. But we must distinguish, in this system, between the energy of the brain and the vital fluid it sends forth by the nerves; for while the former rises and sinks alternately, the latter remains permanently the same. It is not a secretion, but an inherent principle, never exhausted, and that never needs renewal.

This hypothesis, in its various ramifications, influenced every part of his theory of medicine, and consequently laid a foundation for his doctrine of fever. The proximate cause of fever was, in his opinion, a collapse or declination of the energy of the brain, produced by the application of certain sedative powers, as contagion, miasm, cold, and fear, which constitute the remote causes. This diminished energy extends its influence over the whole system, and occasions an universal debility; but chiefly over the extreme vessels, on which it induces a spasm; and in this spasm the cold fit is supposed to consist.

'Such, however,' to adopt the words of Cullen himself, 'is the nature of the animal economy, that this debility proves an indirect stimulus to the sanguiferous system; whence by the intervention of the cold stage, and spasms connected with it, the action of the heart and larger arteries is increased, and continues so till it has had the effect of restoring the energy of the brain, of extending this energy to the extreme vessels, of restoring, therefore, their action, and thereby especially overcoming the spasm affecting them; upon the removing of which, the excretion of sweat, and other marks of the relaxation of the excretories, take place.'

This relaxed or perspiratory section of the paroxysm, however, is not regarded by Cullen as a part of the disease, but as the prelude to returning health. Yet the fit still consists of three stages: the first, of debility or diminished energy; the second, of spasm; and the third, of heat. And though Cullen had some doubts whether the remote causes of fever might not produce the spasm as well as the atony of the nervous system, yet he inclined to ascribe the second stage to the operation of the first, as he did most decidedly the third to that of the second: and thus to regard the whole as a regular series of actions, employed by the *vis medicatrix naturæ* for the recovery of health.

That fever, in its commencement or earliest stage, is characterised by debility of the living fibre, or, more closely in the words of Cullen, by diminished energy of the brain, extending directly or indirectly to the voluntary muscles and capillaries, cannot for a moment be doubted by any one who accurately watches its phænomena. And thus far the Cullenian hypothesis is unquestionably correct; as it appears to be, also, in supposing the cold stage to be the foundation of the hot, and of the excretion of sweat by which the hot stage is succeeded. But it fails in the two following important points, without noticing a few others of smaller consequence. The spasm on the minute vessels produced by debility takes the lead in the general assault; and, though it forms only a link in the remedial process, is the most formidable enemy to be subdued: and hence all that follows in the paroxysm is an effort of the system to overcome this spasm. The effort at length proves successful: the debility yields to returning strength; the spasm is conquered, and the war should seem to be over. But this is not the fact: the war continues notwithstanding; there is nothing more than a hollow truce; debility and spasm take the field again, and other battles remain to be fought. There is nothing in this hypothesis to account for a return of debility and spasm, after they have been subdued; nor to show why spasm should ever, in the first instance, be a result of debility.

The next striking defect is, that debility is here made a cause of strength; the weakened action of the first stage giving rise to the increased action and re-excited energy that restore the system to a balance of health: and here, again, we stand in need of the interposition of some present divinity to accomplish such an effort by such means.

IV. It is not, therefore, to be wondered at that this system, with all its ingenuity and masterly combination, should not have proved satisfactory to every one. In reality, it did not for many years prove satisfactory to every one in the celebrated school in which it was first propounded. And hence, under the plastic hands of Brown, arose another hypothesis, of which we shall proceed to give a very brief outline, together with the modification it received under the finishing strokes of Darwin.

It had great simplicity of principle, and some plausibility of feature; it attracted the curious by its novelty, the indolent by its facility, and every one by the boldness of its speculations. It circulated widely, and soon acquired popularity abroad, as well as at home.

Man, according to Dr. Brown, is an organised machine, endowed with a principle

of excitability, or predisposition to excitement, by means of a great variety of stimuli, both external and internal, some of which are perpetually acting upon the machine; and hence the excitement which constitutes the life of the machine is maintained. Excitability, therefore, is the nervous energy of Cullen, and, like that, is constantly varying in its accumulation and exhaustion; yet not, like the nervous energy of Cullen, under the direction and guidance of a *vis conservatrix et medicatrix naturæ*, distinct from the matter of the organisation itself, but passively exposed to the effect of such stimuli as it may chance to meet with, and necessarily yielding to their influence.

Upon this hypothesis, excitement is the vital flame, excitability the portion of fuel allotted to every man at his birth, and which, varying in every individual, is to serve him without any addition for the whole of his existence: while the stimuli by which we are surrounded, are the different kinds of blasts by which the flame is kept up. If the fuel or excitability be made the most of, by a due temperature or mean rate of blasts or stimuli, the flame or excitement may be maintained for sixty or seventy years. But its power of supporting a protracted flame may be weakened by having the blast either too high or too low. If too high, the fuel or excitability will, from the violence of the flame, be destroyed rapidly, and its power of prolonging the flame be weakened directly: and, to this state of the machine, Brown gave the name of indirect debility, or exhausted excitability. If the blasts or stimuli be below the mean rate, the fuel, indeed, will be but little expended, but it will become drier and more inflammable, and its power of prolonging the flame will be still more curtailed than in the former case; for half the blast that would be required to excite rapid destruction antecedently, will be sufficient to excite the same effect now. This state of the machine, therefore, the author of the hypothesis contradistinguished by the name of direct debility, or accumulated excitability.

Upon these principles he founded the character and mode of treatment of all diseases. They consist but of two families, to which he gave the name of sthenic and asthenic: the former produced by accumulated excitability, and marked by direct debility; the latter occasioned by exhausted excitability, and marked by indirect debility.

Fevers, therefore, under this hypothesis, like other diseases, are either sthenic or asthenic: they result from accumulated or exhausted excitability. Inflammatory fever belongs to the first division, and typhus to the second.

The Brunonian hypothesis offers one principle that is unquestionably founded on fact, and is peculiarly worthy of attention: that of accumulated excitability from an absence or defect of stimuli; in colloquial language, an increase of energy by rest. And it is this principle which forms the hinge on which turns the more finished system of Darwin.

Sensible of the objection that weighs equally against that part of the system of Cullen and Brown, which represents the energy or excitability of the living frame as capable of recruiting itself after collapse or exhaustion, without a recruiting material to feed on, he directly allows the existence of such a material; regards it as a peculiar secretion, and the brain as the organ that elaborates and pours it forth. The brain, therefore, in the system of Darwin, is the common fountain from which every other organ is supplied with sensorial fluid, and is itself supplied from the blood, as the blood is from the food of the stomach.

All this is intelligible; but when, beyond this, he endows his sensorial fluid with a mental as well as a corporeal faculty, makes it the vehicle of ideas as well as of sensation, and tells us that ideas are the actual 'contractions, or motions, or configurations of the fibres which constitute the immediate organ of sense,' he wanders very unnecessarily from his subject, and clogs it with all the errors of materialism.

He supposes the sensorial power, thus secreted, to be capable of exhaustion in four different ways, or through four different faculties of which it is possessed: the faculty of *irritability*, exhausted by external stimuli, affecting simple irritable fibres: that of *sensibility*, exhausted by stimuli affecting the fibres of the organs of sense: that of *voluntarity*, exhausted by stimuli affecting the fibres of the voluntary organs acting in obedience to the command of the will: and that of *associability*, exhausted by stimuli affecting organs associated in their actions by sympathy or long habit. By all or any of these means, the sensorial power becomes evacuated, as by food and rest it becomes replenished, often, indeed, with an accumulation or surplus stock of power.

In applying this doctrine to fever, he considers its occasional causes, whatever they may be, as inducing a quiescence or torpor of the extreme arteries, and the subsequent heat as an inordinate exertion of the sensorial power hereby accumulated to excess; and, consequently, the fever of Darwin commences a stage lower than that of Cullen, or in the cold fit, instead of in a collapse of the nervous energy lodged in the brain.

Now, allowing this explanation to account for the cold and hot stages of a single paroxysm of fever, like the spasm of Cullen, it will apply no farther. For when the sensorium has exhausted itself of its accumulated irritability, the disease should cease. It may, perhaps, be said, that a second torpor will be produced by this very exhaustion, and a second paroxysm must necessarily ensue. Admitting this, however, for a moment, it must be obvious that the first or torpid stage only can ensue; for the system being now quite exhausted, the quiescence that takes place

during the torpor can only be supposed to recruit the common supply necessary for health: we have no reason to conceive, nor is any held out to us, that this quantity can again rise to a surplus. Yet it must be farther remarked, that in continued fevers we have often no return of torpor or quietude whatever, and, consequently, no means of re-accumulating irritability; but one continued train of preternatural action and exhaustion, till the system is completely worn out. And to this objection the Darwinian hypothesis seems to be altogether without a reply.

V. There are other pathologists who have referred the proximate cause of fever to a morbid affection of some particular organ, or set of organs associated in a common function. Thus, Baron Haller alludes to several in his day, who ascribed it to a diseased state of the vena cava. Bianchi pitched upon the liver; Swalve on the pancreas; Rahn on the digestive organisation generally; and Dr. Clutterbuck has still more lately, in our own country, and with far more reason and learning, brought forward the brain, to an inflammation of which organ he ascribes fevers of every kind, regarding them merely as so many varieties of one specific disease, originating from this one common cause. But this is to confound fever with local inflammation, the idiopathic with the symptomatic affection. A very striking objection to Dr. Clutterbuck's hypothesis, is his limiting himself to a single organ as the cause of an effect which is equally common to all of them. And on this ground it is that Professor Marcus, of Bavaria, who has contended with similar strenuousness for the identity of fever and inflammation, has regarded all inflamed organs as equal causes; and is hereby enabled to account, which Dr. Clutterbuck's more restricted view does not so well allow of, for the different kinds of fever that are perpetually springing before us, one organ giving rise to one, and another to another. Thus, inflammation of the brain, according to Dr. Marcus, is the proximate cause of typhus; inflammation of the lungs, of hectic fever; that of the peritonæum, of puerperal fever; and that of the mucous membrane of the trachea, of catarrhal fever.

The general answer, however, to pathologists of every description who thus confound or identify fever with inflammation, whether of a single organ or of all organs equally, is, that though fever is commonly a symptom or sequel of inflammation, inflammation is not uncommonly a symptom or sequel of fevers. And hence, though *post-obit* examinations, in the case of those who have died of fever, should show inflammation in the brain, the liver, or any other organ, it is by no means a proof that the disease originated there, since the same appearance may take place equally as an effect, and as a cause; whilst a single example of fever terminating fatally, without a trace of inflammation in any organ whatever (and such examples are perpetually occurring), is sufficient to establish the existence of fever as an idiopathic malady, and to separate the febrile from the phlogotic divisions of diseases.

'A fever, therefore,' to adopt the language of Dr. Fordyce, 'is a disease that affects the whole system; it affects the head, the trunk of the body, and the extremities; it affects the circulation, the absorption, and the nervous system; it affects the skin, the muscular fibres, and the membranes; it affects the body, and affects likewise the mind. It is, therefore, a disease of the whole system in every kind of sense. It does not, however, affect the various parts of the system uniformly and equally; but, on the contrary, sometimes one part is much affected in proportion to the affection of another part.'

The result of the whole is, that we know little or nothing of the proximate cause of fever, or the means by which its phænomena are immediately produced. In the language of Lieutaud, applied to the subject before us, they are too often *atrâ caligine mersæ;* nor have any of the systems hitherto invented to explain this recondite inquiry, however ingenious or elaborate, answered the purpose for which they were contrived.

Dr. Cullen resolves all remote causes into debilitating or sedative powers, instead of being stimulant, as they were formerly very generally considered, and as they are still regarded by many pathologists, and especially by those who contemplate fever and inflammation as identic."

Respecting the other, or remote causes of fever, they are either marsh or human effluvia, exposure to cold, fear, intemperance, and other circumstances, which are particularly noticed in the account of each genus of fever.

Of the division of Fevers. Fevers are distinguished into, *intermittent, remittent, continued,* and *hectic.* See *Ague, Inflammatory fever, Remittent fever, Mixed fever, Typhus fever, Puerperal fever,* and *Nervous fever;* also, *Synocha, Synochus,* and *Typhus.*

Febris alba. See *Chlorosis.*

Febris amphimerina. A day fever.

Febris anginosa. See *Scarlet fever.*

Febris aphthosa. See *Aphthæ.*

Febris ardens. See *Fever.*

Febris assodes. A tertian intermittent fever, with extreme restlessness.

Febris bullosa. See *Pemphigus.*

Febris carcerum. Prison fever.

Febris castrensis. A camp fever.

Febris catarrhalis. A fever, attended with symptoms of catarrh.

Febris cholerica. A fever attended throughout with bilious diarrhœa.

Febris continua. A continued fever, or one which has no intermission, but exacerbations come on usually twice in one day. The genera of continued fever are, the inflammatory, the typhus, the mixed, and hectic fever. See *Fever.*

FEBRIS ELODES. A fever with continual and profuse sweating.

FEBRIS EPIALA. A fever with a continual sense of coldness. See *Epialus*.

FEBRIS ERYSIPELATOSA. See *Erysipelas*.

FEBRIS EXANTHEMATICA. A fever with an eruption. See *Exanthema*.

FEBRIS FLAVA. See *Typhus*.

FEBRIS HECTICA. See *Hectic fever*.

FEBRIS HYDRODES. A fever with profuse sweats.

FEBRIS INFLAMMATORIA. See *Inflammatory fever*.

FEBRIS INTERMITTENS. An intermittent fever. See *Ague*.

FEBRIS LACTEA. Milk fever, which is mostly of the synochous type.

FEBRIS LENTA. See *Typhus*.

FEBRIS LENTICULARIS. A fever, attended by an eruption like small lentils.

FEBRIS MALIGNA. See *Typhus*.

FEBRIS MILIARIS. See *Miliaria*.

FEBRIS MORBILLOSA. See *Rubeola*.

FEBRIS NERVOSA. See *Typhus*.

FEBRIS NOSOCOMIORUM. The fever of hospitals.

FEBRIS PALUSTRIS. The marsh fever.

FEBRIS PESTILENS. See *Pestis*.

FEBRIS PETECHIALIS. See *Typhus*.

FEBRIS PUTRIDA. See *Typhus*.

FEBRIS REMITTENS. See *Remittent fever*.

FEBRIS SCARLATINA. See *Scarlatina*.

FEBRIS SYNOCHA. See *Inflammatory fever*.

FEBRIS TYPHODES. See *Typhus*.

FEBRIS URTICARIA. See *Urticaria*.

FEBRIS VARIOLOSA. See *Small-pox*.

FEBRIS VESICULOSA. See *Erysipelas*.

FE'CULA. See *Fæcula*.

FECUNDATION. See *Generation*.

FEL. See *Bile*.

FEL NATURÆ. See *Aloes*.

FEL-WORT. (So called, from its bitter taste, like bile.) See *Gentiana*.

FELLI'CULUS. The gall-bladder.

FELLI'FLUA PASSIO. See *Cholera*.

FELON. See *Paronychia*.

FELSPAR. An important mineral genus, distributed by Jameson into four species: prismatic felspar; pyramidal felspar; prismato-pyramidal felspar; rhomboidal felspar.

1. The prismatic felspar has nine subspecies: — Adularia; glassy felspar; ice spar; common felspar; Labradore felspar; compact felspar; clink-stone; earthy common spar; porcelain earth.

2. Pyramidal felspar. This embraces the scapolite and elaolite.

3. Prismato-pyramidal felspar. See *Meionite*.

4. Rhomboidal felspar. See *Nepheline*. Chiastolite and sodalite have also been annexed to this species.

FE'MEN. (*Quasi ferimen*; from *fero*, to bear: so called, because it is the chief support of the body.) The thigh.

FEMINEUS. Female. A flower is termed a female, which is furnished with the pistillum, and not with the stamina; the pistil being considered as the female generative organ.

FEMORAL. (*Femoralis*; from *femur*, the thigh.) Of or belonging to the thigh.

FEMORA'LIS ARTERIA. A continuation of the external iliac along the thigh, from Poupart's ligament to the ham.

FE'MORIS OS. (*Femur, oris.* n.; the thigh.) The thigh-bone. A long cylindrical bone, situated between the pelvis and tibia. Its upper extremity affords three considerable processes; these are, the head, the trochanter major, and trochanter minor. The head, which forms about two thirds of a sphere, is turned inwards, and is received into the acetabulum of the os innominatum, with which it is articulated by enarthrosis. It is covered by a cartilage, which is thick in its middle part, and thin at its edges, but which is wanting in its lower internal part, where a round spongy fossa is observable, to which the strong ligament, usually, though improperly called the *round* one, is attached. This ligament is about an inch in length, flattish, and of a triangular shape, having its narrow extremity attached to the fossa just described, while its broader end is fixed obliquely to the rough surface near the inner and anterior edge of the acetabulum of the os innominatum, so that it appears shorter internally and anteriorly, than it does externally and posteriorly.

The head of the os femoris is supported obliquely, with respect to the rest of the bone, by a smaller part, called the *cervix*, or *neck*, which, in the generality of subjects, is about an inch in length. At its basis we observe two oblique ridges, which extend from the trochanter major to the trochanter minor. Of these ridges, the posterior one is the most prominent. Around this neck is attached the capsular ligament of the joint, which likewise adheres to the edge of the cotyloid cavity, and is strengthened anteriorly by many strong ligamentous fibres, which begin from the lower and anterior part of the ilium, and spreading broader as they descend, adhere to the capsular ligament, and are attached to the anterior oblique ridge at the bottom of the neck of the femur. Posteriorly and externally, from the basis of the neck of the bone, a large unequal protuberance stands out, which is the *trochanter major*. The upper edge of this process is sharp and pointed posteriorly, but is more obtuse anteriorly. A part of it is rough and unequal, for the insertion of the muscles; the rest is smooth, and covered with a thin cartilaginous crust, between which and the tendon of the glutæus maximus that slides over it, a large bursa mucosa is interposed. Anteriorly, at the root of this process, and immediately below the bottom of the neck, is a small process called *trochanter minor*. Its basis is nearly triangular, having its two upper angles turned towards the head of the femur, and the great trochanter, while its lower angle is placed towards the body of the bone. Its summit is rough and rounded. These two processes have the name of *tro*

chanters, from the muscles that are inserted into them, being the principal instruments of the rotatory motion of the thigh. Immediately below these two processes the body of the bone may be said to begin. It is smooth and convex before, but is made hollow behind by the action of the muscles. In the middle of this posterior concave surface is observed a rough ridge, called *linea aspera*, which seems to originate from the trochanters, and extending downwards, divides at length into two branches, which terminate in the tuberosities near the condyles. At the upper part of it, blood-vessels pass to the internal substance of the bone, by a hole that runs obliquely upwards.

The lower extremity of the os femoris is larger than the upper one, and somewhat flattened, so as to form two surfaces, of which the anterior one is broad and convex, and the posterior one narrower and slightly concave. This end of the bone terminates in two large protuberances, called *condyles*, which are united before so as to form a pulley, but are separated behind by a considerable cavity, in which the crural vessels and nerves are placed secure from the compression to which they would otherwise be exposed in the action of bending the leg. Of these two condyles, the external one is the largest; and when the bone is separated from the rest of the skeleton, and placed perpendicularly, the internal condyle projects less forwards, and descends nearly three tenths of an inch lower than the external one; but in its natural situation, the bone is placed obliquely, so that both condyles are then nearly on a level with each other. At the side of each condyle, externally, there is a tuberosity, the situation of which is similar to that of the condyles of the os humeri. The two branches of the linea aspera terminate in these tuberosities, which are rough, and serve for attachment of ligaments and muscles.

Femorocele. See *Hernia cruralis*.

FE'MUR. (*Femur, oris*. n.) The thigh. The thigh consists of one bone, the os femoris; of several muscles, — the psoas magnus, iliacus internus, gluteus maximus, medius, and minimus, the pectinæus, triceps, obturator externus and internus, pyriformis, geminus, quadratus, and tensor vaginæ femoris; and these are surrounded by the common integuments. The ligaments of the thigh are those of its articulation with the os innominatum; viz. — the ligamentum teres and capsulare. The artery is the femoral, a continuation of the external iliac. Its veins and absorbents are numerous, and run parallel with the artery. The nerves are formed by the lumbar and sacral, and are the ischiadic, the obturator, and the crural. The glands are the inguinal and synovial.

FENE'STRA. (*a, æ*. f.; from φαινω, *quasi phænestra*.) A window, entry, or hole.

Fenestra ovalis. An oblong or elliptical foramen, between the cavity of the tympanum and the vestibulum of the ear. It is shut by the stapes.

Fenestra rotunda. A round foramen, leading from the tympanum to the cochlea of the ear. It is covered by a membrane in the fresh subject.

FE'NNEL. See *Anethum fœniculum*.

Fennel, hog's. See *Peucedanum*.

FE'NUGREEK. See *Trigonella*.

FE'RINE. (*Ferinus*, savage or brutal.) A term occasionally applied to any malignant or noxious disease.

FERMENTA'TION. (*Fermentatio, onis*. f.; from *fermento*, to ferment.) When aqueous combinations of vegetable or animal substances are exposed to ordinary atmospherical temperatures, they speedily undergo spontaneous changes, to which the generic term of fermentation has been given. There are several circumstances required in order that fermentation may proceed: such are, 1. A certain degree of fluidity; thus, dry substances do not ferment at all. 2. A certain degree of heat. 3. The contact of air. Chemists, after Boerhaave, have distinguished three kinds of fermentation:—

1. The *vinous* or *spirituous*, which affords ardent spirit.

2. The *acetous*, which affords vinegar, or acetic acid.

3. The *putrid* fermentation, or putrefaction, which produces volatile alkali.

I. The conditions necessary for vinous fermentation are: 1. A saccharine mucilage. 2. A degree of fluidity slightly viscid. 3. A degree of heat between 55 and 65 of Fahrenheit. 4. A large mass, in which a rapid commotion may be excited. When these four conditions are united, the vinous fermentation takes place, and is known by the following characteristic phænomena: 1. An intestine motion takes place. 2. The bulk of the mixture then becomes augmented. 3. The transparency of the fluid is diminished by opake filaments. 4. Heat is generated. 5. The solid parts mixed with the liquor rise and float in consequence of the disengagement of elastic fluid. 6. A large quantity of carbonic acid gas is disengaged in bubbles. All these phænomena gradually cease in proportion as the liquor loses its sweet and mild taste, and it becomes brisk, penetrating, and capable of producing intoxication. In this manner, wine, beer, cider, &c. are made. All bodies which have undergone the spirituous fermentation are capable of passing on to the acid fermentation: but, although it is probable that the acid fermentation never takes place, before the body has gone through the spirituous fermentation, yet the duration of the first is frequently so short and imperceptible, that it cannot be ascertained. Besides the bodies which are proper for spirituous fermentation, this class includes all sorts of fæcula boiled in water.

II. The conditions required for the acid fermentation, are: 1. A heat from 70 to 85 degrees of Fahrenheit. 2. A certain degree of liquidity. 3. The presence of atmospheric

air. 4. A moderate quantity of fermentable matter. The phænomena which accompany this fermentation, are an intestine motion, and a considerable absorption of air. The transparent liquor becomes turbid, but regains its limpidity when fermentation is over. The fermented liquor now consists, in a great measure, of a peculiar acid, called the acetic acid, or vinegar. Not a vestige of spirit remains, it being entirely decomposed, but the greater the quantity of spirit in the liquor, previous to the fermentation, the greater will be the quantity of true vinegar obtained. As the ultimate constituents of vegetable matter are oxygene, hydrogene, and carbon ; and of animal matter, the same three principles with azote, we can readily understand that all the products of fermentation must be merely new compounds of these three or four ultimate constituents. Accordingly, 100 parts of real vinegar, or acetic acid, are resolvable, by Gay Lussac and Thénard's analysis, into 50·224 carbon + 46·911 hydrogene and oxygene, as they exist in water, + 2·863 oxygene in excess. In like manner, wines are all resolvable into the same ultimate components, in proportions somewhat different. The aëriform results of putrefactive fermentation are in like manner found to be hydrogene, carbon, oxygene, and azote variously combined, and associated with minute quantities of sulphur and phosphorus. The residuary matter consists of the same principles mixed with the saline and earthy parts of animal bodies.

Lavoisier was the first philosopher who instituted, on right principles, a series of experiments to investigate the phænomena of fermentation ; and they were so judiciously contrived, and so accurately conducted, as to give results comparable to those derived from the more rigid methods of the present day. Since then, Thénard and Gay Lussac have each contributed most important researches. By the labours of these three illustrious chemists, those material metamorphoses, formerly quite mysterious, seem susceptible of a satisfactory explanation.

As sugar is a substance of uniform and determinate composition, it has been made choice of for determining the changes which arise when its solution is fermented into wine or alkohol. Lavoisier justly regarded it as a true vegetable oxide, and stated its constituents to be, 8 hydrogene, 28 carbon, and 64 oxygene, in 100 parts. By two different analyses of Berzelius, we have,—

Hydrogene,	6·802	6·891
Carbon,	44·115	42·704
Oxygene,	49·083	50·405
	100·000	100·000

Gay Lussac and Thénard's analyses give,

Hydrogene,	6·90	57·53 water,
Oxygene	50·63	
Carbon,	42·47	42·47
	100·00	100·00

It has been said that sugar requires to be dissolved in at least 4 parts of water, and to be mixed with some yeast, to cause its fermentation to commence. But this is a mistake. Syrup stronger than the above will ferment in warm weather, without addition. If the temperature be low, the syrup weak, and no yeast added, acetous fermentation alone will take place. To determine the vinous, therefore, we must mix certain proportions of saccharine matter, water, and yeast, and place them in a proper temperature.

To observe the chemical changes which occur, we must dissolve 4 or 5 parts of pure sugar in 20 parts of water, put the solution into a matrass, and add 1 part of yeast. Into the mouth of the matrass a glass tube must be luted, which is recurved, so as to dip into the mercury of a pneumatic trough. If the apparatus be now placed in a temperature of from 70° to 80°, we shall speedily observe the syrup to become muddy, and a multitude of air bubbles to form all around the ferment. These unite, and attaching themselves to particles of the yeast, rise along with it to the surface, forming a stratum of froth. The yeasty matter will then disengage itself from the air, fall to the bottom of the vessel, to re-acquire buoyancy a second time by attached air bubbles, and thus in succession. If we operate on 3 or 4 ounces of sugar, the fermentation will be very rapid during the first ten or twelve hours; it will then slacken, and terminate in the course of a few days. At this period, the matter being deposited which disturbed the transparency of the liquor, this will become clear.

The following changes have now taken place:—1. The sugar is wholly, and the yeast partially, decomposed. 2. A quantity of alkohol and carbonic acid, together nearly in weight to the sugar, is produced. 3. A white matter is formed, composed of hydrogene, oxygene, and carbon, equivalent to about half the weight of the decomposed ferment. The carbonic acid passes over into the pneumatic apparatus; the alkohol may be separated from the vinous liquid by distillation, and the white matter falls down to the bottom of the matrass with the remainder of the yeast.

The quantity of yeast decomposed is very small. 100 parts of sugar require, for complete decomposition, only two and a half of that substance, supposed to be in a dry state. It is hence very probable, that the ferment, which has a strong affinity for oxygene, takes a little of it from the saccharine particles, by a part of its hydrogene and carbon, and thus the equilibrium being broken between the constituent principles of the sugar, these so react on each other, as to be transformed into alkohol and carbonic acid. If we consider the composition of alkohol, we shall find no difficulty in tracing the steps of this transformation.

Neglecting the minute products which the yeast furnishes in the act of fermentation, let us regard only the alkohol and carbonic acid. We shall then see, on comparing the compo-

sition of sugar to that of alkohol, that to transform sugar into alkohol, we must withdraw from it one volume of vapour of carbon, and one volume of oxygene, which form by their union one volume of carbonic acid gas. Finally, let us reduce the volumes into weights, we shall find, that 100 parts of sugar ought to be converted, during fermentation, into 51·55 of alkohol, and 48·45 of carbonic acid.

When it is required to preserve fermented liquors in the state produced by the first stage of fermentation, it is usual to put them into casks before the vinous process is completely ended; and in these closed vessels a change very slowly continues to be made for many months, and perhaps for some years.

But if the fermentative process be suffered to proceed in open vessels, more especially if the temperature be raised to 90 degrees, the acetous fermentation comes on. In this, the oxygene of the atmosphere is absorbed; and the more speedily in proportion as the surfaces of the liquor are often changed by lading it from one vessel to another. The usual method consists in exposing the fermented liquor to the air in open casks, the bunghole of which is covered with a tile to prevent the entrance of the rain. By the absorption of oxygene which takes place, the inflammable spirit becomes converted into an acid. If the liquid be then exposed to distillation, pure vinegar comes over instead of ardent spirit.

III. When the spontaneous decomposition is suffered to proceed beyond the acetous process, the vinegar becomes viscid and foul; air is omitted with an offensive smell; volatile alkali flies off; an earthy sediment is deposited; and the remaining liquid, if any, is mere water. This is the putrefactive process. See also *Putrefaction*.

FERME'NTUM. (*um, i.* n.; *quasi fervimentum,* from *ferveo,* to work.) Yeast.

Fermentum cerevisiæ. Yeast; barm: the scum which collects on beer while fermenting, and has the property of exciting that process in various other substances. Medicinally it is antiseptic and tonic; and has been found useful internally in the cure of typhus fever attended with an obvious tendency to putrefaction in the system, with petechiæ, vibices, and the like: the best way to administer it, is to mix a fluid ounce with seven of strong beer, and give three table-spoonsful to an adult every three or four hours. Externally, it is used in the fermenting cataplasm.

FERN. See *Filix, Pteris, Aspidium,* and *Polypodium.*

Fern, male. See *Aspidium filix mas.*

Fern, female. See *Pteris aquilina.*

Fern, mules. See *Asplenium hemonitis.*

FERNEL, John, was born near the end of the 15th century. His works are numerous on philosophical, as well as medical subjects: of the latter, the most esteemed were his *Medicina,* dedicated to Henry II., and a posthumous *Treatise on Fevers.*

Ferrame'ntum. An instrument made of iron.

Ferri alkalini liquor. Solution of alkaline iron. Take of iron, two drachms and a half; nitric acid, two fluid ounces; distilled water, six fluid ounces; solution of subcarbonate of potash, six fluid ounces. Having mixed the acid and water, pour them upon the iron, and when the effervescence has ceased, pour off the clear acid solution; add this gradually, and at intervals, to the solution of subcarbonate of potash, occasionally shaking it, until it has assumed a deep brown-red colour, and no further effervescence takes place. Lastly, set it by for six hours, and pour off the clear solution. This preparation was first described by Stahl, and called tinctura martis alkalina, and is now introduced in the London Pharmacopœia, as affording a combination of iron distinct from any other, and often applicable to practice. The dose is from half a drachm to a drachm.

Ferri carbonas. See *Ferri subcarbonas.*

Ferri limatura purificata. Purified iron filings. These possess tonic, astringent, and deobstruent virtues, and are calculated to relieve chlorosis, and other diseases in which steel is indicated, where acidity in the primæ viæ abounds.

Ferri rubigo. See *Ferri subcarbonas.*

Ferri subcarbonas. *Ferri carbonas; Ferrum præcipitatum;* formerly called *chalybis rubigo præparata,* and *ferri rubigo.* Subcarbonate of iron. Take of sulphate of iron, eight ounces; subcarbonate of soda, six ounces; boiling water, a gallon. Dissolve the sulphate of iron and subcarbonate of soda separately, each in four pints of water; then mix the solutions together and set it by, that the precipitated powder may subside; then having poured off the supernatant liquor, wash the subcarbonate of iron with hot water, and dry it upon bibulous paper in a gentle heat. It possesses mild corroborant and stimulating properties, and is exhibited with success in leucorrhœa, ataxia, asthenia, chlorosis, dyspepsia, rachitis, &c. Dose from two to ten grains.

Ferri sulphas. Sulphate of iron; formerly called, *sal martis, vitriolum martis, vitriolum ferri,* and *ferrum vitriolatum.* Green vitriol. Take of iron, sulphuric acid, of each by weight, eight ounces; water, four pints. Mix together the sulphuric acid and water in a glass vessel, and add thereto the iron; then, after the effervescence has ceased, filter the solution through paper, and evaporate it until crystals form as it cools. Having poured away the water, dry these upon bibulous paper. This is an excellent preparation of iron, and is exhibited, in many diseases, as a styptic, tonic, astringent, and anthelmintic. Dose from one grain to five grains.

FERRO-CHYAZIC. (*Ferro-chyazicus:* so called from ferrum and chyazium, of which it is composed.) Appertaining to the compound of this name.

Ferro chyazic acid. *Acidum ferro-chyazicum.* An acid obtained by adding to a solution of ferro-cyanite of barytes, sulphuric acid just enough to precipitate the barytes. It

has a pale yellow colour, no smell, and is decomposed by gentle heat or strong light, in which case hydrocyanic acid is formed, and white hydrocyanite of iron is deposited, which becomes blue by exposure.

FERRO-CYANATE. *Ferro-cyianus.* A compound of ferro-prussic acid with salifiable bases.

FERRO-CYANIC. (*Ferro-cyanicus:* so called from its constituents.) Of or belonging to the compound of ferrum and cyanium.

Ferro-cyanic acid. See *Ferro-prussic acid.*

FERRO-PRUSSIC. (*Ferro-prussicus:* so called from its being prussic acid with iron.) Of or belonging to the compound of iron and prussic acid.

Ferro-prussic acid. *Acidum ferro-prussicum. Acidum ferro-cyanicum.* Into a solution of the amber-coloured crystals, usually called prussiate of potash, pour hydro-sulphuret of barytes, as long as any precipitate falls. Throw the whole on a filter, and wash the precipitate with cold water. Dry it; and having dissolved 100 parts in cold water, add gradually thirty of concentrated sulphuric acid; agitate the mixture, and set it aside to repose. The supernatant liquid is ferro-prussic acid, called by Porrett, who had the merit of discovering it, *ferruretted chyazic acid.*

It has a pale lemon-yellow colour, but no smell. Heat and light decompose it. Hydrocyanic acid is then formed, and white ferro-prussiate of iron, which soon becomes blue. Its affinity for the bases enables it to displace acetic acid, without heat, from the acetates, and to form ferroprussiates.

FERRUGINEUS. 1. Appertaining to iron.

2. A yellowish brown colour, like the rust of iron.

FE'RRUM. (*um, i.* n.; the etymology uncertain.) See *Iron.*

Ferrum ammoniatum. Ammoniated iron; formerly known by the names of *flores martiales; flores salis ammoniaci martiales; ens martis; ens veneris Boylei; sal martis muriaticum sublimatum;* and, lately, by the title of *ferrum ammoniacale.* Take of subcarbonate of iron, muriate of ammonia, of each a pound. Mix them intimately, and sublime by immediate exposure to a strong fire; lastly, reduce the sublimed ammoniated iron to powder. This preparation is astringent and deobstruent, in doses from three tó fifteen grains, or more, in the form of bolus or pills, prepared with some gum. It is exhibited in most cases of debility, in chlorosis, asthenia, menorrhagia, intermittent fevers, &c. This or some other strong preparation of iron, as the Tinct. ferri muriatis, Mr. Cline recommended in scirrhous affections of the breast. See *Tinctura ferri ammoniati.*

Ferrum salitum. An old name of the muriate of iron.

Ferrum tartarizatum. Tartarized iron. A tartrate of potash and iron; formerly called *tartarus chalybeatus; mars solubilis; ferrum potabile.* Take of iron, a pound; supertartrate of potash, powdered, two pounds; water, a pint. Rub them together; and expose them to the air in a broad glass vessel for eight days, then dry the residue in a sand bath, and reduce it to a very fine powder. Add to this powder a pint more water, and expose it for eight days longer, then dry it, and reduce it to a very fine powder. Its virtues are astringent and tonic, and it forms in solution an excellent tonic fomentation to contusions, lacerations, distortions, &c. Dose from ten grains to half a drachm.

Ferruretted chyazic acid. See *Ferro-prussic acid.*

Fersæ. The measles.

FERTILE. *Fertilis.* Fruitful. Applied,

1. In *Physiology,* to women, and the female of brute animals, which are prolific.

2. In *Botany,* to a flower, called *flos fertilis* and *femineus,* when it produces a seed capable of vegetation, which is generally the case in flowers which have both stamens and pistils. Flowers that have only stamens never can produce seeds, and flowers that have only pistils must be barren, if they are so situated as to be out of reach of the pollen from the anthers of the staminiferous flowers: in some instances they will, indeed, produce seeds to all appearance perfect, but these seeds will never vegetate.

Fertile flower. See *Flos.*

FE'RULA. (*a, æ.* f.; a staff, which it resembles: so called *à feriendo.*) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Ferula africana galbanifera. The galbanum plant. See *Bubon galbanum.*

Ferula assafœtida. The systematic name of the assafœtida plant. *Assafœtida. Hingiseh* of the Persians. *Altiht* of the Arabians. By some thought to be the σιλφιον, vel οπος σιλφιου, of Dioscorides, Theophrastus, and Hippocrates. *Laser et laserpitium,* of the Latins. *Ferula assafœtida—foliis alternatim sinuatis, obtusis,* of Linnæus. This plant, which affords us the assafœtida of the shops, grows plentifully on the mountains in the provinces of Chorassan and Laar, in Persia.

The process of obtaining it is as follows: the earth is cleared away from the top of the roots of the oldest plants; the leaves and stalks are then twisted away, and made into a covering, to screen the root from the sun: in this state the root is left for forty days, when the covering is removed, and the top of the root cut off transversely; it is then screened again from the sun for forty-eight hours, when the juice it exudes is scraped off, and exposed to the sun to harden. A second transverse section of the root is made, and the exudation suffered to continue for forty-eight hours, and then scraped off. In this manner it is eight times repeatedly collected in a period of six weeks. The juice thus obtained has a bitter, acrid, pungent taste, and is well known by its peculiar nauseous smell, the strength of which is the surest test of its goodness. This odour

is extremely volatile, and of course the drug loses much of its efficacy by keeping. It is brought to us in large irregular masses, composed of various little shining lumps, or grains, which are partly of a whitish colour, partly reddish, and partly of a violet hue. Those masses are accounted the best which are clear, of a pale reddish colour, and variegated with a great number of elegant white tears. This concrete juice consists of two thirds of gum, and one third of resin and volatile oil, in which its taste and smell reside. It yields all its virtues to alkohol. Triturated with water, it forms a milk-like mixture, the resin being diffused by the medium of the gum. Distilled with water, it affords a small quantity of essential oil. It is the most powerful of all the fœtid gums, and is a most valuable remedy. It is most commonly employed in hysteria, hypochondriasis, some symptoms of dyspepsia, flatulent colics, and in most of those diseases termed nervous, but its chief use is derived from its antispasmodic effects; and it is thought to be the most powerful remedy we possess for those peculiar convulsive and spasmodic affections which often recur in the first of these diseases, both taken into the stomach and in the way of enema. It is also recommended as an emmenagogue, anthelmintic, antiasthmatic, and anodyne. Dr. Cullen prefers it as an expectorant to gum ammoniacum. Where we wish it to act immediately as an antispasmodic, it should be used in a fluid form, as that of tincture, from half a drachm to two drachms. When given in the form of a pill, or triturated with water, its usual dose is from five to twenty grains. When in the form of enema, one or two drachms are to be diffused in eight ounces of warm milk or water. It is sometimes applied externally as a plaster and stimulating remedy, in hysteria, &c.

Ferula minor. All-heal of Æsculapius; probably the *heracleum*.

Feruła'cca. See *Bubon galbanum*.

FEVER. See *Febris*.

Fever, continued. See *Febris continua*.

Fever, hectic. See *Hectic fever*.

Fever, inflammable. See *Synocha*.

Fever, intermittent. See *Ague*.

Fever, nervous. See *Nervous fever*.

Fever, putrid. See *Typhus fever*.

Fever, remittent. See *Remittent fever*.

Fever, scarlet. See *Scarlet fever*.

FEVERFEW. See *Matricaria*.

FI'BER. (*er, ri.* m.; from *fiber*, extreme: because it resides in the extremities of lakes and rivers.) The beaver. See *Castor fiber*.

FIBRE. (*Fibra, æ.* f.; from the adjective *fiber*, *i. e.* extreme.) A very simple filament. It is owing to the difference in the nature and arrangements of the fibres that the structure of the several parts of animals and vegetables differ: hence the barks, woods, leaves, &c. of vegetables, and the cellular structure, membranes, muscles, vessels, nerves, and, in short, every part of the body, has its fibres variously constituted and arranged, so as to form these different parts.

Fibre, muscular. See *Muscular fibre*.

FIBRIL. (*Fibrila*, diminutive of *fibra*.) A small thread-like fibre: applied to the little roots which are given off from radicles.

FI'BRIN. A peculiar organic compound found both in vegetables and animals. It is procured, however, in its most characteristic state from animal matter. It exists in chyle; it enters into the composition of blood; of it the chief part of muscular flesh is formed; and hence it may be regarded as the most abundant constituent of the soft solids of animals.

To obtain it, we may beat blood as it issues from the veins with a bundle of twigs. Fibrin soon attaches itself to each stem, under the form of long reddish filaments, which become colourless by washing them with cold water. It is solid, white, insipid, without smell, denser than water, and incapable of affecting the hue of litmus or violets. When moist it possesses a species of elasticity; by desiccation it becomes yellowish, hard, and brittle. By distillation we can extract from it much carbonate of ammonia, some acetate, a fœtid brown oil, and gaseous products; while there remains in the retort a very luminous charcoal, very brilliant, difficult of incineration, which leaves, after combustion, phosphate of lime, a little phosphate of magnesia, carbonate of lime, and carbonate of soda.

Cold water has no action on fibrin. Treated with boiling water, it is so changed as to lose the property of softening and dissolving in acetic acid. The liquor filtered from it yields precipitates with infusion of galls, and the residue is white, dry, hard, and of an agreeable taste.

FIBROLITE. A crystallised mineral, harder than quartz, of a white or grey colour, found in the Carnatic, and composed of alumina, silica, and iron.

FIBROUS. (*Fibrosus*; from *fibra*, a fibre.) A term frequently used, in *Anatomy*, to express the texture of parts. In *Botany*, its meaning is the same, and is applied to roots and other parts; as those of grasses, &c.

FI'BULA. (*a, æ.* f.; *quasi figibula*; from *figo*, to fasten: so named because it joins together the tibia and the muscles.) A long bone of the leg, situated on the outer side of the tibia, and which forms, at its lower end, the outer ankle. Its upper extremity is formed into an irregular head, on the inside of which is a slightly concave articulating surface, which, in the recent subjects, is covered with cartilage, and receives the circular flat surface under the edge of the external cavity of the tibia. This articulation is surrounded by a capsular ligament, which is farther strengthened by other strong ligamentous fibres, so as to allow only a small motion backwards and forwards. Externally, the head of the fibula is rough and protuberant, serving for the attachment of ligaments, and for the insertion of the biceps cruris muscle. Immediately below it, on its inner side, is

a tubercle, from which a part of the gastrocnemius internus has its origin. Immediately below this head the body of the bone begins. It is of a triangular shape, and appears as if it were slightly twisted at each end, in a different direction. It is likewise a little curved inwards and forwards. This curvature is in part owing to the action of muscles; and in part, perhaps, to the carelessness of nurses. Of the three angles of the bone, that which is turned towards the tibia is the most prominent, and serves for the attachment of the interosseous ligament, which, in its structure and uses, resembles that of the fore-arm, and, like that, is a little interrupted above and below. The three surfaces of the bone are variously impressed by different muscles. About the middle of the posterior surface is observed a passage for the medullary vessels, slanting downwards. The lower end of the fibula is formed into a spongy, oblong head, externally rough and convex, internally smooth, and covered with a thin cartilage, where it is received by the external triangular depression at the lower end of the tibia. This articulation, which resembles that of its upper extremity, is furnished with a capsular ligament, and farther strengthened by ligamentous fibres, which are stronger and more considerable than those before described. They extend from the tibia to the fibula, in an oblique direction, and are more easily discernible before than behind. Below this the fibula is lengthened out, so as to form a considerable process, called *malleolus externus*, or the outer ankle. It is smooth, and covered with cartilage on the inside, where it is contiguous to the astragalus, or first bone of the foot. At the lower and inner part of this process, there is a spongy cavity, filled with fat; and a little beyond this, posteriorly, is a cartilaginous groove, for the tendons of the peroneus longus and peroneus brevis, which are here bound down by the ligamentous fibres that are extended over them.

The principal uses of this bone seem to be, to afford origin and insertion to muscles, and to contribute to the articulation of the leg with the foot.

FICA'RIA. (*a, æ.* f.; from *ficus*, a fig, so called from its likeness.) See *Ranunculus ficaria.*

FICA'TIO. (From *ficus*, a fig.) A tuberculous disease, near the anus and pudenda.

FICOIDE'A. (*a, æ.* f.; from *ficus*, a fig, and *ειδος*, resemblance: resembling a fig.) See *Sempervivum tectorium.*

FICOIDES. (From *ficus*, a fig, and *ειδος*, resemblance.) Fig-like.

FI'CUS. (*us, i.* f.; and *us, ûs.* f.) 1. A fleshy substance about the anus, in figure resembling a fig.

2. The name of a genus of plants in the Linnæan system. Class, *Polygamia*; Order, *Diœcia.* The fig-tree.

FICUS CARICA. The systematic name of the fig-tree; called also, *Carica, Ficus vulgaris*, and *Ficus communis.* Συκη of the Greeks. French figs are, when completely ripe, soft, succulent, and easily digested, unless eaten in immoderate quantities, when they are apt to occasion flatulency, pain of the bowels, and diarrhœa. The dried fruit, which is sold in our shops, is pleasanter to the taste, and more wholesome and nutritive. They are directed in the *decoctum hordei compositum*, and in the *confectio sennæ.* Applied externally, they promote the suppuration of tumours; hence they have a place in maturating cataplasms; and are very convenient to apply to the gums, and, when boiled with milk, to the throat.

FICUS INDICA. See *Lacca.*

Fiddle-shaped. See *Panduriformis.*

FIDICINA'LIS. See *Lumbricales.*

FIENUS, THOMAS, of Antwerp, was born in 1567. Besides his great abilities in medicine and surgery, he was distinguished for his knowledge of natural history, the learned languages, and the mathematics. He has left several works; the chief of which is termed "Libri Chirurgici XII.," treating of the principal operations: it passed through many editions. His father, *John*, was author of a well-received treatise, "De Flatibus."

FIG. See *Ficus carica.*

FIGURESTONE. A massive mineral of a grey colour, or brown flesh-red, and sometimes spotted, or with blue veins; unctuous to the touch, and yielding to the nail. It comes from China, cut into grotesque figures. It differs from steatite in wanting the magnesia. It is also found in Transylvania, and in Wales.

Figwort. See *Ranunculus ficaria*, and *Scrophularia.*

Figwort, great water. See *Scrophularia.*

FILA'GO. (*ago, aginis.* f.; from *filum*, a thread, and *ago*, to produce or have to do with: in allusion to the cottony web connected with every part of the plant.) A genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia necessaria.* Cud or cotton weed.

FILAGO LEONTOPODIUM. The herb lion's-foot, formerly used in the cure of diseases but now fallen into disuse.

FILAGO PIGMÆA. This plant is sometimes used as an astringent.

FI'LAMENT. (*Filamentum*; from *filum*, a thread.) 1. Applied, in *Anatomy*, to a small thread-like portion adhering to any part, and frequently synonymous with fibre. See *Fibre.*

2. In *Botany*, to the *stamen* of a flower, which consists of the filaments, anther, and pollen. The filament is the column which supports the anther.

From its *figure* the filament is called,

1. *Capillary*; as in plantago.
2. *Filiform*; as in scilla maritima.
3. *Flat*; as in allium cepa.
4. *Dilatate*, spreading laterally; as in ornithogalum umbellatum.
5. *Pedicellate*, affixed transversely to a little stalk; as in salvia.
6. *Bifid*, having two; as in stemodia.
7. *Bifurced*; as in prunella.

8. *Multifid;* as in carolina princeps.
9. *Dentate;* as in rosmarinus officinalis.
10. *Nicked;* as in allium cepa.
11. *Lanceolate;* as in ornithogalum pyrenaicum.
12. *Castrate,* the anther naturally wanting; as in gratiola officinalis.
13. *Subulate;* as in tulipa gesneriani.

From the *pubescence,*—

1. *Barbate,* bearded; as in lycium.
2. *Lanate,* woolly; as in verbascum thapsus.
3. *Pilose;* as in anthericum frutescens.
4. *Gland-bearing;* as in laurus and rheum.

From its *direction,*—

1. *Erect;* as in tulipa gesneriana.
2. *Incurved;* curved inward.
3. *Declinate;* as in hemerocalis fulva.
4. *Connivent;* as in physalis alkekengi.

From its *concretion,*—

1. *Liberate,* free, no where adhering; as in nicotiana tabacum.
2. *Connate,* adhering at their base; as in malva sylvestris, and alcea rosea.

From its *insertion,*—

1. *Receptaculine,* inserted into the receptaculum; as in papaver somniferum.
2. *Corolline;* as in verbascum thapsus, and nerium oleander.
3. *Calicine;* as in pyrus malus, and mespilus germanica.
4. *Styline;* as in the orchides.
5. *Nectorine;* as in pancratium declinatum.

From its length, it is said to be,

1. Very *long;* as in plantago major.
2. Very *short;* as in jasminum, and vinca.
3. *Unequal,* some long, some short; as in cheiranthus cheiri.

FILARIA. (*a, æ.* f.) The name of a genus of worms in Rudolphi's classification.

Filaria medinensis. The systematic name of a curious animal; called also, *Vermis medinensis, Vena medinensis, Vermiculus capillaris, Dracunculus,* the muscular hair worm, and the Guinea worm. This animalcule is common in both Indies, in most parts of Africa, occasionally at Genoa, and other hot countries. It resembles the common worm, but is much larger; is commonly found in the legs, but sometimes in the muscular part of the arms. It principally affects children, and its generation is not unlike that of the broad worms of the belly. While it moves under the skin, it creates no trouble; but, in length of time, the place near the dracunculus suppurates, and the animal puts forth its head. If it be drawn, it excites considerable uneasiness, especially if drawn so forcibly as to break it; for the part left within creates intolerable pain. These worms are of different lengths. In the Edin. Med. Essays, mention is made of one that was three yards and a half in length.

File'llum. (From *filum,* a thread; because it resembles a string.) The frænum of the penis and tongue.

File'tum. (From *filum,* a thread; named from its string-like appearance.) The frænum of the tongue and penis.

Filices. (The plural of *filix.*) Ferns. One of the families, or natural tribes, into which the whole vegetable kingdom is divided. They are defined plants which bear their flower and fruit on the back of the leaf or stalk, which is termed *frons.*

FILI'CULA. (*a, æ.* f.; diminutive of *filix,* fern; a small sort of fern: or from *filum,* a thread, which it resembles.) See *Adianthum capillus veneris.*

FILIFORMIS. Filiform: thread-like. Applied to many parts of animals and vegetables from their resemblance; as the leaves of the *Fœniculum dulce,* the style of the *Crocus sativus,* and *Lonicera periclimenum.*

FILIPE'NDULA. (*a, æ.* f.; from *filum,* a thread, and *pendeo,* to hang: so named because the numerous bulbs of its roots hang, as it were, by small threads.) See *Spiræa filipendula.*

Filipendula aquatica. Water-dropwort; the *Œnanthe fistulosa* of Linnæus.

Filius ante patrem. Any plant, the flower of which comes out before the leaf; as coltsfoot.

FI'LIX. (*ix, icis.* f.; in plural, *filices;* from *filum,* a thread: so called from its being cut, as it were, in slender portions, like threads.) Fern. See *Polypodium.*

Filix aculeata. See *Polypodium.*

Filix florida. See *Osmunda regalis.*

Filix fœmina. See *Pteris aquilina.*

Filix mas. See *Aspidium filix mas.*

FILTRA'TION. (*Filtratio;* from *filtrum,* a strainer.) An operation, by means of which a fluid is mechanically separated from consistent particles merely mixed with it. It does not differ from straining.

An apparatus fitted up for this purpose is called a filter. The form of this is various, according to the intention of the operator. A piece of tow, or wool, or cotton, stuffed into the pipe of a funnel, will prevent the passage of grosser particles, and by that means render the fluid clearer which comes through. Sponge is still more effectual. A strip of linen rag, wetted and hung over the side of a vessel containing a fluid, in such a manner as that one end of the rag may be immersed in the fluid, and the other end may remain without, below the surface, will act as a syphon, and carry over the clearer portion. Linen or woollen stuffs may either be fastened over the mouths of proper vessels, or fixed to a frame, like a sieve, for the purpose of filtering. All these are more commonly used by cooks and apothecaries than by philosophical chemists, who, for the most part, use the paper called cap paper, made up without size.

As the filtration of considerable quantities of fluid could not be effected at once without breaking the filter of paper, it is found requisite to use a linen cloth, upon which the paper is applied and supported.

Precipitates and other pulverulent matters are collected more speedily by filtration than by subsidence. But there are many chemists who disclaim the use of this method, and avail

themselves of the latter only, which is certainly more accurate, and liable to no objection, where the powders are such as will admit of edulcoration and drying in the open air.

Some fluids, as turbid water, may be purified by filtering through sand. A large earthen funnel, or stone bottle with the bottom beaten out, may have its neck loosely stopped with small stones, over which smaller may be placed, supporting layers of gravel increasing in fineness, and lastly covered to the depth of a few inches with fine sand all thoroughly cleansed by washing. This apparatus is superior to a filtering stone, as it will cleanse water in large quantities, and may readily be renewed when the passage is obstructed, by taking out and washing the upper stratum of sand.

A filter for corrosive liquors may be constructed, on the same principles, of broken and pounded glass.—*Ure's Chem. Dict.*

FI'LTRUM. A filter, or straining or filtering instrument.

FILUM. (*um, i.* n.) A thread or filament.

FILUM ARSENICALE. Corrosive sublimate.

FI'MBRIA. (*a, æ.* f.; a fringe: *quasi fimbria;* from *finis*, the extremity.) A fringe.

1. A term used by anatomists to a curled membraneous production at the extremities of the Fallopian tubes.

2. In *Botany*, it is applied to the dentate or fringe-like ring of the operculum of mosses, by the elastic power of which the operculum is displaced. See *Peristomium.*

FIMBRIATUS. See *Ciliatus.*

FINCKLE. See *Anethum fœniculum.*

Fingered. See *Digitatus.*

FIORITE. See *Pearl sinter.*

FIR. See *Pinus.*

Fir, Canada. See *Pinus balsamea.*

Fir, Norway spruce. See *Pinus abies.*

Fir, Scotch. See *Pinus sylvestris.*

Fir, silver. See *Pinus picea.*

Fir, spruce. See *Pinus picea.*

Fir-balsam. See *Pinus balsamea.*

FIRE. See *Ignis.*

FIRM. See *Compact.*

FIRMI'SIUM MINERALIUM. Antimony.

FISCHER, JOHN ANDREW, born in 1667. Among several minor works he was author of some of greater importance; as the *Consilia Medica*, in three volumes; the *Responsa Practica*, and a Synopsis of Medicine, facetiously termed *Illias in Nuce.*

FISH. *Pisces.* In *Zoology*, a class of animals which have either a naked or scaly body, always having fins, but without feet.

FISH-GLUE. See *Ichthyocolla.*

FISSURA. (*a, æ.* f.; from *findo*, to cleave or crack.) A fissure. 1. That species of fracture in which the bone is slit, but not completely divided.

2. A name given to a deep and long depression in a part.

FISSURA MAGNA SYLVII. The anterior and middle lobes of the cerebrum on each side are parted by a deep narrow sulcus, which ascends obliquely backwards from the temporal ala of the os sphenoides, to near the middle of the os parietale, and this sulcus is thus called.

FISSUS. Cleft; cloven. In *Botany*, applied to leaves and pods, *folia fissa*, that are, as it were, cut into fissures or straight segments. See *Leaf.*

Fistic-nut. See *Pistachia vera.*

FI'STULA. (*a, æ.* f.; *quasi fusula*, from *fundo*, to pour out; or from its similarity to a pipe, or reed.) A long and sinuous ulcer that has a narrow opening, and which sometimes leads to a larger cavity, and has no disposition to heal.

FISTULA CIBALIS. The œsophagus.

FISTULA'RIA. (*a, æ.* f.; from *fistula*, a pipe: so called because its stalk is hollow.) Staves-acre. See *Delphinium staphisagria.*

FISTULOUS. *Fistulosus.* Hollow.

FIXED. *Fixus.* In *Chemistry*, applied to those substances which cannot be caused to pass by a strong rarefaction from the solid or liquid state of an elastic fluid.

Fixed air. See *Carbonic acid.*

FIXITY. The property by which bodies resist the action of heat, so as not to rise in vapour.

FLABELLIFORM. (*Flabelliformis;* from *flabellum*, a fan, and *forma*, likeness.) Fan-like: formerly applied to leaves.

FLACCID. *Flaccidus.* Feeble; limber.

FLAG. The name of leaves and flowers which are long and flag-shaped.

Flag, sweet. See *Acorus.*

Flag, water. See *Iris pseudacorus.*

Flag, yellow-water. See *Iris.*

FLAGELLIFORM. *Flagelliformis.* Whip-like. A term applied to a stem that is long and pliant, whip-like; as that of jasmine and blue boxthorn. See *Caulis.*

FLAGELLUM. (*um, i.* n.; diminutive of *flagrum*, a whip.) A runner, or a twig, which runs out long and slender; as that of the strawberry.

Flake-white. Oxide of bismuth.

FLA'MMULA. (*a, æ.* f.; dim. of *flamma*, a fire: named from the burning pungency of its taste.) See *Ranunculus flammula.*

FLAMMULA JOVIS. See *Clematis recta.*

FLATULENCY. By this is understood a morbid collection of gas in the stomach and bowels. Mr. Hunter supposed, and late experiments prove the truth of his opinion, that gaseous fluids are secreted from the mouths of the secernents into certain cavities in which it is found. This is one way in which a flatulent state of the stomach and bowels is produced; but the most common way is by a fermentation, or chemical separation from the materials introduced into the stomach in the form of food. When the fluids which are poured naturally into the stomach are secreted in a healthy state, they tend to prevent this: but when, from imbecility of the stomach, or its consociate viscera, they are secreted in a dilute or other imperfect state, they lose their corrective power, fermentation rapidly commences, and the stomach is overloaded, distended, and sometimes ready to burst with

gas that is hereby let loose, relief being only obtained by frequent *eructation*, or rejection upwards, *crepitation*, or rejection downwards; or its combining loosely with such fluids as may exist in the large intestines, where it often rolls about in an ascending or descending direction, according to the action of the abdominal muscles—sometimes with a rumbling sound, where the intestinal fluid is but small in quantity; and sometimes, when it is considerable, with a gurgling noise, like air rushing into a bottle as the water contained in it is poured out, and hence by the Greeks denominated borborygmus.

The quantity of gas formed in the stomach and bowels is sometimes prodigious. It appears from the experiments of Dr. Hales, that one apple, during fermentation, will give above six hundred times its bulk in gas; and we know that many of the vegetable materials introduced into the stomach possess far more ventosity than apples. Flatulency is often a symptom of other diseases, especially indigestion, colic, cholera, hysteria, and hypochondriasis. For the cure of this disease, carminatives, aperients, and tonics are resorted to; as the spicy fruits and verticillate carminatives: nutmegs, cardamoms, pimenta, pepper, capsicum, camphire, peppermint, spearmint, cinnamon, rosemary, lavender, penny-royal, &c. The essential oils or dilute essences may be formed into pills and draughts. If these do not succeed, æthereal preparations and warm tonics should be given, and the strictest attention paid to the diet, in which all oleraceous vegetables, and all kinds of peas, beans, and flatulent fruits should be avoided; also, large libations of fluids. The diet should consist of roasted and boiled, or broiled old meats, with peppers, and good brandy amply diluted at dinner.

FLATUS. Wind. See *Flatulency*.

FLAVESCENS. Yellowish, or pale whitish yellow.

FLAVO-VIRENS. A yellowish green.

FLAVUS. Yellow. See *Colour*.

FLAX. See *Linum*.

Flax, purging. See *Linum catharticum*.

Flax, spurge. See *Daphne gnidium*.

Flax-leaved daphne. See *Daphne gnidium*.

FLEABANE. See *Inula dysenterica*.

FLEA-WORT. See *Plantago psyllium*.

FLE'MEN. (From *flecto*, to incline downwards.) A swelling about the ankles.

FLERE'SIN. Gout.

FLESH. 1. The muscles of an animal.

2. All the soft parts of an animal.

3. Those leaves, fruit, &c. which have the consistence of flesh. See *Carnosus*.

FLESHY. See *Carnosus*.

FLEXIBLE. *Flexilis*. Readily bending without breaking.

FLE'XOR. The name of several muscles, the office of which is to bend parts into which they are inserted.

Flexor accessorius digitorum pedis. See *Flexor longus digitorum pedis*.

Flexor brevis digitorum pedis, perforatus, sublimis. A flexor muscle of the toes, situated on the foot. *Flexor brevis digitorum pedis, perforatus*, of Albinus. *Flexor brevis*, of Douglas. *Flexor digitorum brevis, sive perforatus pedis*, of Winslow. *Perforatus, seu flexor secundi internodii digitorum pedis*, of Cowper. It arises by a narrow, tendinous, and fleshy beginning, from the inferior protuberance of the os calcis. It likewise derives many of its fleshy fibres from the adjacent aponeurosis, and soon forms a thick belly, which divides into four portions. Each of these portions terminates in a flat tendon, the fibres of which decussate, to afford a passage to a tendon of the long flexor, and afterwards re-uniting, are inserted into the second phalanx of each of the four lesser toes. This muscle serves to bend the second joint of the toes.

Flexor brevis minimi digiti pedis. *Parathenar minor*, of Winslow. This little muscle is situated along the inferior surface and outer edge of the metatarsal bone of the little toe. It arises tendinous from the basis of that bone, and from the ligaments that connect it to the os cuboides. It soon becomes fleshy, and adheres almost the whole length of the metatarsal bone, at the anterior extremity of which it forms a small tendon, that is inserted into the root of the first joint of the little toe. Its use is to bend the little toe.

Flexor brevis pollicis manus. *Flexor secundi internodii*, of Douglas. *Thenar*, of Winslow. *Flexor primi et secundi ossis pollicis*, of Cowper. This muscle is divided into two portions by the tendon of the flexor longus pollicis. The outermost portion arises tendinous from the anterior part of the os trapezoides and internal annular ligament. The second, or innermost, and thickest portion, arises from the same bone, and likewise from the os magnum, and os cuneiforme. Both these portions are inserted tendinous into the sesamoid bones of the thumb. The use of this muscle is to bend the second joint of the thumb.

Flexor brevis pollicis pedis. A muscle of the great toe, that bends the first joint of that part. *Flexor brevis*, of Douglas. *Flexor brevis pollicis*, of Cowper. It is situated upon the metatarsal bone of the great toe, arises tendinous from the under and anterior part of the os calcis, and from the under part of the os cuneiforme externum. It soon becomes fleshy and divisible into two portions, which do not separate from each other till they have reached the anterior extremity of the metatarsal bone of the great toe, where they become tendinous, and then the innermost portion unites with the tendon of the abductor, and the outermost with that of the abductor pollicis. They adhere to the external os sesamoideum, and are finally inserted into the root of the first joint of the great toe. These two portions, by their separation, form a groove, in which passes the tendon of the flexor longus pollicis.

Flexor carpi radialis. A long thin muscle, situated obliquely at the inner and

anterior part of the fore-arm, between the palmaris longus and the pronator teres. *Radialis internus*, of Albinus and Winslow. It arises tendinous from the inner condyle of the os humeri, and, by many fleshy fibres, from the adjacent tendinous fascia. It descends along the inferior edge of the pronator teres, and terminates in a long, flat, and thin tendon, which afterwards becomes narrower and thicker, and, after passing under the internal annular ligament, in a groove distinct from the other tendons of the wrist, it spreads wider again, and is inserted into the fore and upper part of the metacarpal bone that sustains the fore-finger. It serves to bend the hand, and its oblique direction may likewise enable it to assist in its pronation.

Flexor carpi ulnaris. *Ulnaris internus*, of Winslow and Albinus. A muscle situated on the cubit or fore-arm, that assists in bending the arm. It arises tendinous from the inner condyle of the os humeri, and, by a small fleshy origin, from the anterior edge of the olecranon. Between these two portions, we find the ulnar nerve passing to the fore-arm. Some of its fibres arise, likewise, from the tendinous fascia that covers the muscles of the fore-arm. In its descent, it soon becomes tendinous, but its fleshy fibres do not entirely disappear till it has reached the lower extremity of the ulna, where its tendon spreads a little, and after sending off a few fibres to the external and internal and annular ligaments, is inserted into the os pisiforme.

Flexor longus digitorum pedis profundus perforans. A flexor muscle of the toes, situated along the posterior part and inner side of the leg. *Perforans seu flexor profundus*, of Douglas. *Flexor digitorum longus, sive perforans pedis*, and *perforans seu flexor tertii internodii digitorum pedis*, of Cowper. It arises fleshy from the back part of the tibia, and, after running down to the internal ankle, its tendon passes under a kind of annular ligament, and then through a sinuosity at the inside of the os calcis. Soon after this it receives a small tendon from the flexor longus pollicis pedis, and about the middle of the foot it divides into four tendons, which pass through the slits of the flexor brevis digitorum pedis, and are inserted into the upper part of the last bone of all the lesser toes. About the middle of the foot, this muscle unites with a fleshy portion, which, from the name of its first describer, has been usually called *massa carnea Jacobi Sylvii*: it is also termed *Flexor accessorius digitorum pedis*. This appendage arises by a thin fleshy origin, from most part of the sinuosity of the os calcis, and likewise by a thin tendinous beginning from the anterior part of the external tubercle of that bone; it soon becomes all fleshy, and unites to the long flexor just before it divides into its four tendons. The use of this muscle is to bend the last joint of the toes.

Flexor longus pollicis manus. *Flexor longus pollicis*, of Albinus. *Flexor tertii internodii*, of Douglas; *Flexor tertii internodii sive longissimus pollicis*, of Cowper. A muscle of the thumb, placed at the side of the flexor longus digitorum, profundus, perforans, and covered by the extensores carpi radiales. It arises fleshy from the anterior surface of the radius, immediately below the insertion of the biceps, and is continued down along the oblique ridge, which serves for the insertion of the supinator brevis, as far as the pronator quadratus. Some of its fibres spring, likewise, from the neighbouring edge of the interosseous ligament. Its tendon passes under the internal annular ligament of the wrist, and, after running along the inner surface of the first bone of the thumb, between the two portions of the flexor brevis pollicis, goes to be inserted into the last joint of the thumb, being bound down in its way by the ligamentous expansion that is spread over the second bone. In some subjects we find a tendinous portion arising from the inner condyle of the os humeri, and forming a fleshy slip that commonly terminates near the upper part of the origin of this muscle from the radius. The use of this muscle is to bend the last joint of the thumb.

Flexor longus pollicis pedis. A muscle of the great toe, situated along the posterior part of the leg. It arises tendinous and fleshy a little below the head of the fibula, and its fibres continue to adhere to that bone almost to its extremity. A little above the heel it terminates in a round tendon, which, after passing in a groove formed at the posterior edge of the astragalus, and internal and lateral part of the os calcis, in which it is secured by an annular ligament, goes to be inserted into the last bone of the great toe, which it serves to bend.

Flexor ossis metacarpi pollicis. *Opponens pollicis*, of Innes. *Opponens pollicis manus*, of Albinus. *Flexor primi internodii*, of Douglas. *Antithenar sive semi-interosseus pollicis*, of Winslow. A muscle of the thumb, situated under the abductor brevis pollicis, which it resembles in its shape. It arises tendinous and fleshy from the os scaphoides, and from the anterior and inner part of the internal annular ligament. It is inserted tendinous and fleshy into the under and anterior part of the first bone of the thumb. It serves to turn the first bone of the thumb upon its axis, and at the same time to bring it inwards opposite to the other fingers.

Flexor parvus minimi digiti. *Abductor minimi digiti, Hypothenar Riolani*, of Douglas. *Hypothenar minimi digiti*, of Winslow. A muscle of the little finger, situated along the inner surface of the metacarpal bone of the little finger. It arises tendinous and fleshy from the hook-like process of the unciform bone, and likewise from the anterior surface of the adjacent part of the annular ligament. It terminates in a flat tendon, which is connected with that of the abductor minimi digiti, and inserted into the inner and anterior part of the upper end of the first bone of the little finger. It serves to bend the little finger, and likewise to assist the abductor.

Flexor profundus perforans. *Profundus*, of Albinus. *Perforans*, of Douglas. *Perforans vulgo profundus*, of Winslow. *Flexor tertii internodii digitorum manus, vel perforatus manus*, of Cowper. A muscle of the fingers, situated on the fore-arm, immediately under the *perforatus*, which it greatly resembles in its shape. It arises fleshy from the external side, and upper part of the ulna, for some way downwards, and from a large portion of the interosseous ligament. It splits into four tendons a little before it passes under the annular ligament of the wrist, and these pass through the slit in the tendons of the flexor sublimis, to be inserted into the fore and upper part of the third or last bone of all the four fingers, the joint of which they bend.

Flexor sublimis perforatus. This muscle, which is the *perforatus* of Cowper, Douglas, and Winslow, is, by Albinus and others, named *sublimis*. It is called *perforatus*, from its tendons being perforated by those of another flexor muscle of the finger, called the *perforans*. They who give it the appellation of *sublimis*, consider its situation with respect to the latter, and which, instead of *perforans*, they name *profundus*. It is a long muscle, situated most commonly at the anterior and inner part of the fore-arm, between the palmaris longus and the flexor carpi ulnaris; but, in some subjects, we find it placed under the former of these muscles, between the flexor carpi ulnaris and the flexor carpi radialis. It arises, tendinous and fleshy, from the inner condyle of the os humeri, from the inner edge of the coronoid process of the ulna, and from the upper and fore part of the radius, down to near the insertion of the pronator teres. A little below the middle of the fore-arm, its fleshy belly divides into four portions, which degenerate into as many round tendons, that pass all together under the internal annular ligament of the wrist, after which they separate from each other, become thinner and flatter, and running along the palm of the hand, under the aponeurosis palmaris, are inserted into the upper part of the second bone of each finger. Previous to this insertion, however, the fibres of each tendon decussate near the extremity of the first bone, so as to afford a passage to a tendon of the perforans. Of these four tendons, that of the middle finger is the largest, that of the fore-finger the next in size, and that of the little finger the smallest. The use of this muscle is to bend the second joint of the fingers.

Flexor tertii internodii. See *Flexor longus pollicis manus.*

FLEXUOSUS. Flexuous: full of turnings or windings. A stem is so named which is zigzag, forming angles alternately from right to left, and from left to right; as in *Smilax aspera.*

FLINT. A hard stone, found in beds of chalk, and in primitive, transition, secondary, and alluvial mountains. Its constituents are silica, lime, alumina, and oxide of iron.

FLINTY SLATE. A mineral, found in different parts of great tracts of clay-slate.

FLOATING. See *Natans.*

FLOATSTONE. A spongiform quartz.

FLOCCILATION. (*Floccilatio, onis.* f.; from *floccus*, the nap of clothes.) Picking the bed-clothes. A symptom of great danger in acute diseases.

FLORAL. (*Floralis;* from *flos*, a flower.) Belonging to a flower; as floral leaf, &c.

Floral leaf. See *Bractea.*

Flores benzoes. See *Benzoic acid.*

Flores martiales. See *Ferrum.*

Flores salis ammoniaci. See *Ammoniæ subcarbonas.*

Flores sulphuris. See *Sulphur.*

Flores sulphuris loti. See *Sulphur.*

FLORESCENTIA. (*a, æ.* f.; from *floresco*, to flourish or bloom.) The act of flowering, which Linnæus compares to the act of generation in animals.

FLORET. A little flower.

FLOS. (*os, oris.* f.; a flower.) I. A flower. That part of a plant for the most part beautifully coloured, and protecting the internal organs.

Every flower has parts, which are,

1. *Essential*, constituting properly the flower; as the pistil, stamen, and receptacle.

2. *Less essential*, without which the flower is in some instances formed; as the *calyx*, *corolla*, and *pedunculus*.

3. *Accidental*, noticed in a few only; as the *bractea* and *nectarium.*

A flower is said to be,

1. *Complete*, when furnished with calyx, corolla, stamens, and pistils; as *Nicotiana tabacum.*

2. *Incomplete*, when the calyx or corolla is wanting.

3. *Naked*, devoid of the calyx; as in *Lilium candidum*, and *Tulipa gesneriana.*

4. *Apetaloid*, without the corolla; as in *Galenia africana*, and *Saururus cernuus.*

When the stamens and pistils are both, as usual, in one flower, that flower is called *perfect*, or united; when they are situated in different flowers of the same species, they are called *separated flowers;* that which has the stamens being named the *barren* flower, as producing no fruit in itself, and that with the pistils the *fertile* one, as bearing the seed.

The flower contains the internal or genital parts of a plant:—

1. The *stamen*, or male genital organ.

2. The *pistillum*, or female genital organ.

From their diversity, flowers are called,

1. *Male*, which have the stamina only.

2. *Female*, in which are the pistils only.

3. *Hermaphrodite*, which contain both stamens and pistils.

4. *Neuter*, naturally deficient of stamens and pistils; as the marginal flowers of the *Centaurea cyanus*, and *Jacobea.*

5. *Castrate*, when the anthers or the pistils are naturally wanting. The pistils, for example, are wanting in the *Calendula officinalis*, and in the *Viola mirabilis* there are no anthers.

6. *Abortive*, the fecundated germens of which wither before the maturity of the fruit; as happens to the florets in the radius of the *Helianthus annuus*. See *Abortive*.

7. *Monstrous*, when the internal organs become petals, as is the case with full or double flowers. A double flower is also termed *flos plenus*.

8. *Fertile*, when they bear seeds which vegetate. See *Fertile*.

9. *Barren*, when without seeds, or have such as do not vegetate. See *Barren*.

Besides these distinctions, Linnæus's favourite division is into,

1. *Aggregate*.
2. *Compound*.
3. *Amentaceous*.
4. *Glumose*, or chaffy, peculiar to the grasses.
5. The *sheathed flower*, the common receptacle of which springs from a sheath; as in *Arum*.
6. The *umbellate*.
7. The *cymose*. See also *Inflorescence*.

II. A term applied by former chemists to whatever had a flower-like appearance, especially if obtained by sublimation; as flowers of sulphur, benjamin, zinc, &c.

Flos ferri. A radiated variety of carbonate of lime.

FLOSCULO'SUS. Flosculose: having little florets.

FLOSCULUS. (*us*, *i*. m.; diminutive of *flos*.) A little flower; a floret. A term applied, in *Botany*, to the small and numerous florets of a compound flower, which are all sessile on a common undivided receptacle, and enclosed in one contiguous calyx, or perianth.

FLOUNDER. See *Pleuronectes flessus*.

Flounder, liver. See *Distoma*.

FLOUR. 1. The powder of the gramineous seeds.

2. The powder of any farinaceous substance.

FLOWER. See *Flos*.

FLOWER-DE-LUCE. See *Iris*.

Flowers of benjamin. See *Benzoic acid*.

FLOYER, Sir John, was born about the year 1649. He strongly advocated the use of cold bathing, particularly in chronic rheumatism, and nervous disorders. He published several works on this and other subjects; particularly an excellent *Treatise on the Asthma*. He is said to have been one of the first who reckoned the number of pulsations by a timepiece.

FLUATE. *Fluas*. A compound of the fluoric acid with salifiable bases: thus, fluate of lime, &c.

FLUCTUA'TION. *Fluctuatio*. A term used by surgeons, to express the undulation of a fluid; thus when pus is formed in an abscess, or when water accumulates in the abdomen, if the abscess or abdomen be lightly pressed with the fingers, the motion of fluctuation may be distinctly felt.

FLUELLIN. See *Antirrhinum elatine*.

FLUID. *Fluidus*. That, the particles of which so little attract each other, that when poured out, it drops *guttatim*, and adapts itself in every respect to the form of the vessel containing it.

The fluids of animal bodies, and particularly those of the human body, are something very considerable in proportion to the solids; the ratio in the adult being as nine to one. Chaussier put a dead body of 120 pounds into an oven, and found it, after many days' successive desiccation, reduced to 12 pounds. Bodies found, after being buried for a long time in the burning sands of the Arabian deserts, present an extraordinary diminution of weight.

The animal fluids are sometimes contained in vessels, wherein they move with more or less rapidity; sometimes in little areolæ or spaces, where they seem to be kept in reserve; and at other times they are placed in the great cavities, where they make only a temporary stay of longer or shorter duration.

The fluids of the human body are,

1. The blood.
2. The lymph.
3. The perspiratory or perspirable fluids, which comprise the liquids of cutaneous transpiration: the transpiration or exhalation of mucous membranes, as also of the synovial, serous, and cellular; of the adipose cells, the medullary membranes, the thyroid and thymus glands, &c.
4. The follicular fluid; the sebaceous secretion of the skin, the cerumen, the ropy matter from the eyelids, the mucus from the glands, and follicles of that name from the tonsils, the cardiac glands, the prostate, the vicinity of the anus, and some other parts.
5. The glandular fluids; the tears, the saliva, the pancreatic fluid, the bile, the urine, the secretion from Cowper's glands, the semen, the milk, the liquid contained in the supra-renal capsules, that of the testicles, and of the mammæ of new-born infants.
6. The chyme and the chyle.

The properties of fluids, both chemical and physical, are exceedingly various. Many have some analogy to each other under these two relations; but none exhibit a perfect resemblance. The writers of all ages have attached a considerable degree of importance to their methodical arrangement; and, according to the doctrine then flourishing in the schools, they have created different systems of classification. Thus, the ancients, who attributed much importance to the four elements, said that there were four principal humours, the blood, the lymph, or *pituita*, the yellow bile, the black bile, or *atra bilis*; and these four humours corresponded to the four elements, to the four seasons of the year, to the four divisions of the day, and to the four temperaments. Afterwards, at different periods, other divisions have been substituted to this classification of the ancients. Thus, some have made three classes of liquids:—1. the chyme and chyle; 2. the blood; 3. the humours emanating from the blood. Some

authors have been content with forming two classes:—1. *primary*, alimentary, or useless fluids; 2. *secondary*, or useful. Consequently, they distinguished them into,—

1. *Recrementitious;* or humours destined from their formation to the nourishment of the body.

2. *Excrementitious;* or fluids destined to be thrown off from the system.

3. Humours, which at times participate in the characters of the two former classes, and are therefore named *excremento-recrementitious.*

In later times, chemists have endeavoured to class the humours according to their intimate or component nature, and thus they have established albuminous, fibrinous, saponaceous, watery, &c. fluids.

FLUOBORATE. A compound of the fluoboric acid with a salifiable basis.

FLUOBORIC. (*Fluoboricus:* so called because it is a compound of fluoric and boracic acid.) Of or belonging to the peculiar acid so called.

Fluoboric acid. *Acidum fluoboricum.* Probably a compound of fluorine with boron. A gaseous acid, obtained by heating in a glass retort twelve parts of sulphuric acid with a mixture of one part of fused boracic acid, and two of fluor spar, reduced to a very fine powder. It must be received over mercury. It combines with salifiable bases, and forms salts called *fluoborites.*

FLU'OR. (From *fluo*, to flow.) 1. In *Pathology*, means a flow, or increased discharge: generally applied to an increased discharge of a white mucous secretion from the internal surface of the vagina of females.

2. In *Mineralogy*, (so called because it melts or runs into a fluid very readily,) applied to a genus of minerals, the octohedral fluor of Jameson. It is divided into three subspecies, compact fluor, foliated fluor, and earthy fluor. This genus of mineral abounds in nature, formed by the combination of the fluoric acid with lime.

Fluor albus. See *Leucorrhœa.*

FLUORIC. (*Fluoricus:* so called because it belongs to the fluor spar.) Of or belonging to fluor spar.

Fluoric acid. *Acidum fluoricum.* Hydrofluoric acid: obtained from fluor spar, which is generally distinguished by the name of Derbyshire spar, and consists of calcareous earth in combination with this acid.

Fluoric acid, silicated. See *Fluoric acid.*

FLUORIDE. A combination of fluorine with a salifiable basis.

FLUORINE. The imaginary radical of fluoric acid.

FLUOSILICIC. (*Fluosilicicus:* so called from its being composed of fluor and silica.) Of or belonging to the acid so named.

Fluosilicic acid. *Acidum fluosilicicum.* See *Fluoric acid.*

FLUOTITANIC. (*Fluotitanicus:* so called, because it is composed of fluoric and titanic acids.) Of or belonging to the acid which bears this name.

Fluotitanic acid. When fluoric acid is poured on titanic acid, the latter becomes warm, even after having been previously ignited, and dissolves completely with the aid of heat. Evaporated at a gentle heat, to the consistence of syrup, the solution affords crystals, which do not re-dissolve completely in water, but which are decomposed into two peculiar combinations, of which one is acidulous and soluble, and the other with excess of base is insoluble. The solution of the former, namely, of the fluotitanic acid, in water, is analogous to the liquid fluosilicic acid: it contains fluotitanic acid and fluoric acid combined with water.

FLUX. 1. In *Pathology*, often applied to diarrhœa, dysentery, and cholera.

2. In *Chemistry*, used to denote any substance or mixture added to assist the fusion of metals.

Flux, bile. See *Cholera.*

Flux, intestinal, See *Diarrhœa.*

FLUXION. *Fluxio.* A term mostly applied by chemists, to signify the change of metals, or other bodies from the solid into the fluid state, by the application of heat. See *Fusion.*

FLY. See *Musca.*

Fly, Spanish. See *Cantharis.*

FO'CILE. The ulna and the radius are occasionally denominated by the barbarous appellations of *focile majus* and *minus;* the tibia and fibula in the leg are also so called.

Fo'cus. A lobe of the liver.

FODI'NA. (From *fodio*, to dig.) A quarry. The labyrinth of the ear.

Fœnicula'tum lignum. A name for sassafras.

FŒNI'CULUM. (*um, i.* n.; *quasi fœnum oculorum*, the hay or herb good for the sight: so called because it is thought good for the eyes.) Fennel. See *Anethum.*

Fœniculum alpinum. See *Æthusa.*

Fœniculum annuum. Royal cummin.

Fœniculum aquaticum. See *Phellandrium aquaticum.*

Fœniculum dulce. See *Anethum.*

Fœniculum germanicum. See *Anethum fœniculum.*

Fœniculum marinum. See *Crithmum.*

Fœniculum orientale. See *Cuminum.*

Fœniculum porcinum. See *Peucedanum officinale.*

Fœniculum sinense. See *Anisum.*

Fœniculum sylvestre. See *Seseli.*

Fœniculum tortuosum. See *Seseli.*

Fœniculum vulgare. See *Anethum.*

FŒ'NUM. (*um, i.* n.) Hay.

Fœnum camelorum. See *Juncus.*

Fœnum græcum. See *Trigonella.*

Fœnum sylvestre. Wild fenugreek.

FOESIUS, Anutius, was born at Mentz, in 1528. He first published an excellent Latin translation and commentary on the second book of Hippocrates' Epidemics; then an explanation of his terms, under the title of *Œconomia Hippocratis;* and, lastly, at the solicitation of the chief physicians of Europe,

he undertook a complete correct edition of his works, with an interpretation and notes, which he accomplished in six years, in such a manner as to rank him among the ablest interpreters of the ancients. He was also author of a *Pharmacopœia* for his native city; and died in 1595.

FŒTA'BULUM. (From *fœteo*, to become putrid.) 1. An encysted abscess.

2. A foul ulcer.

FŒ'TUS. (*us, ûs.* m.; from *feo*, to bring forth, according to Vossius.) *Epicyema. Epigonion.* The child enclosed in the uterus of its mother, is called a fœtus from the fifth month after pregnancy until the time of its birth. See *Ovum.*

FOLIACEOUS. Leafy.

FOLIATA TERRA. 1. Sulphur.

2. An old name of the acetate of potash.

FOLIATION. (*Foliatio;* from *folium*, a leaf.) The manner in which leaves are folded up in their buds. See *Vernatio*, and *Gemma.*

FOLIA'TUS. (From its resemblance to *folium*, a leaf.) Foliate: leafy.

FOLIO'LUM. A leaflet or little leaf.

FO'LIUM. (*um, i.* n.; from φυλλον, the leaf of a tree.) See *Leaf.*

FOLIUM ORIENTALE. See *Cassia senna.*

FOLLICLE. (*Folliculus;* diminutive of *follis*, a bag.) A small bag: applied to glands. See *Folliculus.*

FOLLICULOSE. (*Folliculosus;* from *folliculus*, a little bag.) Appertaining to a follicle.

FOLLI'CULUS. (Diminutive of *follis*, a bag.) 1. A little bag. In *Anatomy*, applied to a simple gland or follicle. One of the most simple species of gland, consisting merely of a hollow vascular membrane or follicle, and an excretory duct; such are the muciparous glands, the sebaceous, &c.

In *Botany*, a follicle is a one-valved pericarp, or seed-vessel. It has one cell and bursts lengthwise, and bears the seeds on or near its edges, or on a receptacle parallel therewith.

From the adhesion of the seeds it is distinguished into,

1. A follicle, *with a partition*, when the seeds adhere to an intermediate dissepiment.

2. A follicle, *without a partition*, when the seeds adhere to the internal sides only.

From the number of seeds,

1. *Monosperm follicle;* as in *Orontium.*

2. *Polysperm;* as in *Asclepias syriaca.*

From the direction into,

1. *Erect;* as in *Vinca*, and *Nerium.*

2. *Reflected;* as in *Plumeria.*

3. *Horizontal;* as in *Cameraria.*

Follicle also means, in *Botany*, an air-bag.

FOLLICULUS FELLIS. The gall-bladder.

FOMENTA'TION. *Fomentatio.* A sort of partial bathing, by applying hot flannels to any part, dipped in medicated decoctions, whereby steams are communicated to the parts, their vessels are relaxed, and their morbid action sometimes removed.

FOMES. (*es, itis.* m.; *à fovendo.*) Fuel: when applied to diseases, it is either to their remote or efficient causes, or to the infection contained in woollen or cotton materials or other substances.

FOMES VENTRICULI. Hypochondriacism.

FO'MITES. A term mostly applied to substances imbued with contagion.

FONS. (*Fons, ontis.* m.) A fountain.

FONS PULSATILIS. See *Fontanella.*

FONTANE'LLA. (*a, æ. f.*; diminutive of *fons*, a fountain.) *Fons pulsatilis.* The parietal bones and the frontal do not coalesce until the third year after birth, so that, before this period, there is an obvious interstice, commonly called *mould*, and scientifically the *fontanel*, or *fons pulsatilis.* There is also a lesser space, occasionally, between the occipital and parietal bones, termed the *posterior fontanel.* These spaces between the bones are filled up by the dura mater, pericranium, and external integuments, so that, during birth, the size of the head may be lessened; for, at that time, the bones of the head, upon the superior part, are not only pressed nearer to each other, but they frequently lap over one another, in order to diminish the size during the passage of the head through the pelvis.

FONTI'CULUS. (*us, i.* m.; diminutive of *fons.*) An issue. An artificial ulcer formed in any part by cutting a portion of the skin, and kept discharging by introducing daily a pea, covered with any digestive ointment.

FOOT. *Pes.* That part of an animal on which it stands or walks.

In *Zoology*, animals are distinguished, with respect to the number of feet, into,

1. *Biped*, or two-footed; as men and birds.

2. *Quadruped*, or four-footed; as most land animals.

3. *Multiped*, or many-footed; as insects.

The reptile kind have no feet.

Galen has several good observations on the wise adjustment of the number of feet in men and other animals, in his book *De Usu Partium.*

Foot-bath. See *Pediluvium.*

FORA'MEN. (*en, inis.* n.; from *foro*, to pierce.) A little opening.

FORAMEN CŒCUM. 1. A single opening, in the basis of the cranium, between the ethmoid and the frontal bone, that gives exit to a small vein.

2. A hole in the middle of the tongue.

FORAMEN LACERUM IN BASI CRANII. A foramen in the basis of the cranium, through which the internal jugular vein, and the eighth pair and accessory nerves pass.

FORAMEN LACERUM ORBITALE SUPERIUS. A large opening between the greater and lesser wing of the sphenoid bone on each side, through which the third, fourth, first branch of the fifth, and the sixth pair of nerves, and the ophthalmic artery pass.

FORAMEN OPTICUM. The hole which transmits the optic nerve.

FORAMEN OVALE. The opening between the two auricles of the heart of the fœtus. See also *Innominatum os.*

Foramen, of Winslow. An opening in the omentum. See *Omentum.*

Forami'nulum os. The ethmoid bone.

FO'RCEPS. (*eps, ipis.* f.; *quasi ferriceps*, as being the iron with which we seize any thing hot, from *ferrum*, iron, and *capio*, to take.) Pincers. A surgical instrument with which extraneous bodies or other substances are extracted. Also an instrument occasionally used by men-midwives to bring the head of the fœtus through the pelvis.

FORDYCE, George, was born at Aberdeen, in 1736. He studied at Edinburgh, and afterwards settled in London, where he soon gave lectures on chemistry, the practice of physic, and the materia medica. He was author of several publications on medical and philosophical subjects; many of which are to be found in the Transactions of the societies to which he belonged. The most esteemed, and that on which he employed most labour, was a series of *Dissertations on Fever;* four of them appeared during his life, and another was left in manuscript, which has since been printed. His Treatise on Digestion was read originally as the Gulstonian Lecture, before the College of Physicians. He was the projector of the Experiments in heated rooms, of which Sir Charles Blagden gave an account.

FORDYCE, Sir William, was born at Aberdeen, in 1724. He wrote a Treatise on *Fevers*, and on the *Ulcerated Sore Throat;* on his entering into practice, he likewise published on the Venereal Disease.

FORENSIC. *Forensis. Forensicus.* Belonging to the forum, or courts of law. Forensic medicine is that which is connected with a legal enquiry as to cause of defect, disease, or death.

FORESKIN. See *Prepuce.*

FORESTUS, or Van Forest, Peter, was born in 1522. He published, at different periods, six volumes of Medical and Surgical Cases; to one of which was added a Dissertation, exposing the fallacy and absurdity of pretending to judge of every thing by the urine. Boerhaave has highly commended his writings, which have been often reprinted.

FORGETFULNESS. This is technically called *Amnesia*, feebleness, or failure of the memory. It is a kind of mental imbecility.

FORKED. See *Furcatus.*

FO'RMIATE. *Formias.* A compound produced by the union of the formic acid with a salifiable basis: thus, *formiate of ammonia*, &c.

FORMIC. (*Formicus:* so called, from *formica*, the ant.) Appertaining to the ant.

Formic acid. (*Acidum formicum:* so called, because obtained from the *formica*, or ant.) This acid comes from the ant, or *formica rufa*, of Linnæus. It may be obtained either by simple distillation, or by infusion in boiling water, and subsequent distillation of as much of the water as can be brought over without burning the residue. After this it may be purified by repeated rectifications, or by boiling to separate the impurities; or, after rectification, it may be concentrated by frost.

This acid has a very sour taste, and continues liquid even at very low temperatures. It has not yet been applied to any use.

FORMICA. (*a, æ.* f.; *quod ferat micas*, because of his diligence in collecting small particles of provision together.) 1. The name of a genus of insects. The ant or pismire. See *Formica rufa.*

2. The name of a black wart with a broad base, and cleft superficies, because the pain attending it resembles the biting of an ant.

3. A varicose tumour on the anus and glans penis.

Formica rufa. The ant or pismire. This industrious little insect contains an acid juice, and gross oil, which were supposed to possess aphrodisiac virtues. The chrysalides of this animal are said to be diuretic and carminative, and by some recommended in the cure of dropsy.

The ant also furnishes an acid called the formic, which it has been long known to contain, and occasionally to emit. See *Formic acid.*

Fo'rmix. See *Herpes exedens.*

FO'RMULA. (*a, æ.* f.; diminutive of *forma*, a form.) A little form of prescription, such as physicians direct in extemporaneous practice, in distinction from the greater form in pharmacopœias, &c.

Fo'rnax. A furnace.

FORNICA'TUS. Fornicate: vaulted. See *Forniciformis.*

FORNICIFORMIS. Forniciform: vaulted. Applied to the nectary of some plants; as the *Symphytum officinale*, &c. See *Nectarium.*

FO'RNIX. (*ix, icis.* f.; an arch or vault.) A part of the corpus callosum in the brain is so called, because, if viewed in a particular direction, it has some resemblance to the arch of an ancient vault. It is the medullary body, composed of two anterior and two posterior crura, situated at the bottom and inside of the lateral ventricle, over the third ventricle, and below the septum lucidum.

FO'SSA. (*a, æ.* f.; from *fodio*, to dig.) *Fovea.* A little depression or sinus. The pudendum muliebre.

Fossa amyntæ. A double-headed roller for the face.

Fossa magna. 1. The great groove of the ear.

2. The opening of the pudendum muliebre.

Fossa navicularis. 1. The cavity at the bottom of the entrance of the pudendum muliebre

2. The great groove of the ear.

Fossa ovalis. The depression in the right auricle of the human heart, which, in the fœtus, opened into the other auricle, forming the foramen ovale.

Fossa pituitaria. The depression in the sella turcica of the sphenoid bone.

FO'SSIL. (*Fossilis;* from *fodio*, to dig.) Any thing dug out of the earth.

Fossil copal. Highgate resin. A semi-transparent, brittle, resinous substance, of a

yellowish-brown colour; found in the bed of blue clay at Highgate, near London.

Fo'ssilus. The bone of the leg.

FOTHERGILL, John, was born in Yorkshire, in 1712, of a Quaker family, and settled in London in 1740. His practice was for some time chiefly gratuitous; but his *Account of the Putrid Sore Throat*, published in 1748, brought him speedily into reputation. Several papers of Dr. Fothergill were printed in the Philosophical Transactions, and in the Medical Observations and Enquiries: he also sent several communications to the Gentleman's Magazine, and other periodical publications.

FO'TUS. (*us, ûs.* m.) See *Fomentation.*

FO'VEA. (*a, æ.* f.; from *fodio*, to dig.)

1. A little depression.
2. The pudendum muliebre.
3. A partial sweating-bath.

FOVEATUS. Having a little depression, or pit. Applied to the nectary of plants. See *Nectarium.*

FOWL. In a general sense this word is of equal import with bird: but it is applied in a more particular manner to poultry of all kinds.

Fowl, dunghill. See *Phasianus.*

Fowl, guinea. See *Numidia meleagris.*

Fowl, pea. See *Pavo cristatus.*

FOX-GLOVE. See *Digitalis.*

Fox-glove, Eastern. See *Sesamum.*

FRACASTORIUS, Hieronymus, was born at Verona, in 1483. He wrote a treatise, in elegant Latin, on *Syphilis*, which was thought worthy of comparison with the Georgics of Virgil by some of the best judges. He died in 1553; and a statue was erected to him by the town of Verona. He published also on *Contagious Diseases*, and several other medical and philosophical subjects.

FRA'CTURE. (*Fractura, æ.* f.; from *frango*, to break.) In *Anatomy*, a solution of a bone into two or more fragments; called also, *Catagma, Clasis, Clasma*, and *Agme.* A *simple* fracture is when the bone only is divided. A *compound* fracture is a division of the bone, with a laceration of the integuments, the bone mostly protruding. A fracture is also termed transverse, oblique, &c. according to its direction.

2. In *Mineralogy*, the form and aspect of the surface, produced by breaking off a piece of a mineral with a hammer. It is said to be compact, or fibrous, radiated, and foliated.

FRÆ'NULUM. (*um. i.* n.; diminutive of *frænum*, a bridle.) The cutaneous fold under the apex of the tongue, that connects the tongue to the infralingual cavity. It is sometimes in infancy so short as to prevent the child from sucking, when it is necessary to cut it, in order to give more room for the motion of the tongue.

FRÆ'NUM. (*um, i.* n.) The membraneous fold which connects the prepuce to the inferior part of the glans penis.

FRAGA'RIA. (*a, æ.* f.; from *fragro*, to smell sweet.) The strawberry. 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Polygynia.*

2. The pharmacopœial name of the strawberry. See *Fragaria vesca.*

Fragaria sterilis. Barren strawberry. Astringent, seldom used.

Fragaria vesca. The systematic name of the strawberry plant. The mature fruit of the *Fragaria, fragellis reptantibus*, of Linnæus, was formerly recommended in gouty and calculous affections, in consequence, it would appear, of its efficacy in removing tartar from the teeth, which it is said to do very effectually.

FRAGILIS. Brittle.

FRAGI'LITAS. Fragility or brittleness: applied to bones.

Fra'gmen. *Fragmentum.* A splinter of a bone.

FRA'GUM. (*um, i.* n.; from *fragro*, to smell sweet.) See *Fragaria.*

FRAMBŒ'SIA. (From *framboise*, Fr. for a raspberry.) The yaws; a disease that is endemial to the Antilles islands, as well as Africa. It appears with excrescences like mulberries growing out of the skin in various parts of the body, which discharge an ichorous fluid. The nature of this disease has been imperfectly investigated by European practitioners; and as it is perhaps never seen in England, a very brief account of it here will be sufficient.

The eruption of the yaws sometimes commences without any precursory symptoms of ill health; but it is generally preceded by a slight febrile state, with languor, debility, and pains of the joints, resembling those of rheumatism. After several days, minute protuberances appear on various parts of the skin, at first smaller than the head of a pin, but gradually enlarging, in some cases to the diameter of a sixpence, and in others even to a greater extent: they are most numerous, and of the largest size, in the face, groins, axillæ, and about the anus and pudenda. But the crop is not completed at once: new eruptions appear in different places, while some of the earlier ones dry off. When the cuticle is broken, a foul crust is formed on the surface, from under which, in the larger protuberances, red fungous excrescences often spring up, which attain different magnitudes, from that of a small raspberry to that of a large mulberry, which fruit they somewhat resemble from their granulated surfaces. When the eruption is most copious, these tubercles are of the smallest size; and when fewer, they are largest. Their duration and progress are various in different constitutions, and at different periods of life. Children suffer less severely than adults, and are more speedily freed from the disease: in them, according to Dr. Winterbottom, the duration of the yaws is from six to nine months; while in adults it is seldom cured in less than a year, and sometimes continues during two or three. The fungous tubercles attain their acme more rapidly in the well-fed

negroes, than in those who are ill-fed and thin; and they likewise acquire a larger size in the former than in the latter. They are not possessed of much sensibility, and are not the seat of any pain, except when they appear upon the soles of the feet, where they are confined and compressed by the hard and thickened cuticle: in that situation they render the act of walking extremely painful, or altogether impracticable. They never suppurate kindly, Dr. Winterbottom says, but gradually discharge a sordid glutinous fluid, which forms an ugly scab round the edges of the excrescence, and covers the upper part of it, when much elevated, with white sloughs. When they appear on any part of the body covered with hair, this gradually changes in its colour from black to white, independently of the white incrustation from the discharge. They leave no depression of the skin.

The period, during which the eruption is in progress, varies from a few weeks to several months. "When no more pustules are thrown out," Dr. Winterbottom observes, "and when those already upon the skin no longer increase in size, the disease is supposed to have reached its acme. About this time it happens, on some part of the body or other, that one of the pustules becomes much larger than the rest, equalling or surpassing the size of a half-crown piece; it assumes the appearance of an ulcer, and, instead of being elevated above the skin like others, it is considerably depressed; the surface is foul and sloughy, and pours out an ill-conditioned ichor, which spreads very much, by corroding the surrounding sound skin: this is what is called the *master* or *mother yaw*." When arrived at its acme, however, the eruption continues a considerable time without undergoing much alteration, often without very materially injuring the functions, and it seldom proves dangerous, except from the mischievous interference of ill-directed art.

The frambœsia is propagated solely by the contagion of the matter, discharged from the eruption, when it is applied to the wounded or broken skin of another person, who has not previously undergone the disease. For, like the febrile eruptions, the frambœsia affects the same person only once during life; but, unlike them, it is not propagated by effluvia. In Africa, it is usually undergone during childhood. The period which elapses between the reception of the contagion and the commencement of the disease, is no where mentioned; but in the case of a Dane, whom Dr. Adams saw at Madeira, the patient had been ten months absent from the West Indies, before he felt any indisposition.

With respect to the treatment of frambœsia, nothing very satisfactory is to be collected from the writings of the practitioners to whom we are indebted for the history of the disease. The native Africans, according to Dr. Winterbottom, "never attempt to cure it until it has nearly reached its height, when the fungi have acquired their full size, and no more pustules appear." And the practitioners in the West Indies soon learned, by experience, that active evacuations retard the natural progress of the disease; and that mercurials, although they suspended it, and cleared the skin of the eruption, yet left the patient still susceptible of, or rather still impregnated with, the virus, which speedily evinced its presence, by a reappearance of the symptoms more severe and tedious than before. In truth, the disease, it would seem, like the pustular and exanthematous fevers of our own climate, will only leave the constitution after it has completed the various stages of its course, and removed the susceptibility of the individual to future infection; and no medicine, yet discovered, has had any influence in superseding this action, or in accelerating its progress. Unless, therefore, any urgent symptoms should require alleviation, which seldom, if ever, happens, it is advisable to dispense with the administration of medicine, and to be content with restricting the patient to a moderate and temperate regimen, during the first stage of the malady. When the eruptions begin to dry, or as soon as they cease to multiply and enlarge, the disease appears to require the same management as other slow and superficial ulcerations, accompanied with a cachectic state of the system; viz. a light, but nutritious diet, a dry and wholesome air, warm clothing, moderate exercise, and a course of tonic medicine, especially of sarsaparilla, or cinchona, with the mineral acids, or with antimonials and small doses of mercury, according to the circumstances of the individual habit. The effects of mercury, however, exhibited so as to excite salivation, as the early West Indian practitioners recommend, seem to be of a very questionable nature, especially when it is unaccompanied by the vegetable decoctions; and it is certain that patients have, in some cases, soon recovered under the use of the latter, when the mercurials were omitted. The native Africans employ decoctions of the bark of two or three trees, which are gently purgative, as well as tonic, and likewise wash the sores with them, after carefully removing the crusts.

The *master yaw* sometimes remains large and troublesome, after the rest of the eruption has altogether disappeared. It requires to be treated with gentle escharotics, and soon assumes a healing appearance under these applications. Stronger caustics are requisite for the cure of the *crab yaws*, or tedious excrescences which occur on the soles of the feet.

FRA'NGULA. (*a, æ.* f.; from *frango*, to break: so called because of the brittleness of its branches.) See *Rhamnus frangula.*

FRANKINCENSE. See *Juniperus lycia*, and *Pinus abies.*

FRAXINE'LLA. (*a, æ.* f.; from *fraxinus*, the ash: so called because its leaves resemble those of the ash.) See *Dictamnus albus.*

Fraxinella, white. See *Dictamnus albus.*

FRA'XINUS. (*us, i.* f.; *à fragore*, from

the noise its seeds make when shaken by the wind; or from φραξις, a hedge, because of its use in forming hedges.) The ash.

1. The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Diœcia.*

2. The pharmacopœial name of the ash-tree. See *Fraxinus excelsior.*

Fraxinus excelsior. The systematic name of the ash-tree. *Fraxinus.* Called also, *brumelli,* and *bumelia.* The bark of this tree, *Fraxinus—foliis serratis floribus apetalis,* of Linnæus, when fresh, has a moderately strong bitterish taste. It possesses resolvent and diuretic qualities, and has been successfully exhibited in the cure of intermittents. The seeds are occasionally exhibited medicinally as diuretics, in the dose of a drachm. In warm climates a sort of manna exudes from this species of fraxinus.

Fraxinus ornus. The systematic name of the tree from which manna flows. This substance is also termed *Manna calabrina; Ros calabrinus; Acromeli; Alusar; Drysomeli.* That species which is of a rosy colour, is called *nuba. Mel aërium,* from the supposition that it descended from Heaven. Manna is the condensed juice of the flowering ash, or *Fraxinus ornus—foliis ovato oblongis serratis petiolatis, floribus corollatis,* Hort. Kew, which is a native of the southern parts of Europe, particularly Sicily and Calabria. Many other trees and shrubs have likewise been observed to emit a sweet juice, which concretes upon exposure to the air, and may be considered of the manna kind, especially the *Fraxinus rotundifolia,* and *excelsior.* In Sicily these three species of fraxinus are regularly cultivated for the purpose of procuring manna, and with this view are planted on the declivity of a hill with an eastern aspect. After ten years' growth, the trees first begin to yield the manna, but they require to be much older before they afford it in any considerable quantity. Although the manna exudes spontaneously upon the trees, yet, in order to obtain it more copiously, incisions are made through the bark, by means of a sharp crooked instrument; and the season thought to be most favourable for instituting this process, is a little before the dog-days commence, when the weather is dry and serene. Manna is generally distinguished into different kinds, viz. the manna in tear, the canulated and flaky manna, and the common brown or fat manna. All these varieties seem rather to depend upon their respective purity, and the manner in which they are obtained from the plant, than upon any essential difference of the drug. The best manna is in oblong pieces or flakes, moderately dry, friable, very light, of a whitish or pale yellow colour, and in some degree transparent: the inferior kinds are moist, unctuous, and brown. Manna is well known as a gentle purgative, so mild in its operation, that it may be given with safety to children and pregnant women, to the delicacy of whose frames and situations it is particularly adapted. It is esteemed a good and pleasant auxiliary to the purgative neutral salts. It sheathes acrimony, and is useful in coughs, disorders of the breast, and such as are attended with fever and inflammation, as in pleuritis, &c. It is particularly efficacious in bilious complaints, and helps the discharge of mineral waters, when they are not of themselves sufficiently active. It is apt, in large does, to create flatulencies and gripes; both of which are prevented by a small addition of some warm carminatives. It purges in doses of from ℥j. to ℥ij.; but its purgative quality is much increased, and its flatulent effects prevented, by a small addition of cassia. The dose for children is from one scruple to three. It is best dissolved in whey.

Fraxinus rotundifolia. The systematic name of a tree which affords manna. See *Fraxinus ornus.*

FRECKLE. See *Ephelis.*

FREIND, John, was born in 1675, at Croton, in Northamptonshire. He published, in 1703, *Emmenologia,* explaining the phænomena of menstruation, both natural and morbid, on mechanical principles. In 1707 he published his *Chemical Lectures,* in Latin. In 1716, the *first* and *third books of Hippocrates on Epidemics,* with a Commentary on Fevers, in nine parts; a work of great erudition and judgment. Some of his opinions having been severely attacked, he was led to defend them in a letter to Dr. Mead, entitled *De purgantibus in secundo Variolarum confluentium Febre adhibendis,* 1719. While in the Tower, Dr. Freind formed the plan of his great work, "The *History of Physic,* from Galen to the beginning of the Sixteenth Century, chiefly with regard to practice;" which came out in two volumes within three years after. This was intended as a continuation of Le Clerc, and met with a very favourable reception; indeed it still continues to be a standard book.

Fre'na. The sockets of the teeth.

FRIABILITY. (*Friabilitas;* from *frio,* to crumble.) The reduction of substances into small particles: applied to bony and calcareous substances.

FRIABLE. (*Friabilis;* from *frio,* to crumble.) Easily broken down into small particles or crumbs.

Frigera'na. A putrid fever.

FRIGIDA'RIUM. (*um, i.* n.; from *frigidus,* cold.) The cold place or bath.

FRIGUS. (*us, oris.* n.; from *frigeo,* to be cold.) A privation of heat. It is nothing positive, but somewhat of the negative kind. The human body contains within itself, as long as it is living, a principle of warmth: if any other body, being in contact with it, abstracts the heat with unusual rapidity, it is said to be cold; but if it carries off the heat more slowly than usual, or even communicates heat to our body, it is said to be hot. See *Ardor.* Cold is a strong irritant, when the atmospheric temperature is too high; it is

a pleasant and reviving agent, inasmuch as it both reduces the heated medium, and restores the particles of the affected organ from a state of disquieting tenseness to their usual scale of approximation. If the cold be pushed further, it may go a little beyond this, and be still pleasant and healthful: for the organ or the general system may be in a state of morbid relaxation, and consequently, in their actual scale of approach, the living particles may be too far remote for the purposes of high elasticity and vigour. And it is in such a condition as this that cold chiefly shows its stimulant power, and is so generally resorted to as a tonic. But if the agency of cold be carried farther than this, it produces uneasiness to the nerves of feeling, by a process precisely the reverse of that which is pursued by heat, and consequently in a twofold manner: first, by lowering the warmth of the organ, or of the system, below its scale of ease and comfort; and next, by forcing the living particles into too close and crowded a state, and not allowing them sufficient room for play. Cold, as an idiopathic affection, is chiefly local, and most common to the head and feet. It is temporarily relieved by warmth and stimulants, and particularly by the friction of a warm hand; and, where it can be used, the exercise of walking. It is permanently relieved by the warmer tonics, as sea-bathing and aromatic bitters.

Considerable mischief has often been produced by a sudden exposure of the feet to severe cold, and especially in delicate and irritable habits, unused to such applications, as colic, headache, catarrh, fevers, and, in podagral habits, gout. But the application of severe and sudden cold to the head or stomach, by drinking ice or cold water, and especially when the individual is heated and perspiring, has been followed with more alarming effects, and even with death itself. Mauriceau relates an instance of death produced during baptism, by applying to the head the water of the baptismal font. This must be a rare occurrence; while the fatal effects of drinking ice or iced water, in a state of heat, are innumerable. It is observed by Dr. George Fordyce, and the observation is quoted and called curious by Dr. Darwin, "that those people who have been confined some time in a very warm atmosphere, as of 120 or 130 degrees of heat, do not feel cold, nor are subject to paleness of their skins, on coming into a temperature of 30 or 40 degrees: which would produce great paleness and painful sensation of coldness in those who had been for some time confined in an atmosphere of only 86 or 90 degrees." The cause is not difficult of explanation. The sensorial power is exhausted, and the nerves of feeling rendered torpid by a long exposure to a heat of 120 or 130 degrees, and the turgid capillaries, the dilatation of which produces the general blush, lose their power of constriction or collapse; while in a heat of 86 or 90 degrees, neither of such effects take place.

Cold, as a symptom, is found in the first stage of fever, in syncope, hysteria, nausea, and inflammation of the viscera, in all of which the affection is general.

FRINGE. See *Fimbria.*

Fringed. See *Ciliatus.*

FRONS. (*s, tis.* f. or m.) 1. The forehead. The part between the eyebrows and the hairy scalp.

2. (*s, dis.* f.) The frond, or leaf; a tree: now used by botanists to the cryptogamious plants only, to signify that the stem, root, and leaf are all in one; as in ferns, fusci, &c.

FRONTAL. (*Frontalis;* from *frons,* the forehead.) Belonging to the forehead.

Frontal bone. See *Frontis os.*

Frontal sinus. See *Frontis os.*

FRONTA'LIS. See *Frontal.*

Frontalis verus. See *Corrugator supercilii.*

Fro'ntis os. The frontal bone. *Os coronale. Os inverecundum. Metopon.* The external surface of this bone is smooth at its upper convex part, but below several cavities and processes are observed. At each angle of the orbits the bone jets out to form two internal and two external processes; and the ridge under the eyebrow, on each side, is called the superciliary process; from which the orbitar processes extend backwards, forming the upper part of the orbits; and between these the ethmoid bone is received. The nasal process is situated between the two internal angular processes. At the internal angular process is a cavity for the caruncula lachrymalis; and at the external, another for the pulley of the major oblique muscle. The foramina are three on each side: one in each superciliary ridge, through which a nerve, artery, and vein pass to the integuments of the forehead; a second near the middle of the internal side of the orbit, called internal orbitar; the third is smaller, and lies about an inch deeper in the orbit. On the inside of the os frontis there is a ridge which is hardly perceptible at the upper part, but grows more prominent at the bottom, where the foramen cœcum appears; to this ridge the falx is attached. The frontal sinus is placed over the orbit on each side: except at this part the frontal bone is of mean thickness between the parietal and occipital; but the orbitar process is so thin as to be almost transparent.

FRUCTIFICATION. (*Fructificatio, onis.* f.; from *fructus,* fruit, and *facio,* to make.) Under this term are comprehended the flowers and the fruit of a plant. It is a temporary part of plants appropriated to generation, terminating the old vegetable and beginning the new. By the parts of fructification, Sir James Smith observes, each species is perpetually renewed without limits, while all other modes of propagation are but the extension of an individual, and sooner or later terminate in its total extinction. The fructification is therefore essential to vegetables. A plant may be destitute of stem, leaves, or even roots, because

if one of these parts be wanting, the others may perform its functions; but it can never be destitute of those organs by which its species is propagated.

Linnæus distinguishes seven parts of fructification, some of which are essential to the very nature of a flower or fruit; others, not so indispensably necessary, and therefore are not universal.

1. The *calyx*, or flower-cup, not essential and often absent. See *Calyx.*

2. The *corolla*, or petal, likewise not essential. See *Corolla.*

3. The *stamen*, or *stamina*. These are essential. See *Stamen.*

4. The *pistillum*, or *pistilla*, in the centre of the flower, consisting of the rudiments of the fruit, with one or more organs attached to them, and therefore essential. See *Pistillum.*

5. The *pericarpium*, or seed-vessel, wanting in many plants. See *Pericarpium.*

6. The *semen*, or seed, the perfecting of which is the sole end of all the other parts.

7. The *receptaculum*, which must necessarily be present in some form or other. See *Receptaculum.*

FRU'CTUS. (*us, ûs.* m. ; *à fruor.*) The fruit of a tree or plant. By this term is understood, in *Botany*, the produce of the germen, consisting of the seed-vessel and seed.

FRUCTUS HORÆI. Summer fruits. Under this term are comprehended strawberries, cherries, currants, mulberries, raspberries, and the like. They possess a sweet sub-acid taste, and are exhibited as dietetic auxiliaries, as refrigerants, antiseptics, attenuants, and aperients. Formerly they were exhibited medicinally in the cure of putrid affections, and to promote the alvine and urinary excretions. The acid which they contain is either the tartaric, oxalic, citric, or mallic, or a mixture of two or more of them with sugar and gluten, starch, and a gelatinous substance. Considering them as an article of diet, they afford little nourishment, and are liable to produce flatulencies. To persons of a bilious constitution and rigid fibres, and where the habit is disposed naturally, or from extrinsic causes, to an inflammatory or putrescent state, their moderate and even plentiful use is salubrious; by those of a cold inactive disposition, where the vessels are lax, the circulation languid, and the digestion weak, they should be used very sparingly. The juices extracted from these fruits by expression, contain their active qualities freed from their grosser indigestible matter. On standing, the juice ferments and changes to a vinous or acetous state. By proper addition of sugar, and by boiling, their fermentative power is suppressed, and their medicinal qualities preserved. The juices of these fruits, when purified from their fæculencies by settling and straining, may be made into syrups, with a due proportion of sugar in the usual way.

FRUIT. See *Fructus.*

Fruit-stalk. See *Pedunculus.*

Fruits, summer. See *Fructus horæi.*

FRUMENTA'CEOUS. *Frumentaceus.* A term applied to all such plants as have a conformity with wheat, either with respect to their fruit, leaves, or ears.

FRUTESCENTIA. (*a, æ. f.*; from *fructus*, fruit.) The time at which the fruit arrives at maturity.

FRUTEX. (*ex, icis.* m.) A shrub or plant, which rises with a woody durable stem, but never arrives at the height, or has the appearance of an *arbor*, or tree.

FRUTICO'SUS. Fruticose: shrubby; shrub-like.

FU'CUS. (*us, i.* m.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia*; Order, *Algæ.*

FUCUS BACCIFERUS. Gulph weed. This is eaten raw as a sallad, and pickled as samphire. It is aperient, diuretic, and wholesome.

FUCUS DIGITATUS. Sea girdle and hangers. This fucus grows upon stones and rocks in the sea near the shore. It has several plain long leaves or sinuses springing from a round stalk, in the manner of fingers when extended. It affords soda.

FUCUS EDULIS. Red dulce. This species is eaten raw, also after being broiled, when it has the taste of roasted oysters.

FUCUS ESCULENTUS. *Fucus teres; Fucus fimbriatus.* Daber locks. Edible fucus. Hudson has made this a distinct species, but Linnæus included it under his saccharinus. It grows plentifully in the sea near the shores of Scotland, and also those of Cumberland, where it is eaten by the natives. It has a broad, plain, simple, sword-shaped leaf, springing from a pinnated stalk.

FUCUS FIMBRIATUS. See *Fucus esculentus.*

FUCUS HELMINTHOCORTON. *Helmintho-corton. Conferva helmintho-cortos. Conferva dichotoma. Corallina rubra. Corallina melito-corton. Lemitho-corton. Mouse de Corse.* Corsican worm-weed. *Fucus helmintho-corton*, of De la Tourrette. This plant has gained great repute in destroying all species of intestinal worms. Its virtues are extolled by many; but impartial experimentalists have frequently been disappointed of its efficacy. The Geneva Pharmacopœia directs a syrup to be made of it. It is given also internally in the cure of scrofulous and cancerous complaints, and in some cases it is said to have been very efficacious.

This sea moss contains several kinds of geniculated thread-like algæ, confervus, and fuci, which are also vermifuges.

FUCUS NATANS. Sea lentil. *Vitis marina. Lenticula marina.* This is said to be useful against some forms of dysuria.

FUCUS PALMATUS. Handed fucus. Dulce. Dills. Dulesh. This grows in the sea, and consists of a thin-lobed leaf like a hand, and is eaten either raw, boiled, or broiled.

FUCUS PINNATIFIDUS. Pepper dulce. This is often eaten as a sallad: it is warm, like cresses, and very wholesome.

FUCUS SACCHARINUS. Sweet fucus. Sea-belts. This species grows upon rocks and stones by the sea-shore. The leaves are very sweet, and, when washed and hung up to dry,

will exude a substance like sugar, from whence it was named.

Fucus teres. See *Fucus esculentus*.

Fucus vesiculosus. The systematic name of the sea-oak. Sea wreck. Bladder wrack. *Quercus marina*. This sea-weed, the *Fucus vesiculosus—fronde plana dichotoma costata integerrima, vesiculis axillaribus geminis, terminalibus tuberculatis*, of Linnæus, is said to be a useful assistant to sea-water, in the cure of disorders of the glands. Burnt in the open air, and reduced to a black powder, it forms the *æthiops vegetabilis* of the shops, which, as an internal medicine, is similar to burnt sponge, containing a considerable quantity of alkali.

FULCRUM. (*um, i.* n.) A prop or support. This term is applied by Linnæus, not only to those organs of vegetables correctly so denominated, such as tendrils, but also to various other appendages to the herbage of a plant, none of which are universal or essential, nor is there any one plant furnished with them all. Sir James Smith prefers the English term *appendage*, for these organs in general, to *props*, because the latter applies only to one of them.

The greater *props*, or *fulcra* of vegetables, are the roots, trunks, and branches.

To the *lesser* are referred,

1. The *petiolus*, or petiole, which is the fulcrum of the leaf.

2. *Cirrus*, the tendril. See *Cirrus*.

3. The *stolo*, or sucker; a filament, or under-ground bud, protruded from the root, and sending off radicles into the earth, pushes up a stem resembling the parent plant; as in the strawberry, and *Syringa vulgaris*.

4. *Sarmentum*, the runner, which gives off from the stem, and radicates on that which is nearest to it; as does the *Hedera helix*, or ivy.

The *fulcra of a flower* are the peduncle, scape, and receptacle.

FULIGINO'SUS. Fuliginous: sooty.

FULI'GO. (*o, inis.* f.; *quasi fumiligo*; from *fumus*, smoke.) Soot. Wood-soot, *fuligo ligni*, or the condensed smoke from burning wood, has a pungent, bitter, and nauseous taste, and is resolved by chemical analysis into a volatile alkaline salt, an empyreumatic oil, a fixed alkali, and an insipid earth. The tincture prepared from this substance, *tinctura fuliginis*, is recommended as a powerful antispasmodic in hysterical affections.

FULLER'S EARTH. *Cimolia purpurescens*. An earth found in large beds in Buckinghamshire and Surrey, composed of silica, alumine, magnesia, lime, muriate of soda, a trace of potash, and oxide of iron. It is sometimes applied by the poor to inflamed breasts, &c. with a view of cooling them.

FULMINA'TION. *Fulminatio*. Detonation. A quick and lively explosion of bodies, such as takes place with fulminating gold, fulminating powder, and in the combustion of a mixture of inflammable gas and vital air.

FULMINIC. (*Fulminicus*: so called because its compounds explode with a noise.) Appertaining to the peculiar acid so called.

Fulminic acid. *Acidum fulminicum*. An acid obtained from fulminate of silver, which is the cyanic combined with oxide of silver.

FUMA'RIA. (*a, æ.* f.; from *fumus*, smoke, from its juice, when dropped into the eye, producing the same sensations as smoke.)

1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*. Fumitory.

2. The pharmacopœial name of the common fumitory. See *Fumaria officinalis*.

Fumaria bulbosa. *Aristolochia fabacea*. The root of this plant, *Fumaria—caule simplici, bracteis longitudine florum*, of Linnæus, was formerly given to restore suppressed menses, and as an anthelmintic.

Fumaria officinalis. The systematic name of the fumitory or *Fumaria*; called also, *Fumus terræ*, *Capnos*; *Herba melancholifuga*. The leaves of this indigenous plant, *Fumaria—pericarpiis monospermis racemosis, caule diffuso*, of Linnæus, are directed for medicinal use by the Edinburgh college: they are extremely succulent, and have no remarkable smell, but a bitter, somewhat saline taste. The infusion of the dried leaves, or the expressed juice of the fresh plant, is esteemed for its property of clearing the skin of many disorders of the leprous kind.

FUMIGA'TION. (*Fumigatio, onis.* f.; from *fumus*, smoke.) The application of fumes, to destroy contagious miasmata or effluvia. The most efficacious substance for this purpose is chlorine; next to it the vapour of nitric acid; and, lastly, that of the muriatic. The fumes of heated vinegar, burning sulphur, or the smoke of exploded gunpowder, deserve little confidence as antiloimics. The air of dissecting rooms should be nightly fumigated with chlorine, whereby their atmosphere would be more wholesome and agreeable during the day. See *Contagion*.

FUMITORY. See *Fumaria*.

FUMUS. (*us, i.* m.) Smoke.

Fumus albus. Mercury.

Fumus citrinus. Sulphur.

Fumus duplex. Sulphur and mercury.

Fumus rubens. Orpiment.

FUNCTION. See *Action*.

FUNDAMENT. (*Fundamentum, i.* n.) See *Anus*.

Fundament, falling down of. See *Prolapsus ani*.

FUNGI. (The plural of *fungus*.) An order of the class *Cryptogamia* of Linnæus's system. They cannot probably be said to have any herbage; their substance is fleshy: their parts of fructification are in form of very small capsules buried in their fleshy substance. These seminiferous capsules are on the surface, or in plates, and are called *lamellæ*, or gills, pores, or prickles, and they burst, as in the algæ.

A fungus or mushroom affords the following parts:—

1. *Pileus*, the hat, which is the round upper part, or head.

2. The *umbo*, the knob, or boss, or more prominent part in the centre of the hat.

3. *Lamellæ*, the gills, or membraneous

parts on the under side. These are peculiar to the *Agarici.*

4. The *pores*, or small punctures on the under surface observed only in the genus *Boletus.*

5. *Echini*, or *Aculei*, elevated points on the upper surface of the pileus, noticed in the genus *Hydra* only.

6. *Verrucæ*, warts, observed on the inferior surface.

7. *Stipes*, the stem supporting the hat.

8. *Volva*, the wrapper, or covering, of a membraneous texture, surrounding the stem, and concealing the parts of fructification, and in due time bursting all around, forming a ring upon the stalk; as in *Agaricus campestris.* Linnæus also uses this term for the more fleshy external covering of some other fungi, which is scarcely raised out of the ground, and enfolds the whole plant when young.

9. *Annulus*, the ring, or slender membrane surrounding the stem.

The varieties of the *pileus*, or hat, are,—

1. *Planus*, flat.
2. *Convexus*; as in *Boletus bovinus.*
3. *Concavus*; as in *Octospora.*
4. *Umbonatus*, umbo or navel-like; as in *Agaricus conspurcatus.*
5. *Campanulatus*; as in *Agaricus fimilarius.*
6. *Viscidus*, viscid.
7. *Dimidiatus*, half round; as in *Agaricus niveus.*
8. *Squamosus*, covered with coloured scales; as in *Agaricus procerus.*
9. *Squarrosus*, having stiff elevated scales; as in *Agaricus conspurcatus.*

The varieties of the *lamellæ* are,—

1. *Equal*; as in *Agaricus crinitus.*
2. *Unequal.*
3. *Branched*, when several run into one; as in *Merulius cantharellus.*
4. *Decurrent*, proceeding down the stem.
5. *Venous*, so small that they appear like elevated veins.
6. *Dimidiate*, half round; as in *Agaricus muscarius.*
7. *Labyrinth-like*; as in *Agaricus quercinus.*

The varieties of the *volva* are,—

1. *Simple.*
2. *Double.*
3. *Stellate*, cut several times; as in *Lycopodium stellatum.*

The varieties of the *annulus* are,—

1. *Erect*, loose above, and fixed below; as in *Agaricus conspurcatus.*
2. *Inverse*, fixed above, free and bell-like below; as in *Agaricus mappa.*
3. *Sessile*, fixed only laterally.
4. *Mobile*; as in *Agaricus antiquatus.*
5. *Persistent*, remaining after the perfect formation of the plant.
6. *Evanescent*, disappearing after the complete evolution of the fungus.
7. *Arachnoid*, resembling a slender white web.

The varieties of the *stipes*, or stem:—

1. *Annulate*, having a ring.
2. *Naked*, without any.
3. *Squamose*, scaly.
4. *Bulbous*; as in *Agaricus separatus.*
5. *Filiform*; as in *Agaricus crinitus.*

FUNGIC. (*Fungicus*; from *fungus*, the name of a family of plants.) Of or belonging to a fungus.

Fungic acid. *Acidum fungicum.* The expressed juice of the *boletus juglandis*, *boletus pseudo-igniarius*, the *phallus impudicus*, *merulius cantharellus*, or the *peziza nigra*, being boiled to coagulate the albumen, then filtered, evaporated to the consistence of an extract, and acted on by pure alkohol, leaves a substance which is called *fungic acid.*

FUNGIFORM. (*Fungiformis*; from *fungus*, and *forma*, resemblance.) Fungus-like. Applied to any thing that resembles a fungus.

FUNGIN. The fleshy part of mushrooms, deprived by alkohol and water of every thing soluble.

FU'NGUS. (*us*, *i.* m.) 1. In *Surgery*, proud flesh. A term that expresses any luxuriant formation of flesh on an ulcer; and it is applied also to a disease of the structure of a part which enlarges, is soft, and excrescential.

2. The name of an order of plants in the Linnæan system, belonging to the *Cryptogamia* class. This division of plants comprehends many which are poisonous to mankind. The best remedy in this case is immediate vomiting, and the exhibition of glysters, and then a fluid drachm of æther, in a glass of water. The Russians, however, eat almost every species that are of any size, only stewing them thoroughly, and drinking a glass of brandy after them.

Fungus cerebri. *Hernia cerebri.* A tumour which every now and then rises from the brain, through an ulcerated opening in the dura mater, and protrudes through a perforation in the cranium, made by the previous application of the trephine.

Fungus hæmatodes. See *Hæmatoma.*

Fungus igniarius. See *Boletus igniarius.*

Fungus laricis. See *Boletus laricis.*

Fungus melitensis. See *Cynomorium.*

Fungus phalloides. See *Phallus impudicus.*

Fungus rosaceus. See *Bedeguar.*

Fungus salicis. See *Boletus.*

Fungus sambucinus. See *Peziza auricula.*

Fungus vinosus. The dark cobweb-like fungus which vegetates in dry cellars, where wine, ale, and the like are kept.

FUNI'CULUS. (*Funiculus*: diminutive of *funis*, a cord.) A little cord.

Funiculus umbilicalis. See *Umbilical cord.*

The funiculus of a seed is a little filament by which the immature seed adheres to the receptacle, seen in *Pisum sativum*, and *Lunaria annua.*

FU'NIS. (*is*, *is.* m. and f.) A rope or cord.

Funis umbilicalis. See *Umbilical cord.*

FUNNEL. See *Infundibulum.*

Funnel-shaped. See *Infundibuliformis.*

FURCA. (*a*, *æ.* f.) A fork or species of armature of plants. See *Aculeus.*

FURCATUS. Furcate: forked; dividing and often subdividing into two, fork-like; as the stems of most of the *Euphorbiæ*. See *Dichotomous*.

FURCE'LLA INFERIOR. The ensiform cartilage.

F'URCULA. A little fork; applied to the clavicle.

FU'RFUR. (*ur, uris.* m.) 1. Bran. See *Bran*.

2. A disease of the skin, in which the cuticle keeps falling off in small scales like bran. See *Pityriasis*.

FURFURA'CEOUS. (*Furfuraceus;* from *furfur*, bran.) A term applied to the bran-like sediment occasionally deposited in the urine.

FURNACE. (*Furnus*, *i.* m.) The furnaces employed in chemical operations are of three kinds:—

1. The *evaporatory furnace*, which has received its name from its use; it is employed to reduce substances into vapour by means of heat, in order to separate the more fixed principles from those which are more volatile.

2. The *reverberatory furnace*, which name it has received from its construction, the flame being prevented from rising; it is appropriated to distillation.

3. The *forge furnace*, in which the current of air is determined by bellows.

FU'ROR. (*or, oris.* m.) Fury; rage.

FUROR UTERINUS. (From *furo*, to be mad, and *uterus*, the womb.) See *Nymphomania*.

FURROWED. See *Sulcatus*.

FURU'NCULUS. (*us, i.* m.; from *furo*, to rage: so named from its heat and inflammation before it suppurates.) A boil. An inflammation of a subcutaneous gland, known by an inflammatory tumour that does not exceed the size of a pigeon's egg. It always has a central core, and is mostly found in persons of high health, and in the vigour of youth. The existence of a core offers a singularity in this affection that is well worth attending to, and shows that, from some cause or other, the ulcerative part of the process is imperfect. This disease rarely requires medical or surgical treatment, unless the person has many, and then bleeding and purging are required; but, in delicate constitutions, an alterative course of sarsaparilla will be found the best plan.

FUSCUS. 1. Brown.

2. A greyish brown. See *Colour*.

FUSIBILITY. The property by which metals and minerals assume the fluid state.

FUSIBLE. Having the property of becoming fluid by the application of heat: applied to metals.

Fusible metal. A combination of three parts of lead with two of tin, and five of bismuth. It melts at 197° Fahr.

FUSIFORM. *Fusiformis.* Spindle-shaped or tapering. Applied to parts of plants, as roots, &c. which penetrate perpendicularly into the earth; as the carrot, parsnip, radish, &c.

FUSION. (*Fusio;* from *fundo*, to pour out.) A chemical process, by which bodies are made to pass from the solid to the fluid state, in consequence of the application of heat. The chief objects susceptible of this operation are salts, sulphur, and metals. Salts are liable to two kinds of fusion: the one, which is peculiar to saline matters, is owing to water contained in them, and is called *aqueous fusion;* the other, which arises from the heat alone, is known by the name of *igneous fusion*.

FUSUS. (From *fundo*, to pour out.) Poured out.

G.

GABARÆ. (*a, æ.* f.) A mummy.

GABIA'NUM OLEUM. (Called Gabian, from a village in Languedoc, where it abounds.) See *Petroleum rubrum*.

GABI'REA. A fatty kind of myrrh, mentioned by Dioscorides.

GADOLINITE. A hard black-coloured semitransparent mineral from Sweden, composed of silica, yttria, oxide of cerum, and oxide of iron.

GADUS. (*us, i.* m.) The name of a genus of fishes, of the jugular tribe. The following species are brought to the European markets for the use of the table.

GADUS CILIARIS. The Baltic torsk. The Icelanders prepare it by salting and drying, when it becomes an article of commerce, under the name of *Tetteling*. Its flesh is white, tender, and well flavoured.

GADUS MORHUA. The cod-fish. This fish, well known in our markets, abounds in the northern seas. Its flesh is white, tender, and delicious. When salted it is also well-flavoured, and in general esteem.

GADUS ÆGLEFINUS. The haddock. An inhabitant of the northern seas of Europe. The larger ones are much esteemed during the winter; the smaller ones for summer use. They are of easy digestion. Salted and dried, they are eaten at breakfast as a delicacy.

GADUS MINUTUS. Very small, never exceeding six or seven inches in length. It is found in the Mediterranean in great abundance, where it is called a *capelan*, or *officier*.

Gadus merlangus. The whiting. A delicate white fish, in great abundance in the Irish seas, and German ocean.

Gadus pollacius. The whiting pollack, found on the rocky coasts of Britain, and other parts of Europe, and is in great esteem for the table.

Gadus carbonarius. The coal-fish. Very abundant on the rocky coasts of the northern parts of this island, about the Orkneys, and the coast of Yorkshire, where they become two and three feet long, and constitute the chief support of the poor.

Gadus merluccius. The hake. A native of the North and Mediterranean Seas, not much eaten, except by the poor when dried, when it is called poor John or stock-fish.

Gadus molva. The ling. This grows to the length of five or six feet. It is not so good as the *morhua*, when fresh; but dried and salted is much esteemed, and is the common food of the poor in Cornwall, where it is prepared for exportation.

Gadus lota. The burbot. The flesh of this is considered delicious and of easy digestion.

Gadus brosme. The torsk. This swarms in the seas about the Shetland Islands, and forms a considerable article of commerce, either dried, or salted, or packed in barrels.

Gagel. See *Myrica gale*.

GALA'CTIA. (*a, æ.* f.: from γαλα, *lac*, milk; or γαλακτινος, *lacteus*, milky.) Mislactation: embracing defective, excessive, vitiated, premature, erratic, and other morbid secretions of the milk.—*Good's Nosology*.

GALACTINA. (*a, æ.* f.; from γαλα, milk.) Aliment prepared with milk.

GALACTINUS. (From γαλα, milk.) Appertaining to milk: applied to food made of milk.

GALACTIRRHŒ'A. (*a, æ.* f.; from γαλά, milk, and ρεω, to flow.) An excess or overflow of milk.

GALACTITES. (From γαλα, milk: so called, according to Dioscorides, from its whiteness when triturated with water.) A fossil employed by the ancients, sometimes as an astringent, but more frequently as a promoter of milk.—*Pliny*, xxvii. 59. It consists of lime, alumine, magnesia, and carbonic acid.

GALACTO'DES. (From γαλα, milk.) In Hippocrates, it signifies both milk-warm and a milky colour.

GALACTO'PHORUS. (From γαλα, milk, and φερω, to bring or carry.) Galactophorous: milk-bearing. Applied to, 1. That which has the property of increasing the secretion of the milk.

2. The excretory ducts of the glands of the breasts of women, which terminate in the papilla, or nipple, and which are called *ductus galactophori*, because they bring the milk to the nipple.

GALACTOPOIE'TICUS. (From γαλα, milk, and ποιεω, to make.) Galactopoietic, or milk making. The faculty of making milk: applied to particular foods, plants, &c.

GALACTOPO'SIA. (*a, æ.* f.; from γαλα, milk, and πινω, to drink.) The method of curing diseases by a milk diet.

Galæna inanis. Bismuth.

GALA'NGA. (*a, æ.* f.; perhaps its Indian name.) See *Maranta* and *Kæmpferia*.

Galanga major. See *Kæmpferia*.

Galanga minor. See *Maranta galanga*.

GALANGAL. See *Maranta galanga*.

Galangal, English. See *Cyperus longus*.

GALA'XA. (*a, æ.* f.; from γαλα, milk.) 1. The white line in the heavens, called the milky way, and hence applied to,

2. The porosities in the cranium.

3. The lacteals in the mesentery.

Galbanatum. A preparation of galbanum.

GALBANUM. (*um, i.* n.; from *chalbanah*, Heb.) See *Bubon galbanum*.

Ga'lbeum. (From *Galba*, the emperor, who is said to have worn them.) A medical bracelet worn by the Romans.

Galbula. (From *galbus*, yellow: so called from its colour.) The cone of the cypress. See *Cupressus sempervirens*.

GA'LBULUS. (*us, i.* m.; from *galbus*, yellow.) 1. The skin of the body was formerly so called when naturally yellow.

2. The name of the nut or little round ball of the cypress-tree.

3. Gærtner applies this term, the classical name of the cypress fruit, which is a true *strobilus*, to a globular spurious berry with three or more seeds formed by the coalescing of a few scales, of a fertile catkin become succulent, which happens in the Juniper.—*Smith*.

GA'LDA. A gum-resin mentioned by old writers, but totally forgot in the present day, and not to be obtained. Externally, it is of a brown colour, but white within, of a hard lamellated structure, and smells and tastes somewhat like elemi. When burnt it gives out an agreeable odour. It was formerly used as a warm stimulating medicine, and applied in plasters as a strengthener.

GA'LE. See *Myrica gale*.

GA'LEA. (*a, æ.* f.; from γαλη, a cat, of the skin of which it was formerly made.) A helmet.

1. In *Anatomy*, the amnios is so called, because it surrounds the fœtus like a helmet.

2. In *Surgery*, a bandage for the head.

3. In *Pathology*, a species of headache was so called, when it surrounded the head like a helmet.

4. In *Botany*, applied to the upper arched lip of ringent and personate corols. See *Corolla*.

GALEANTHRO'PIA. (*a, æ.* f.; this term seems to be from γαλη, a cat, and ανθρωπος, a man.) A species of madness, in which a person imagines himself to be a cat, and imitates its manners.

GALEA'TUS. (From γαλη, a helmet.) Helmet shaped; applied to leaves, flowers, &c.

GA'LEGA. (*a, æ.* f.; from γαλα, milk: so named because it increases the milk of animals which eat it, particularly of goats.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

2. The pharmacopœial name of the goat's rue. See *Galega officinalis.*

GALEGA OFFICINALIS. The systematic name of the goat's rue: called also, *Galega*, and *Ruta capraria.* From the little smell and taste of this plant, *Galega officinalis—leguminibus strictis, erectis; foliolis lanceolatis, striatis, nudis*, of Linnæus, it may be supposed to possess little virtue. In Italy, the leaves are eaten amongst salads.

Galen's madwort. See *Marrubium.*

GALE'NA. (*a, æ.* f.; from γαληνη, a calm.) 1. An ancient name of the theriaca, before the addition of vipers as an ingredient.

2. (From γαλειν, to shine.) The name of an ore formed by the combination of lead with sulphur. A native sulphuret of lead ore.

GAL'ENIC. *Galenicus.* That practice of medicine which conforms to the rules of Galen, and runs much upon multiplying herbs and roots in the same composition, was long called Galenical medicine, after the manner of Galen. It is opposed to chemical medicine, which, by the force of fire, and a great deal of art, fetches out the virtues of bodies, chiefly mineral, into a small compass.

GALE'NIUM. (Γαληνιον, from γαληνη, galena.) A cataplasm; in the composition of which was the galena.

GALENUS, CLAUDIUS, was born at Pergamus, in Asia Minor, in 131. His father, Nicon, having instructed him in the rudiments of knowledge, sent him to attend the best schools of philosophy. Galen soon displayed his judgment by selecting what appeared most rational from the different sects; but he totally rejected the Epicurean system, which was then in fashion. About the age of 17, he began his attachment to the science of medicine, over which he was destined to preside for many centuries with oracular authority. During his youth, he travelled much, that he might converse with the most intelligent physicians of the age, and inform himself concerning the drugs brought from other countries. He resided several years at Alexandria, which was then the great resort of men of science, and the best school of medicine in the world. At the age of 28, returning to his native place, he met with distinguished success in practice; but four years after, he attempted to establish himself at Rome. Here he encountered much opposition from his professional brethren, who stigmatised him as a theorist, and even as a dealer in magic; and though he gained the esteem of several men of learning and rank, yet wanting temper and experience sufficient to maintain a successful contest with a numerous and popular party, he was obliged to return to Pergamus within five years, under the pretence of avoiding the plague, which then raged at Rome. He was, however, soon after sent for to attend the emperors Marcus Aurelius and Lucius Verus, of whom the latter died; and the former conceived so high an opinion of Galen, that subsequently, during his German expedition, he committed his two sons to the care of that physician. These princes were seized with fevers, in which Galen having prognosticated a favourable issue, contrary to the opinion of all his colleagues, and having accordingly restored them to health, he attained an eminence of reputation which enabled him to defy the power, and, finally, to ruin the credit, of his former opponents. It is not certain whether he continued at Rome till his death, nor at what precise period this occurred; but Fabricius asserts that he attained the age of 70, which corresponds to the 7th year of Severus; and his writings appear to indicate that he was still in that city in the early part of this emperor's reign. The greatest part of Galen's life was spent in the zealous pursuit of knowledge, and especially of every thing which might have the least connection with medicine; and he is said to have composed about 750 different essays on such subjects. He appears, however, to have been too much elated with the consciousness of his superior endowments, and to have behaved rather contemptuously towards his brethren; which may have inflamed their opposition to him. The chief object in his writing appears to be to illustrate those of Hippocrates, which he thought succeeding physicians had misunderstood or misrepresented: in this he has displayed great acuteness and learning, though he has not much increased the stock of practical information. His example, too, had the unfortunate effect of introducing a taste for minute distinctions and abstract speculations; while the diligent observation of nature, which distinguished the father of medicine, fell into neglect. We must, therefore, regret that the splendour of Galen's talents so completely dazzled his successors, that, until about the middle of the 17th century, his opinion bore almost undivided sway. Numerous editions of his works in the original Greek, or translated into Latin, have been printed in modern times.

GALEO'BDOLON. (*on, i.* n.; from γαλεη, *felis*, and βδολος, *crepitus.*) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

GALEO'PSIS. (*is, eos.* f.; from καλος, good, and οψις, vision: so called because it was thought good for the sight; or from γαλη, a cat, and οψις, aspect: the flowers gaping like the open mouth of that animal.) The name of a genus of plants. Class, *Didynamia;* Order, *Gymnospermia.*

GALEOPSULON. (*on, i.* n.; from καλος, good, and οψις, sight: so called because it is supposed to assist the sight.) Most probably the *Stachys palustris*, now fallen into disuse.

GALERI'CULUM. (*um, i.* n. diminutive.) A little hat.

GALERICULUM APONEUROTICUM. A name in old writings for the tendinous expansion which lies over the pericranium.

GALIA. (*a, æ.* f.; from *gallæ*, galls: so named because galls entered into the composition.) There were two medicines of this name; the one called *pure*, the other *aromatic. Galia moschata* contained aloes, amber, and

musk; sometimes, nutmeg: *galia zibettina*, civet. The form of these medicines was the lozenge.

Galiancon. (From γαλιος, a weasel, and αγκων, the elbow.) Those who have one arm shorter than the other are called *Galiancones*, from their resembling a weasel.

Galipot. See *Barras.*

GA'LIUM. (*um, i.* n.; from γαλα, milk: some species having the property of coagulating milk.) 1. The name of a genus of plants in the Linnean system. Class, *Tetrandria*; Order, *Monogynia*.

2. The pharmacopœial name of the herb cheese-rennet, or ladies' bedstraw. See *Galium verum.*

3. A name for madder. See *Rubia.*

Galium album. See *Galium mollugo.*

Galium aparine. The systematic name of the goose-grass: called also, Cleavers; Cleaver's bees; Goose-share; Hayriff. *Ampelocarpus, Aparine, Asparine, Asperula, Philadelphus, Philanthropos, Omphalocarpus,* and *Ixus.* This plant is common in our hedges and ditches: *Galium aperine—foliis octonis lanceolatis carinatis scabris retrorsum aculeatis, geniculis venosis, fructu hispido,* of Linnæus. The expressed juice has been given with advantage as an aperient and diuretic in incipient dropsies; but the character in which it has of late been chiefly noticed, is that of a remedy against cancer. A tea-cupful, internally, gradually increased to half a pint, two or three times a day, and the herb applied, in cataplasm, externally, has been said to cure cancers. Such beneficial results are not confirmed by the experience of others.

Galium mollugo. The systematic name of the greater ladies' bedstraw; called also, *Galium album. Galium mollugo—foliis octonis, ovato-linearibus, subserratis, patentissimis, mucronatis; caule flaccido, ramis patentibus,* of Linnæus. This herb, with its flowers, is used medicinally. Five ounces, or more of the expressed juice, taken every evening upon an empty stomach, is said to cure epilepsy.

Galium verum. The systematic name of the true ladies' bedstraw, or cheese-rennet. The *Galium* of the pharmacopœias. The tops of this plant, *Galium verum—foliis octonis, linearibus, sulcatis; ramis floriferis, brevibus,* of Linnæus, were long used as an efficacious medicine in the cure of epilepsy; but, in the practice of the present day, they are abandoned. Indeed, from the sensible qualities of the plant, little can be expected. The leaves and flowers possess the property of curdling milk; it is on that account styled cheese-rennet.

GALL. See *Bile.*

Gall-bladder. *Vesicula fellis.* An oblong membraneous receptacle, situated under the liver, to which it is attached in the right hypochondrium. It is composed of three membranes, a common, fibrous, and villous. Its use is to retain the bile which regurgitates from the hepatic duct, there to become thicker, more acrid, and bitter, and to send it through the cystic duct, which proceeds from its neck into the ductus communis choledochus, to be sent on to the duodenum.

Gall-sickness. A popular name for the remitting fever occasioned by marsh miasmata, in the Netherlands. See *Remittent fever.*

Gall-stone. *Calculus biliosus. Chololithus.* Biliary concretion. A hard concrete body, formed in the gall-bladder of animals. Of these there are four different kinds:—

1. The first has a *white colour*, and, when broken, presents crystalline plates, or striæ, brilliant, and white like mica, and having a soft greasy feel. Sometimes its colour is *yellow* or *greenish*; and it has constantly a nucleus of inspissated bile. It is altogether insoluble in water; but hot alkohol dissolves it with facility. It is soluble in oil of turpentine. When melted, it has the appearance of oil, and exhales the smell of melted wax; when suddenly heated, it evaporates altogether in a thick smoke. It is soluble in pure alkalies, and the solution has all the properties of a soap. Nitric acid also dissolves it; but it is precipitated unaltered by water. This matter, which is evidently the same with the crystals Cadet obtained from bile, and which he considered as analogous to sugar of milk, has a strong resemblance to spermaceti. Like that substance, it is of an oily nature, and inflammable; but it differs from it in a variety of particulars. Since it is contained in bile, it is not difficult to see how it may crystallise in the gall-bladder, if it happen to be more abundant than usual; and the consequence must be a gall-stone of this species. Fourcroy found a quantity of the same substance in the dried human liver. He called it *adipocere.*

2. The second species of biliary calculus is of a round or polygonal shape, often of a *grey colour* externally, and *brown* within. It is formed of concentric layers of a matter, which seems to be inspissated bile; and there is usually a nucleus of the white crystalline matter at the centre. For the most part, there are many of this species of calculus in the gall-bladder together; indeed it is frequently filled with them. The calculi belonging to this species are often light and friable, and of a brownish-red colour. The gall-stones of oxen, used by painters, belong to this species. These are also adipocere.

3. The third species of calculi are most numerous of all. Their colour is often deep brown or green; and, when broken, a number of crystals of the substance resembling spermaceti are observable, mixed with inspissated bile. The calculi belonging to these three species are soluble in alkalies, in soap ley, in alkohol, and in oils.

4. Concerning the fourth species of gall-stone, very little is known with accuracy. Dr. Saunders tells us, that he has met with some gall-stones insoluble both in alkohol and oil of turpentine; some of which do not flame, but become red, and consume to ashes like charcoal. Haller quotes several examples of similar calculi. Gall-stones often occur in

the inferior animals, particularly in cows and hogs; but the biliary concretions of these animals have not hitherto been examined with much attention. From the analysis of Fourcroy, it would appear that gall-stones consist principally of a resinous matter, combined with a peculiar oil, and a certain quantity of albumen, forming three of the constituent principles of bile. All these principles have of late, however, been denied by Berzelius, who has discovered that the bile becomes resinous only in the process of experiment, by supersaturating it with acids, while the material hitherto regarded as albumen, is nothing more than a small portion of mucus furnished from the gall-bladder.

Gall-stones often lie quiet; so that, until dissection after death, some are never known to exist: in which case, whatever be its size, the growth takes place, and the containing organs dilate so gradually as to produce little or no inconvenience. In Dr. Baillie's plates, there is an example of a concretion of the size of a pullet's egg, which filled up the whole of the fundus of the gall-bladder, and never caused any inconvenience. A gall-stone weighing two drachms was found in the gall-bladder of the late Lord Bute, though he had never complained of the jaundice, nor of any disorder which Dr. Heberden could attribute to that cause: and the gall-bladder has been found, in several instances, filled with large gall-stones, from which no inconvenience ever resulted. Where, however, they are prevented from passing through the gall-ducts, they obstruct the passage of the bile into the intestines, and produce also many inconvenient symptoms, particularly the jaundice. See *Icterus.*

GA'LLA. (*a, æ.* f.; from *Gallus,* a river in Bithynia.) A gall-nut. See *Quercus cerris.*

Galla turcica. See *Quercus cerris.*

GALLIC. (*Gallicus;* from Gallia, Gaul.) 1. Belonging to the French: hence the venereal disease, which was supposed by some to have originated in France, was called the gallic disease.

2. (From *galla,* the gall or oak nut.) Belonging to the gall-nut; as gallic acid, &c.

Gallic acid. *Acidum gallicum.* An acid found in vegetable substances possessing astringent properties, but most abundantly in the excrescences termed galls, whence it derives its name. It may be obtained by macerating galls in water, filtering and suffering the liquor to stand exposed to the air. It will grow mouldy, be covered with a thick glutinous pellicle, abundance of glutinous flocks will fall down, and, in the course of two or three months, the sides of the vessel will appear covered with small yellowish crystals, abundance of which will likewise be found on the under surface of the supernatant pellicle. These crystals may be purified by solution in alkohol, and evaporation to dryness.

Another simple process for obtaining this acid, is to boil an ounce of powdered galls in sixteen ounces of water to eight, and strain. Dissolve two ounces of alum in water, precipitate the alumina by carbonate of potash; and after edulcorating it completely by repeated ablutions, add it to the decoction, frequently stirring the mixture with a glass rod. The next day filter the mixture, wash the precipitate with warm water, till this will no longer blacken sulphate of iron; mix the washings with the filtered liquor, evaporate, and the gallic acid will be obtained in fine needled crystals.

These crystals obtained in any of these ways, however, are contaminated with a small portion of extractive matter; and, to purify them, they may be placed in a glass capsule in a sand-heat, and sublimed into another capsule inverted over this, and kept cool. This acid is soluble in 20 parts of cold water, and in three parts at a boiling heat. It is more soluble in alkohol, which takes up an equal weight if heated, and one fourth of its weight cold.

It has an acido-astringent taste, and reddens tincture of litmus. It does not attract humidity from the air.

The gallic acid is of extensive use in the art of dyeing, as it constitutes one of the principal ingredients in all the shades of black, and is employed to fix or improve several other colours. It is well known as an ingredient in ink.

GA'LLICUS. See *Gallic.*

GALLINACEUS. (From *gallus,* a cock.) Appertaining to the cock-fowl, or to poultry.

Gallinaceus lapis. A variety of obsidian.

GALLINA'GO. (*o, inis.* f.; diminutive of *gallus,* a cock.) 1. The woodcock.

2. An eminence within the prostate gland is called *caput gallinaginis,* from its fancied resemblance to a woodcock's head.

Galli'trichis. *Gallitrichum.* Corrupted from *callitrichis,* or *callitrichum.* See *Callitriche.*

Ga'llium. See *Galium.*

GALLUS. (*us, i.* m.) The cock, or male bird of the *Phasianus gallus.*

Gallus domesticus. See *Phasianus.*

Galre'da. (From *galrey,* German for jelly.) Jelly.

GA'LVANISM. (*Galvanismus;* from *Galvani,* the inventor.) A professor of anatomy, in the university of Bologna, named *Galvani,* was one day making experiments on electricity in his elaboratory: near the machine were some frogs that had been flayed, the limbs of which became convulsed every time a spark was drawn from the apparatus. Galvani, surprised at this phænomenon, made it a subject of investigation, and discovered that metals, applied to the nerves and muscles of these animals, occasioned powerful and sudden contractions, when disposed in a certain manner. He gave the name of animal electricity to this order of new phænomena, from the analogy that he considered existing between these effects and those produced by electricity.

The name animal electricity has been superseded, notwithstanding the great analogy that exists between the effects of electricity and those of galvanism, in favour of the latter term; which is not only more applicable to the generality of the phænomena, but likewise serves to perpetuate the memory of the discoverer.

In order to give rise to galvanic effects in animal bodies, it is necessary to establish a communication between two points of one series of nervous and muscular organs. In this manner a circle is formed, one arch of which consists of the animal parts, rendered the subject of experiment, while the other arch is composed of excitatory instruments, which generally consist of several pieces, some placed under the animal parts called supporters, others destined to establish a communication between the latter, are called conductors. To form a complete galvanic circle, take the thigh of a frog, deprived of its skin; detach the crural nerve, as far as the knee: put it on a piece of zinc; put the muscles of the leg on a piece of silver; then finish the excitatory arch, and complete the galvanic circle by establishing a communication by means of the two supporters; by means of iron or copper wire, pewter, or lead. The instant that the communicators touch the two supporters, a part of the animal arch formed by the two supporters will be convulsed. Although this disposition of the animal parts, and of galvanic instruments, be most favourable to the development of the phænomena, yet the composition of the animal and excitatory arch may be much varied. Thus contractions are obtained by placing the two supporters under the nerve, and leaving the muscle out of the circle, which proves that nerves essentially constitute the animal arch.

It is not necessary for nerves to be entire in order to produce contractions. They take place whether the organs be tied or cut through, provided there exists a simple contiguity between the divided ends. This proves that we cannot strictly conclude what happens in muscular action, from that which takes place in galvanic phænomena; since, if a nerve be tied or divided, the muscles on which this is distributed lose the power of action.

The cuticle is an obstacle to galvanic effects; they are always feebly manifested in parts covered by it. When it is moist, fine, and delicate, the effect is not entirely interrupted. Humboldt, after having detached the cuticle from the posterior part of the neck and back, by means of two blisters, applied plates of metal to the bare cutis, and, at the moment of establishing a communication, he experienced sharp prickings, accompanied with a sero-sanguineous discharge.

If a plate of zinc be placed under the tongue, and a flat piece of silver on its superior surface, on making them touch each other, an acerb taste will be perceived, accompanied with a slight trembling.

The excitatory arch may be constructed with three, two, or even one metal only, with alloys, amalgams, or other metallic or mineral combinations, carbonated substances, &c. It is observed that metals which are in general the most powerful excitors, induce contractions so much the more as they have an extent of surface. Metals are all more or less excitants; and it is observed that zinc, gold, silver, and pewter, are of the highest rank; then copper, lead, nickel, antimony, &c.

Galvanic susceptibility, like muscular irritability, is exhausted by too long continued exercise, and is recruited by repose. Immersion of nerves and muscles in alkohol and opiate solutions diminishes, and even destroys, this susceptibility, in the same manner, doubtless, as the immoderate use of these substances in the living man blunts, and induces paralysis in muscular action. Immersion in oxymuriatic acid restores the fatigued parts, to be again acted on by the stimulus. Animals killed by the repeated discharge of an electric battery, acquire an increase of galvanic susceptibility; and this property subsists unchanged in animals destroyed by submersion in mercury, pure hydrogene gas, azote, and ammonia; and, finally, it is totally annihilated in animals suffocated by the vapour of charcoal.

Galvanic susceptibility is extinct in the muscles of animals of warm blood, in proportion as vital heat is dissipated: sometimes even when life is terminated in convulsions, contractility cannot be put into action, although warmth be not completely gone, as though the vital property were consumed by the convulsion, amidst which the animals had expired. In those of cold blood, on the contrary, it is more durable. The thighs of frogs, long after being separated from every thing, and even to the instant of incipient putrefaction, are influenced by galvanic stimuli; doubtless because irritability, in these animals, is less intimately connected with respiration, and life more divided among the different organs, which have less occasion to act on each other for the execution of its phænomena. The galvanic chain does not produce sensible actions (that is, contractions,) until the moment it is completed, by establishing a communication with the parts constituting it. During the time it is complete, that is, throughout the whole space of time that the communication remains established, every thing remains tranquil; nevertheless, galvanic influence is not suspended: in fact, excitability is evidently increased, or diminished, in muscles that have been long continued in the galvanic chain, according to the difference of the reciprocal situation of the connecting metals.

If silver has been applied to nerves, and zinc to muscles, the irritability of the latter increases in proportion to the time they have remained in the chain. By this method, the thighs of frogs have been revivified in some degree, and afterwards become sensible to stimuli that before had ceased to act on them. By distributing the metals in an inverse man-

ner, applying zinc to nerves and silver to muscles, an effect absolutely contrary is observed; and the muscles that possessed the most lively irritability when placed in the chain, seem to be rendered entirely paralytic if they remain long in this situation.

This difference evidently depends on the direction of the galvanic fluid, determined towards the muscles or nerves, according to the manner in which these muscles are disposed; and this is of some importance to be known for the application of galvanic means to the cure of diseases.

Galvanic Pile.—Volta's apparatus is as follows:—Raise a pile, by placing a plate of zinc, a flat piece of wet card, and a plate of silver, successively; then a second piece of zinc, &c. until the elevation is several feet high; for the effects are greater in proportion to its height; then touch both extremities of the pile, at the same instant, with one piece of iron wire; at the moment of contact, a spark is excited from the extremities of the pile, and luminous points are often perceived at different heights, where the zinc and silver come into mutual contact. The zinc end of this pile appears to be negatively electrified; that formed by the silver, on the contrary, indicates marks of positive electricity.

If we touch both extremities of the pile, after having dipped our hands into water, or, what is better, a saline solution, a commotion, followed by a disagreeable prickling in the fingers and elbow, is felt.

If we place in a tube filled with water, and hermetically closed by two corks, the extremities of two wires of the same metal, which are in contact at the other extremity, one with the summit, the other with the base of the pile; these ends, even when separated only by the space of a few lines, experience evident changes at the instant the extremities of the pile are touched: the wire in contact with that part of the pile composed of silver becomes covered with bullæ of hydrogene gas; that which touches the extremity formed by zinc, becomes oxidised, or gives off oxygene gas. Fourcroy attributes this phænomenon to the decomposition of water by the galvanic fluid, which abandons the oxygene to the metal that touches the positive extremity of the pile; then conducts the other gas invisibly to the end of the other wire, there to be disengaged.

Galvanic Trough.—This is a much more convenient apparatus. Plates of two metals, commonly zinc and copper, are fastened together, and cemented into a wooden trough, so as to form a number of cells; or earthenware troughs with partitions being procured, the metals, connected by a slip, are suspended over these, so that in each cell, except at the ends, there is a plate of each metal; then a diluted acid (usually the sulphuric, nitric, or muriatic, mixed with from twelve to twenty parts of water,) is poured into the trough. It is necessary that the metals be placed in the same order throughout, or one series will counteract another. The zinc end becomes negative, the copper positive; and the power is in proportion to the number of the series; and several such troughs may be connected together, so as to form a most powerful apparatus. See *Electricity*.

From the number of experiments of Davy, many new and important facts have been established, and galvanism has been found one of the most powerful agents in chemistry: by its influence, platina wire has been melted; gold, silver, copper, and most of the metals, have easily been burnt; the fixed alkalies, and many of the earths have been made to appear as consisting of a metallic base, and oxygene; and compound substances, which were before extremely difficult to decompose, are now, by the aid of galvanism, easily resolved into their constituents.

The galvanic influence has been considered by some practitioners as likely to increase the nervous influence in paralyzed and debilitated states of the muscular system, and many ingenious ways of applying it have been resorted to; but it does not seem to have been useful. Dr. Ure's observations and experiments on this subject, and on galvanism, are highly interesting. The following account of them is extracted from his Chemical Dictionary:—"Many experiments," he observes, "have been performed, in this country and abroad, on the bodies of criminals, soon after their execution. Vassali, Julio, and Rossi made an ample set, on several bodies decapitated at Turin. They paid particular attention to the effect of galvanic electricity on the heart, and other involuntary muscles: a subject of much previous controversy. Volta asserted, that these muscles are not at all sensible to this electric power. Fowler maintained, that they were affected, but with difficulty and in a slight degree. This opinion was confirmed by Vassali; who further showed, that the muscles of the stomach and intestines might thus also be excited. Aldini, on the contrary, declared, that he could not affect the heart by his most powerful galvanic arrangements.

Most of the above experiments were, however, made either without a voltaic battery, or with piles feeble in comparison with those now employed. Those, indeed, performed on the body of a criminal, at Newgate, in which the limbs were violently agitated, the eyes opened and shut, the mouth and jaws worked about, and the whole face thrown into frightful convulsions, were made by Aldini with a considerable series of voltaic plates.

A circumstance of the first moment, in my opinion, has been too much overlooked in experiments of this kind,—that a muscular mass through which the galvanic energy is directly transmitted, exhibits very weak contractile movements, in comparison with those which can be excited by passing the influence along the principal nerve of the muscle. Inattention to this important distinction, I conceive to be the principal source of the slender effects hitherto produced in such experiments on the

heart, and other muscles independent of the will. It ought also to be observed, that too little distinction has been made between the positive and negative poles of the battery; though there are good reasons for supposing, that their powers on muscular contraction are by no means the same.

According to Ritter, the electricity of the positive pole augments, while the negative diminishes the actions of life. Tumefaction of parts is produced by the former; depression by the latter. The pulse of the hand, he says, held a few minutes in contact with the positive pole, is strengthened; that of the one in contact with the negative is enfeebled: the former is accompanied with a sense of heat; the latter with a feeling of coldness. Objects appear to a positively electrified eye, larger, brighter, and red; while to one negatively electrified, they seem smaller, less distinct, and bluish,—colours indicating opposite extremities of the prismatic spectrum. The acid and alkaline tastes, when the tongue is acted on in succession by the two electricities, are well known, and have been ingeniously accounted for by Sir H. Davy, in his admirable Bakerian Lectures. The smell of oxymuriatic acid, and of ammonia, are said by Ritter to be the opposite odours, excited by the two opposite poles; as a full body of sound and a sharp tone are the corresponding effects on the ears. These experiments require verification.

Consonant in some respects, though not in all, with these statements, are the doctrines taught by a London practitioner, experienced in the administration of medical electricity. He affirms, that the influence of the electrical fluid of our common machines, in the cure of diseases, may be referred to three distinct heads: first, the form of *radii*, when projected from a point positively electrified; secondly, that of a star, or the negative fire, concentrated on a brass ball; thirdly, the Leyden explosion. To each of these forms he assigns a specific action. The first acts as a sedative, allaying morbid activity; the second, as a stimulant; and the last has a deobstruent operation, in dispersing chronic tumours. An ample narrative of cases is given in confirmation of these general propositions. My own experience leads me to suppose, that the negative pole of a voltaic battery gives more poignant sensations than the positive.

The most precise and interesting researches on the relation between voltaic electricity and the phænomena of life, are those contained in Dr. Wilson Philip's Dissertations in the Philosophical Transactions, as well as in his Experimental Enquiry into the Laws of the Vital Functions, more recently published.

In his earlier researches he endeavoured to prove, that the circulation of the blood, and the action of the involuntary muscles, were independent of the nervous influence. In a late paper, read in January 1816, he showed the immediate dependance of the secretory functions on the nervous influence.

The eighth pair of nerves distributed to the stomach, and subservient to digestion, were divided by incisions in the necks of several living rabbits. After the operation, the parsley which they ate remained without alteration in their stomachs; and the animals, after evincing much difficulty of breathing, seemed to die of suffocation. But when in other rabbits, similarly treated, the galvanic power was transmitted along the nerve, below its section, to a disc of silver, placed closely in contact with the skin of the animal, opposite to its stomach, no difficulty of breathing occurred. The voltaic action being kept up for twenty-six hours, the rabbits were then killed, and the parsley was found in as perfectly digested a state, as that in healthy rabbits fed at the same time; and their stomachs evolved the smell peculiar to that of a rabbit during digestion. These experiments were several times repeated with similar results.

Hence it appears that the galvanic energy is capable of supplying the place of the nervous influence, so that, while under it, the stomach, otherwise inactive, digests food as usual. I am not, however, willing to adopt the conclusion drawn by its ingenious author, that the 'identity of galvanic electricity and nervous influence is established by these experiments.' They clearly show a remarkable analogy between these two powers, since the one may serve as a substitute for the other. It might possibly be urged by the anatomist, that as the stomach is supplied by twigs of other nerves, which communicate under the place of Dr. Philip's section of the *par vagum*, the galvanic fluid may operate merely as a powerful stimulus, exciting those slender twigs to perform such an increase of action as may compensate for the want of the principal nerve. The above experiments were repeated on dogs, with like results; the battery never being so strong as to occasion painful shocks.

The removal of dyspnœa, as stated above, led him to try galvanism as a remedy in asthma. By transmitting its influence from the nape of the neck to the pit of the stomach, he gave decided relief in every one of twenty-two cases, of which four were in private practice, and eighteen in the Worcester Infirmary. The power employed varied from ten to twenty-five pairs.

The general inferences deduced by him from his multiplied experiments, are, that voltaic electricity is capable of effecting the formation of the secreted fluids, when applied to the blood in the same way in which the nervous influence is applied to it; and that it is capable of occasioning an evolution of caloric from arterial blood. When the lungs are deprived of the nervous influence, by which their function is impeded and even destroyed, when digestion is interrupted by withdrawing this influence from the stomach, these two vital functions are renewed by exposing them to the influence of a galvanic trough. 'Hence,' says he, 'galvanism seems capable of per-

forming all the functions of the nervous influence in the animal economy; but obviously it cannot excite the functions of animal life, unless when acting on parts endowed with the living principle.'

These results of Dr. Philip have been recently confirmed by Dr. Clarke Abel, of Brighton, who employed, in one of the repetitions of the experiments, a comparatively weak, and in the other a considerable power of galvanism. In the former, although the galvanism was not of sufficient power to occasion evident digestion of the food, yet the efforts to vomit, and the difficulty of breathing, constant effects of dividing the eighth pair of nerves, were prevented by it. These symptoms recurred when it was discontinued, and vanished on its re-application. 'The respiration of the animal,' he observes, 'continued quite free during the experiment, except when the disengagement of the nerves from the tin-foil rendered a short suspension of the galvanism necessary during their re-adjustment.' — 'The non-galvanised rabbit breathed with difficulty, wheezed audibly, and made frequent attempts to vomit.' In the latter experiment, in which the greater power of galvanism was employed, digestion went on as in Dr. Philip's experiments.—*Jour. Sc.* ix.

Gallois, an eminent French physiologist, had endeavoured to prove, that the motion of the heart depends entirely upon the spinal marrow, and immediately ceases when the spinal marrow is removed or destroyed. Dr. Philip appears to have refuted this notion, by the following experiments. Rabbits were rendered insensible by a blow on the occiput; the spinal marrow and brain were then removed, and the respiration kept up by artificial means; the motion of the heart, and the circulation, were carried on as usual. When spirit of wine, or opium, was applied to the spinal marrow or brain, the rate of the circulation was accelerated.

A middle-sized, athletic, and extremely muscular man, about thirty years of age, was the subject of the following highly interesting experiments. He was suspended from the gallows nearly an hour, and made no convulsive struggle after he dropped; while a thief, executed along with him, was violently agitated for a considerable time. He was brought to the anatomical theatre in about ten minutes after he was cut down. His face had a perfectly natural aspect, being neither livid nor tumefied; and there was no dislocation of his neck. Dr. Jeffray, the professor of anatomy, having on the preceding day requested me, says Dr. Ure (from whose Dictionary this article is abridged), to perform the galvanic experiments, I sent to his theatre with this view, next morning, my *minor* voltaic battery, consisting of 270 pairs of four-inch plates, with wires of communication, and pointed metallic rods with insulating handles, for the more commodious application of the electric power. About five minutes before the police officers arrived with the body, the battery was charged with a dilute nitro-sulphuric acid, which speedily brought it into a state of intense action. The dissections were skilfully executed by Mr. Marshall, under the superintendence of the professor.

Exp. 1. A large incision was made into the nape of the neck, close below the *occiput*. The posterior half of the *atlas vertebra* was then removed by bone forceps, when the spinal marrow was brought into view. A profuse flow of liquid blood gushed from the wound, inundating the floor. A considerable incision was at the same time made in the left hip, through the great gluteal muscle, so as to bring the sciatic nerve into sight; and a small cut was made in the heel. From neither of these did any blood flow. The pointed rod connected with one end of the battery, was now placed in contact with the spinal marrow, while the other rod was applied to the sciatic nerve. Every muscle of the body was immediately agitated with convulsive movements, resembling a violent shuddering from cold. The left side was most powerfully convulsed at each renewal of the electric contact. On moving the second rod from the hip to the heel, the knee being previously bent, the leg was thrown out with such violence as nearly to overturn one of the assistants, who in vain attempted to prevent its extension.

Exp. 2. The left phrenic nerve was now laid bare at the outer edge of the *sterno-thyroideus* muscle, from three to four inches above the clavicle; the cutaneous incision having been made by the side of the sterno-cleido-mastoideus. Since this nerve is distributed to the diaphragm, and since it communicates with the heart through the eighth pair, it was expected, by transmitting the galvanic power along it, that the respiratory process would be renewed. Accordingly, a small incision having been made under the cartilage of the seventh rib, the point of the one insulating rod was brought into contact with the great head of the diaphragm, while the other point was applied to the phrenic nerve in the neck. This muscle, the main agent of respiration, was instantly contracted, but with less force than was expected. Satisfied, from ample experience on the living body, that more powerful effects can be produced in galvanic excitation, by leaving the extreme communicating rods in close contact with the parts to be operated on, while the electric chain or circuit is completed by running the end of the wires along the top of the plates in the last trough of either pole, the other wire being steadily immersed in the last cell of the opposite pole, I had immediate recourse to this method. The success of it was truly wonderful. Full, nay, laborious breathing, instantly commenced. The chest heaved, and fell; the belly was protruded, and again collapsed, with the relaxing and retiring diaphragm. This process was continued, without interruption, as long as I continued the electric discharges.

In the judgment of many scientific gentlemen who witnessed the scene, this respiratory

experiment was perhaps the most striking ever made with a philosophical apparatus. Let it also be remembered, that for full half an hour before this period, the body had been well nigh drained of its blood, and the spinal marrow severely lacerated. No pulsation could be perceived meanwhile at the heart or wrist; but it may be supposed, that but for the evacuation of the blood,—the essential stimulus of that organ,—this phænomenon might also have occurred.

Exp. 3. The supra-orbital nerve was laid bare in the forehead, as it issues through the supra-ciliary *foramen*, in the eyebrow: the one conducting rod being applied to it, and the other to the heel, most extraordinary grimaces were exhibited every time that the electric discharges were made, by running the wire in my hand along the edges of the last trough, from the 220th to the 270th pair of plates: thus fifty shocks, each greater than the preceding one, were given in two seconds. Every muscle in his countenance was simultaneously thrown into fearful action: rage, horror, despair, anguish, and ghastly smiles, united their hideous expression in the murderer's face, surpassing far the wildest representations of a Fuseli or a Kean. At this period several of the spectators were forced to leave the apartment from terror or sickness, and one gentleman fainted.

Exp. 4. The last galvanic experiment consisted in transmitting the electric power from the spinal marrow to the ulnar nerve, as it passes by the internal condyle at the elbow: the fingers now moved nimbly, like those of a violin performer; an assistant, who tried to close the fist, found the hand to open forcibly, in spite of his efforts. When the one rod was applied to a slight incision in the tip of the fore-finger, the fist being previously clenched, that finger extended instantly; and, from the convulsive agitation of the arm, he seemed to point to the different spectators, some of whom thought he had come to life.

About an hour was spent in these operations.

In deliberating on the above galvanic phænomena, we are almost willing to imagine, that if, without cutting into and wounding the spinal marrow and blood-vessels in the neck, the pulmonary organs had been set a-playing at first (as I proposed), by electrifying the phrenic nerve (which may be done without any dangerous incision), there is a probability that life might have been restored. This event, however little desirable with a murderer, and perhaps contrary to law, would yet have been pardonable in one instance, as it would have been highly honourable and useful to science. From the accurate experiments of Dr. Philip it appears, that the action of the diaphragm and lungs is indispensable towards restoring the suspended action of the heart and great vessels, subservient to the circulation of the blood.

It is known that cases of death-like lethargy, or suspended animation, from disease and accidents, have occurred, where life has returned, after longer interruption of its functions than in the subject of the preceding experiments. It is probable, when apparent death supervenes from suffocation with noxious gases, &c. and when there is no organic læsion, that a judiciously directed galvanic experiment will, if any thing will, restore the activity of the vital functions. The plans of administering voltaic electricity hitherto pursued in such cases, are, in my humble apprehension, very defective. No advantage, we perceive, is likely to accrue from passing electric discharges across the chest, directly through the heart and lungs. On the principles so well developed by Dr. Philip, and now illustrated on Clydesdale's body, we should transmit along the channel of the nerves that substitute for nervous influence, or that power which may perchance awaken its dormant faculties. Then, indeed, fair hopes may be formed of deriving extensive benefit from galvanism; and of raising this wonderful agent to its expected rank among the ministers of health and life to man.

I would, however, beg leave to suggest another nervous channel, which I conceive to be a still readier and more powerful one, to the action of the heart and lungs, than the phrenic nerve. If a longitudinal incision be made, as is frequently done for aneurism, through the integuments of the neck at the outer edge of the *sterno-mastoideus* muscle, about half-way between the clavicle and angle of the lower jaw; then, on turning over the edge of this muscle, we bring into view the throbbing carotid, on the outside of which the *par vagum* and great sympathetic nerve lie together in one sheath. Here, therefore, they may both be directly touched and pressed by a blunt metallic conductor. These nerves communicate, directly or indirectly, with the phrenic; and the superficial nerve of the heart is sent off from the sympathetic.

Should, however, the phrenic nerve be taken, that of the left side is the preferable of the two. From the position of the heart, the left phrenic differs a little in its course from the right. It passes over the *pericardium*, covering the *apex* of the heart.

While the point of one metallic conductor is applied to the nervous cords above described, the other knob ought to be firmly pressed against the side of the person, immediately under the cartilage of the seventh rib. The skin should be moistened with a solution of common salt, or, what is better, a hot saturated solution of sal-ammoniac, by which means the electric energy will be more effectually conveyed through the cuticle, so as to complete the voltaic chain.

For the purposes of resuscitating dormant irritability of nerves, or contractility of their subordinate muscles, the positive pole must be applied to the former, and the negative to the latter.

Gama'ndra. See *Stalagmitis*.

Gambi'ense gummi. See *Kino*.

GAMBOGE. See *Stalagmitis*.

GAMBO'GIA. See *Cambogia.*

GAMBO'GIUM. See *Cambogia.*

GAMBOI'DEA. See *Cambogia.*

GA'MMA. (*a, æ.* f.; from the letter Γ, *gamma,* which it resembles.) A surgical instrument for cauterising a hernia.

GAMMARUS. (*us, i.* m.; from καμαρα, an arch: so called from the vaulted roof of its shell.) The lobster. See *Cancer gammarus.*

GA'MON. See *Cambogia.*

GAMPHE'LE. (From γαμψος, crooked.) The cheeks; the jaw.

GA'NGAMON. (From γαγγαμη, a fishing-net, which it was said to resemble.) 1. A name of the omentum.

2. The contexture of nerves about the navel.

GA'NGLION. (*on, ii.* n. Γαγγλιον, a knot.) A knot. 1. In *Anatomy,* it is applied to a natural knot-like enlargement, in the course of a nerve.

2. In *Surgery,* it is an encysted tumour, formed in the sheath of a tendon, and containing a fluid like the white of an egg. It most frequently occurs on the back of the hand or foot.

Ganglion, abdominal. The semilunar and solar ganglia have this name.

GA'NGRENE. (Γαγγραινα. *Gangrena, æ.* f.; from γραω, to feed upon: so named from its eating away the flesh.) See *Mortification.*

GANGRENA ORIS. See *Stomacace.*

GANGRENA OSSIS. See *Spina ventosa.*

GAPING. See *Ringens,* and *Pandiculation.*

GA'RAB. An Arabic name for the disorder of the eyes. See *Ægylops.*

GARCI'NIA. (*a, æ.* f.: so called in honour of Dr. Garcin, who accurately described it.) The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Monogynia.*

GARCINIA MANGOSTANA. The systematic name of the mangosteen tree. The mangosteen is a fruit about the size of an orange, which grows in great abundance on this tree in Java and the Molucca islands. According to the concurring testimonies of all travellers, it is the most exquisitely flavoured, and the most salubrious of all fruits, it being such a delicious mixture of the tart and sweet. The flesh is juicy, white, almost transparent, and of a more delicate and agreeable flavour than the richest grape. It is eaten in almost every disorder, and the dried bark is used medicinally in dysenteries and tenesmus, and a strong decoction of it is much esteemed as a gargle in ulcerated sore throats.

GA'RGALE. Γαργαλη. *Gargalos; Gargalismos.* Irritation, or stimulation.

GARGA'REON. (Hebrew.) The uvula.

GA'RGARISM. See *Gargarisma.*

GARGARI'SMA. (*a, atis.* n.; and *Gargarismus, i.* m.; and *Gargarismum,* i. n.; from γαργαριζω, to gargle.) A gargle, or wash for the throat.

GARGARISMA ALUMINIS. The best formula of this is one drachm of purified alumin, half a fluid ounce of tincture of myrrh, and seven fluid ounces of mint water, mixed.

GARGARISMUM. See *Gargarisma.*

GA'RGATHUM. A bed on which lunatics, &c. were formerly confined.

GARGEATIO. See *Sudor anglicanus.*

GARGLE. See *Gargarisma.*

GARLICK. See *Allium.*

GARNET. Professor Jameson divides this mineral genus into three species: the pyramidal garnet, dodecahedral garnet, and prismatic garnet.

1. The *pyramidal* contains three subspecies: Vesuvian, Egeran, Gehlenite.

2. The *dodecahedral* contains nine subspecies: Pyreneite, Grossulare, Melanite, Pyrope, Garnet, Allochroite, Colophonite, Cinnamon-stone, Helvin.

3. The *prismatic:* the grenatite. Of the garnet proper, there are two species:—

1. The precious or noble garnet.

2. The common garnet.

GARNET, THOMAS, was born in 1766, at Casterton, in Westmoreland. In 1790, he gave private lectures on Philosophy and Chemistry; and soon after wrote his *Treatise on the Horley Green Spa;* and an *Analysis of the different Waters of Harrowgate.* The professorship at Anderson's Institution in Glasgow was offered him, where he began lecturing in 1796. Two years after, he made *A Tour to the Highlands,* of which he subsequently published an account. On the formation of the Royal Institution in London, he became lecturer there, and died in 1802. A posthumous volume, entitled *Zoonomia,* was published a year after.

GA'RON. (Γαρον. *Garum, i.* n.) A kind of pickle prepared of fish: at first it was made from a fish which the Greeks call *Garos;* but the best was made from mackarel. Among the moderns, *garum* signifies the liquor in which fish is pickled.

GAROSMUM. See *Chenopodium vulvaria.*

GAROU. See *Daphne gnidium.*

GARROPHY'LLUS. See *Eugenia.*

GARROTI'LLO. (From *garottar,* to bind closely. Spanish.) A name of the malignant sore throat, from its sense of strangulation, as if the throat were bound with a cord.

GAS. (From *Gascht,* German, an eruption of wind.) *Gaz.* Aëriform fluid. A term applied to all permanently elastic fluids, simple or compound, except the atmosphere, to which the term *air* is appropriated.

Some of the gases exist in nature without the aid of art, and may therefore be collected; others, on the contrary, are only producible by artificial means.

All gases are combinations of certain substances, reduced to the gaseous form by the addition of caloric. It is, therefore, necessary to distinguish in every gas, the matter of heat which acted the part of a solvent, and the substance which forms the basis of the gas.

Gases are not contained in those substances from which we obtain them in the state of gas,

but owe their formation to the expansive property of caloric.

Formation of Gases.—The different forms under which bodies appear, depend upon a certain quantity of caloric, chemically combined with them. The very formation of gases corroborates this truth. Their production totally depends upon the combination of the particular substances with caloric; and though called permanently elastic, they are only so because we cannot so far reduce their temperature, as to dispose them to part with it; otherwise they would undoubtedly become fluid or solid. Water, for instance, is a solid substance in all degrees below 32° of Fahrenheit's scale; above this temperature it combines with caloric, and becomes a fluid. It retains its liquid state under the ordinary pressure of the atmosphere, till its temperature is augmented to 212°. It then combines with a larger portion of caloric, and is converted, *apparently*, into gas, or at least into elastic vapour; in which state it would continue, if the temperature of our atmosphere was above 212°. Gases are therefore solid substances, between the particles of which a repulsion is established by the quantity of caloric. But as, in the gaseous water or steam, the caloric is retained with but little force, on account of its quitting the water when the vapour is merely exposed to a lower temperature, we do not admit steam amongst the class of gases, or permanently elastic aëriform fluids. In gases, caloric is united by a very forcible affinity; and no diminution of temperature, or increase of pressure, that has ever yet been effected, can separate it from them. Thus the air of our atmosphere, in the most intense cold, or when very strongly compressed, still remains in the aëriform state; and hence is derived the essential character of gases, namely, *that they shall remain aëriform, under all variations of pressure and temperature.*

In the modern nomenclature, the name of every substance existing in the aëriform state, is derived from its supposed solid base; and the term gas is used to denote its existence in this state.

In order to illustrate the formation of gases, or to show in what manner caloric is combined with them, the following experiment may serve:—Put into a retort, capable of holding half a pint of water, two ounces of common salt; pour on it half its weight of sulphuric acid, and apply the heat of a lamp; a great quantity of gas is produced, which might be collected and retained over mercury. But to serve the purpose of this experiment, let it pass through a glass receiver, having two openings, into one of which the neck of the retort passes, whilst from the other a bent tube proceeds, which ends in a vessel of water. Before closing the apparatus, let a thermometer be included in the receiver, to show the temperature of the gas. It will be found that the mercury in the thermometer will rise only a few degrees; whereas the water in the vessel which receives the bent tube, will soon become boiling hot.

Explanation.—Common salt consists of muriatic acid, united to soda; on presenting sulphuric acid to this union, a decomposition takes place, especially when assisted by heat. The sulphuric acid unites by virtue of its greater affinity to the soda, and forms sulphate of soda, or Glauber's salt; the muriatic acid becomes therefore disengaged, and takes the gaseous form in which it is capable of existing at the common temperature. To trace the caloric during this experiment, as was our object, we must remark, that it first flows from the lamp to the disengaged muriatic acid, and converts it into gas; but the heat thus expended is chemically united, and therefore not appreciable by the thermometer. The caloric, however, is again evolved, when the muriatic acid gas is condensed by the water, with which it forms liquid muriatic acid. In this experiment we therefore trace caloric, in a chemical combination, producing gas; and from this union we again trace it, in the condensation of the gas, producing sensible heat.

Such, in general, is the cause of the formation and fixation of gases. It may be further observed, that each of these fluids loses or suffers the disengagement of different quantities of heat, as it becomes more or less solid in its new combination, or as that combination is capable of retaining more or less specific heat.

The discovery of aëriform gaseous fluids has occasioned the necessity of some peculiar instruments, by means of which those substances may be conveniently collected and submitted to examination. The principal ones for that purpose are styled the *pneumatic apparatus.*

The *pneumatic trough* is made either of wood or strong sheet iron, tinned, japanned, or painted. A trough of about two feet long, sixteen inches wide, and fifteen high, has been found to be sufficient for most experiments. Two or three inches below its brim, a horizontal shelf is fastened, in dimension about half or one third part of the width of the trough. In this shelf are several holes: these holes must be made in the centre of a small excavation, shaped like a funnel, which is formed in the lower part of the shelf.

This trough is filled with water sufficient to cover the shelf to the height of an inch.

The use of this shelf is to support receivers, jars, or bell-glasses, which, being previously filled with water, are placed invertedly, their open end turned down upon the above-mentioned holes, through which the gases, conveyed there and directed by means of the funnel-shaped excavations, rise in the form of air-bubbles into the receiver.

When the gaseous fluids are capable of being absorbed by water, as is the case with some of them, the trough must be filled with mercury. The price and gravity of this fluid make it an object of convenience and economy that the trough should be smaller than when water is used.

A mercurial trough is best cut in marble, free-stone, or a solid block of wood. A trough about twelve inches long, three inches wide,

and four deep, is sufficient for all private experiments.

Method of collecting Gases, and transferring them from one vessel to another. — If we are desirous of transmitting air from one vessel to another, it is necessary that the vessel destined to receive it be full of water, or some fluid heavier than air. For that purpose, take a wide-mouthed bell-glass, or receiver; plunge it under the water in the trough, in order to fill it; then raise it with the mouth downwards, and place it on the shelf of the trough, so as to cover one or more of the holes in it.

It will now be full of water, and continue so as long as the mouth remains below the surface of the fluid in the cistern; for, in this case, the water is sustained in the vessel by the pressure of the atmosphere, in the same manner as the mercury is sustained in the barometer. It may without difficulty be imagined, that if common air (or any other fluid resembling common air in lightness and elasticity) be suffered to enter the inverted vessel filled with water, it will rise to the upper part, on account of its levity, and the surface of the water will subside. To exemplify this, take a glass, or any other vessel, in that state which is usually called *empty*, and plunge it into the water with its mouth downwards: scarce any of it will enter the glass, because its entrance is opposed by the elasticity of the included air; but if the vessel be turned with its mouth upwards, it immediately fills, and the air rises in bubbles to the surface. Suppose this operation be performed under one of the jars or receivers, which are filled with water, and placed upon the perforated shelf, the air will ascend in bubbles as before, but, instead of escaping, it will be caught in the upper part of the jar, and expel part of the water it contains.

In this manner we see that air may be emptied out of one vessel into another by a kind of inverted pouring, by which means it is made to ascend from the lower to the upper vessel. When the receiving vessel has a narrow neck, the air may be poured, in a similar manner, through an inverted funnel, inserted in its mouth.

If the air is to be transferred from a vessel that is stopped like a bottle, the bottle must be unstopped, with its orifice downwards in the water; and then inclined in such a manner that its neck may come under the perforated excavation of the shelf. The gas will escape from the bottle, and passing into the vessel destined to receive it, will ascend in it in the form of bubbles.

In whatever manner this operation is performed, the necessity of the excavation in the lower part of the shelf may be readily conceived. It is, as mentioned before, destined to collect the gas which escapes from the vessel, and direct it in its passage towards the vessel adapted to receive it. Without this excavation, the gas, instead of proceeding to the place of its destination, would be dispersed and lost, unless the mouth of the receiving vessel were large.

The vessels, or receivers, for collecting the disengaged gases, should be glass cylinders, jars, or bell-glasses of various sizes; some of them should be open at both ends, others should be fitted with necks at the top, ground perfectly level, in order that they may be stopped by ground flat pieces of metal, glass, slate, &c.; others should be furnished with ground stoppers. Some should be graduated into cubic inches, and subdivided into decimal or other equidistant parts. Besides these, common glass bottles, tumblers, &c. may be used.

Gas, azotic. See *Nitrogene.*

Gas, carbonic acid. See *Carbonic acid.*

Gas, heavy carbonated hydrogene. See *Carburetted hydrogene gas.*

Gas, hepatic. See *Hydrogene gas, sulphuretted.*

Gas, hydrogene. See *Hydrogene.*

Gas, light carbonated hydrogene. See *Carburetted hydrogene gas.*

Gascoigne's powder. (Called *Gascoigne*, from the name of the inventor.) *Pulvis Gascoigni.* This compound, which has also been called bezoardic powder, is made of one pound of the compound powder of crab's-claws, and one ounce of prepared oriental bezoar, mixed together. Made into balls, it is called Gascoigne's balls.

Gascoigne's balls. See *Gascoigne's powder.*

Gaseous oxide of carbon. See *Carbon, gaseous oxide of.*

GA'STER. (Γαστηρ. The Greek for the stomach and belly.) 1. The stomach, properly so called.

2. The belly or abdomen.

GASTEROSTOMA. (From γαστηρ, and στομα: and so called, because the mouth opens into the stomach.) A name given by some to the *tænia osculis superficialibus.*

GA'STRIC. (*Gastricus;* from γαστηρ, the stomach.) Appertaining to the stomach.

Gastric artery. *Arteria gastrica.* The right or greater gastric artery, is a branch of the hepatic; the left, or lesser, a branch of the splenic.

Gastric juice. *Succus gastricus.* A fluid separated by the stomach. See *Digestion.*

Gastrinum. Potash.

GASTRI'TIS. (*is, idis.* f.; from γαστηρ, the stomach.) Inflammation of the stomach. It is known by fever, anxiety, heat, and pain in the epigastrium, increased when any thing is taken into the stomach, vomiting, hiccough, pulse small and hard, and prostration of strength. There are two species:—

1. *Gastritis phlegmonodea,* with acute pain and severe fever.

2. *Gastritis erythematica,* when the pain and fever are slighter, and the inflammation erysipelatous.

Gastritis is produced by acrid substances of various kinds, such as arsenic, corrosive sublimate, &c. taken into the stomach; as likewise by food of an improper nature: by taking large draughts of any cold liquor when the body is much heated by exercise, or danc-

ing; and by repelled exanthemata and gout. Besides these, it may arise from an inflammation of some of the neighbouring parts being communicated to the stomach.

The erysipelatous gastritis arises chiefly towards the close of other diseases, marking the certain approach to dissolution, and being unaccompanied with any marks of general inflammation, or by any burning pain in the stomach.

The symptoms of phlegmonous gastritis, as observed above, are a violent burning pain in the stomach, with great soreness, distension, and flatulency; a severe vomiting, especially after any thing is swallowed, whether it be liquid or solid; most distressing thirst; restlessness, anxiety, and a continual tossing of the body, with great debility, constant watching, and a frequent, hard, and contracted pulse. In some cases, a severe purging attends.

If the disease increases in violence, symptoms of irritation then ensue: there is a great loss of strength, with faintings; a short and interrupted respiration; cold, clammy sweats, hiccoughs, coldness of the extremities, an intermittent pulse, and the patient is soon cut off.

The event of gastritis is seldom favourable, as the person is usually either suddenly destroyed by the violence of the inflammation, or else it terminates in suppuration, ulceration, or gangrene.

If the symptoms are very mild, and proper remedies have been employed at an early period of the disease, it may, however, terminate in resolution, and that in the course of the first, or, at farthest, the second week.

Its termination in suppuration may be known by the symptoms, although moderate, exceeding the continuance of this period, and a remission of pain occurring, whilst a sense of weight and anxiety still remain; and, on the formation of an abscess, cold shiverings ensue, with marked exacerbations in the evening, which are followed by night sweats, and other symptoms of hectic fever; and these at length prove fatal, unless the pus is thrown up by vomiting, and the ulcer heals.

Its tendency to gangrene may be dreaded, from the violence of its symptoms not yielding to proper remedies early in the disease; and, when begun, it may be known by the sudden cessation of the pain; by the pulse continuing its frequency, but becoming weaker; and by delirium, with other marks of increasing debility ensuing.

Fatal cases of this disease show, on dissection, a considerable redness of the inner coat of the stomach, having a layer of coagulable lymph lining its surface. They likewise show a partial thickening of the substance of the organ, at the inflamed part, the inflammation seldom extending over the whole of it. Where ulceration has taken place, the ulcers sometimes are found to penetrate through all its coats, and sometimes only through one or two of them.

The cure is to be attempted by copious and repeated bleedings, employed at an early period of the disease, not regarding the smallness of the pulse, as it usually becomes softer and fuller after the operation: also several leeches should be applied to the epigastrium, followed by fomentations, or the hot bath; after which a large blister will be proper. The large intestines may be in some measure evacuated by a laxative clyster; but scarcely any internal medicine can be borne by the stomach, till the violence of the disease is much abated: we may then try magnesia, or other mild cathartic, to clear out the canal effectually. Where acrid substances have been taken, mucilaginous drinks may be freely exhibited, to assist their evacuation and sheathe the stomach; otherwise only in small quantity: and, in the former case, according to the nature of the poison, other chemical remedies may come in aid, but ought never to be too much relied upon. Should suppuration occur, little can be done beyond avoiding irritation, and supporting strength by a mild farinaceous diet, and giving opium occasionally to relieve pain.

GASTRO. (From γαστηρ, the stomach.) Names compounded with this word have some connection with the stomach.

GASTROCE'LE. (*e, es.* f.; from γαστηρ, the stomach, and κηλη, a tumour.) A hernia of the stomach, occasioned by a protrusion of that viscus through the abdominal parietes. See *Hernia ventriculi.*

GASTROCNE'MIUS. (*us, i.* m.; from γαστηρ, the stomach, and κνημη, the leg.) The calf or belly of the leg.

Gastrocnemius externus. An extensor muscle of the foot, situated immediately under the integuments at the back part of the leg; sometimes called *gemellus:* this latter name is adopted by Albinus. Winslow describes it as two muscles, which he calls *gastrocnemii;* and Douglas considers this and the following as a *quadriceps,* or muscle with four heads, to which he gives the name of *extensor tarsi suralis.* The gastrocnemius externus arises by two distinct heads. The first, which is the thickest and longest of the two, springs by a strong thick tendon from the upper and back part of the inner condyle of the os femoris, adhering strongly to the capsular ligament of the joint, between which and the tendon is a considerable *bursa mucosa.* The second head arises by a thinner and shorter tendon from the back part of the outer condyle of the os femoris. A little below the joint, their fleshy bellies unite in a middle tendon, and below the middle of the tibia they cease to be fleshy, and terminate in a broad tendon, which, a little above the lower extremity of the tibia, unite with that of the gastrocnemius internus, to form one round tendon, sometimes called *chorda magna,* but commonly *tendo Achillis.*

Gastrocnemius internus. This, which is situated immediately under the last described muscle, is sometimes named *soleus,* on account of its shape, which resembles that of

the sole fish. It arises by two heads. The first springs, by tendinous and fleshy fibres, from the posterior part of the head of the fibula, and for some way below it. The second arises from an oblique ridge at the upper and posterior part of the tibia, which affords origin to the inferior edge of the popliteus, continuing to receive fleshy fibres from the inner edge of the tibia for some way down. This muscle, which is narrow at its origin, spreads wider, as it descends, as far as its middle; after which it becomes narrower again, and begins to grow tendinous, but its fleshy fibres do not entirely disappear till it has almost reached the extremity of the tibia, a little above which it unites with the last-described muscle, to form the *tendo Achillis.* This thick round chord is inserted into the lower and posterior part of the os calcis, after sliding over a cartilaginous surface on that bone, to which it is connected by a tendinous sheath that is furnished with a large *bursa mucosa.*

Both the gastrocnemii have the same use, viz. that of extending the foot, by drawing it backwards and downwards.

GASTROCO'LIC. (*Gastrocolicus;* from γαςηρ, the stomach, and κωλον, the colon.) A term applied to a vein which proceeds from the stomach to the colon.

GASTRODY'NIA. (*a, æ.* f.; from γαςηρ, the stomach, and οδυνη, pain.) Pain in the stomach.

GASTRO-EPIPLOIC ARTERY. *Arteria gastrico-epiploica.* The branch of the greater gastric artery that runs to the epiploon.

GASTROLOQUISM. (*Gastroloquens;* from γαστηρ, the stomach, and *loquor,* to speak.) See *Ventriloquism.*

GASTRORAPHY. (*Gastroraphe;* from γαςηρ, the stomach, and ραφη, a suture.) The sewing of wounds of the abdomen.

GASTROTO'MIA. (From γαςηρ, the belly, and τεμνω, to cut.) The operation of cutting open the belly.

GAU'BIUS, Jerome David, a celebrated Dutch physician, and pupil of the illustrious Boerhaave. His reputation was extended all over Europe by several valuable publications, particularly by his *Institutiones Pathologiæ Medicinalis,* and his *Adversaria;* which contributed not a little to the improvement both of the theory and practice of medicine. In another work, he treated ably of the medical regulation of the mind: and he printed also a very elegant little book, *De Methodo concinnandi formulas Medicamentorum.*

GAULE. See *Myrica gale.*

GAZ. See *Gas.*

GEHLENITE. A mineral substance allied to Vesuvian, found along with calcareous spar in the Tyrol.

Geiso'ma. (From γεισον, the eaves of the house.) *Geison.* The prominent parts of the eyebrows, which hang over the eyes like the eaves of a house.

Gei'son. See *Geisoma.*

Gela'sinos. (From γελαω, to laugh.) An epithet for the four middle fore-teeth, because they are shown in laughter.

Gela'smus. (From γελαω, to laugh.) The Sardonic laugh. See *Sardonic laugh.*

GE'LATINE. (*Gelatina, æ.* f.) Gelly, or jelly. A substance soluble in water, but not in alkohol: capable of assuming a well-known elastic or tremulous consistence, by cooling, when the water is not too abundant, and liquifiable again, by increasing its temperature. This last property remarkably distinguishes it from albumen, which becomes consistent by heat. It is precipitated in an insoluble form by tannin; and it is this action of tannin on gelatine that is the foundation of the art of tanning leather.

Jellies are mostly obtained from animal substances, and these are very common in our kitchens; they may be extracted from all the parts of animals, by boiling them in water. Hot water dissolves a large quantity of this substance. Acids, likewise, dissolve them, as do also more particularly the alkalies. Jelly, which has been extracted without long decoction, possesses most of the characters of vegetable mucilage; but it is seldom obtained without a mixture of albumen.

Jellies, in a pure state, have scarcely any smell or remarkable taste. By distillation, they afford an insipid and inodorous phlegm, which easily putrefies. A stronger heat causes them to swell up, become black, and emit a fœtid odour, accompanied with white acrid fumes. An impure volatile alkali, together with empyreumatic oil, then passes over, leaving a spongy coal, not easily burned, and containing common salt and phosphate of lime.

The jelly of various animal substances is prepared for the use of seafaring persons, under the name of portable soup. The whole art of performing this operation consists in boiling the meat, and taking the scum off, as usual, until the soup possesses the requisite flavour. It is then suffered to cool, in order that the fat may be separated. In the next place, it is mixed with five or six whites of eggs, and slightly boiled. This operation serves to clarify the liquid, by the removal of opake particles, which unite with the white of egg at the time it becomes solid by the heat, and are consequently removed along with it. The liquor is then to be strained through flannel, and evaporated on the water-bath, to the consistence of a very thick paste; after which it is spread, rather thin, upon a smooth stone, then cut into cakes, and, lastly, dried in a stove, until it becomes brittle. These cakes may be kept four or five years, if defended from moisture. When intended to be used, nothing more is required to be done than to dissolve a sufficient quantity in boiling water, which by that means becomes converted into soup.

Jelly is also found in vegetables, as ripe currants, and other berries mixed with an acid

GELA'TIO. (*o, onis.* f.; from *gelo,* to freeze.) 1. Freezing.

2. That rigidity of the body which happens in a catalepsy, as if the person were frozen.

GEM. See *Gemma.*

GEME'LLUS. (*us, i.* m.; from *geminus,* double, having a fellow.) See *Gastrocnemius,* and *Gemini.*

GEMINI. (*i, orum.* m. pl.) Twins.

GEMINI, *sc.* MUSCULI. *Gemelli,* of Winslow. Part of the *marsupialis* of Cowper. A muscle of the thigh, which has been a subject of dispute among anatomists since the days of Vesalius. Some describe it as two distinct muscles; and hence the name it has of *gemini.* Others contend that it ought to be considered as a single muscle. The truth is, that it consists of two portions, which are united together by a tendinous and fleshy membrane, and afford a passage between them to the tendon of the obturator internus, which they inclose, as it were, in a purse. These two portions are placed under the glutæus maximus, between the ischium and the great trochanter.

The superior portion, which is the shortest and thickest of the two, arises fleshy from the external surface of the spine of the ischium; and the inferior, from the tuberosity of that bone, and likewise from the posterior sacro-ischiatic ligament. They are inserted, tendinous and fleshy, into the cavity at the root of the great trochanter. Between the two portions of this muscle, and the termination of the obturator internus, there is a small *bursa mucosa,* connected to both, and to that part of the capsular ligament of the joint which lies under the gemini.

This muscle assists in rolling the os femoris outwards, and prevents the tendon of the obturator internus from slipping out of its place while that muscle is in action.

GEMMA. (*a, æ.* f.) 1. In *Mineralogy,* a precious stone or gem.

2. In *Botany,* a bud on the stems of plants. The ancients used the terms *germen* and *oculus* to denote those buds which contain the rudiments of branches and leaves, and *gemma* those in which flowers only are contained; but by the moderns, *germen* has been applied to denote the rudiment of the fruit, or as a generic term for all buds.—*Thompson.*

A *gemma,* or bud, contains the rudiments of a plant, or of part of a plant, for a while in a latent state, till the time of the year, and other circumstances, favour their evolution. In the bud, therefore, the vital principle is dormant. Buds of trees, or shrubs, destined for cold countries, are formed in the course of the summer in the bosoms of their leaves, and are generally solitary; but in the *Lonicera cœrulea,* or blue-berried honey-suckle, they grow one under another for three successive seasons.

The buds of the plane tree, *Platanus,* are concealed in the footstalk, which must be removed before they can be seen, and which they force off by their increase; so that no plant can have more truly and necessarily deciduous leaves.

Shrubs in general have no buds, neither have the trees of hot climates.

Buds are various in their forms, but very uniform in the same species, or even genus. They consist of scales closely enveloping each other, and enfolding the embryo plant or branch. Externally, they have often an additional guard of gum, resin, or woolliness, against wet or cold. The horse-chestnut affords a fine example of large and well-formed buds.

The contents of buds are different, even in different species of the same genus, as willows. The buds of some produce leaves only, others flowers, while in other species the same bud bears both leaves and flowers. Different causes, depending on the soil or situation, seem in one case to generate leaf-buds, in another flower-buds. In general, whatever checks the luxuriant production of leaf-buds, favours the formation of flowers and seeds.—*Smith.*

Gems are found in all trees and shrubs in temperate climates. In the majority of instances they are visible from the first, in which case they are *axillary,* that is, seated in the axillæ of the leaves, or the angle which the upper part of the footstalk of the leaf makes with the surface of the stem; but in some instances, as the sumachs and planes, they are *latent,* being hid within the base of the footstalk, and never seen until the fall of the leaf. Gems are, however, sometimes protruded from the trunk, long after it has ceased to produce leaves, as in the case of adventitious buds; they are also situated on roots, and on tubers; but in these cases they are usually denominated *oculi,* or *eyes.*

Annual plants are supposed to be furnished with gems; but although they are devoid of covered gems, yet their lateral shoots proceed from naked buds which immediately spread into foliage.

The relative position of *axillary* gems is necessarily regulated by that of the leaf, and therefore we find them,

1. *Opposite,* or placed exactly on the same line, on opposite sides of the stem or the branch.

2. *Alternate,* or placed alternately, although on opposite sides; and,

3. *Spiral,* that is, placed round the stem or branch in such a manner that a cord wound in a spiral manner round it would touch each gem. They are said to be *simple* or *solitary,* when one gem only is seen in the axilla of each leaf, as in the greater number of instances; and *aggregate,* when, as in some plants, two, three, or even more, are protruded at the same time: thus we find two in the *Sambucus nigra,* or common elder; three in the *Aristolochia sipho,* or broad-leaved birthwort; and many in the *Zanthoxylum fraxineum,* or toothache tree.

Du Hamel first noticed the fact, that stems

and branches furnished with alternate axillary gems, have generally one *terminal* gem only; and those with opposite have generally three terminal gems.

The gems on most trees and shrubs rise with a broad base from the surface where they are protruded, and consequently, being in close contact with it, are said to be *sessile;* but they are distant or stalked on some, as the common alder, on which they are supported on a short footstalk, and are termed *pedicillatæ*, or stalked.

Gems differ very considerably in the number and characters of the enclosing scales, their contents, the folding up of the leaves within them, and the manner in which they are evolved in the spring.

a. The scales differ in size and texture, even in the same gem: in the gems of different plants, they differ also in number and in the nature of their coverings. Some gems are entirely destitute of scales; as those of annual plants, and many perennials of tropical climates. The scales, in some instances, are besmeared with a resinous matter; in others, they are entirely free from any moist exudation, but are smooth and polished, being covered with a dry gummy varnish; or they are externally hairy, or enveloped in a velvety down.

Gems are arranged into three species:—

1. *Gemmæ foliiferæ*, leaf gems.
2. *Gemmæ floriferæ*, flower gems.
3. *Gemmæ mixtæ*, mixed gems.

The *Amygdalus persica*, or peach-tree, the *Daphne mezereum*, and many other plants, afford examples of distinct leaf and flower gems; the *Syringa vulgaris*, and *Æsculus hippocastanum*, of mixed gems; and the pear and apple trees, of both leaf and mixed gems.

The leaves, as has already been mentioned, are variously folded up, so as to occupy the smallest possible space in the gem. This regulates the expansion of the leaves when the gem opens in spring, and it is invariably the same in individual plants of the same species. This process is termed *foliation*, and the figures which the leaves assume at the time have received different appellations.—*Thompson.*

1. *Foliatio involuta*, involute, in which each internal margin of the leaf is rolled inwards; as in *Humulus lupulus*, and *Nymphæa lutea.*

2. *Revoluta*, revolute, in which the lateral margins are rolled outwards; as in willows, and *Rumex patientia.*

3. *Obvoluta*, obvolute, in which one leaf, doubled length ways, embraces within its doubling one half of the other leaf, folded in the same manner; as in *Salvia officinalis*, and *Dipsacus communis.*

4. *Convoluta*, convolute, in which the leaf is rolled lengthways in a spiral manner, one margin forming the axis round which the other turns; as in *Prunus domestica*, and *Prunus armeniaca*, the cabbage, grasses, &c.

5. *Equitans*, equitant, in which the leaf is so folded that the two sides deeply embrace the opposite leaf, which, in its turn, encloses the one opposed to it, and so on to the centre of the bud: this is beautifully exemplified in the *Hemarocallis*, or day-lily, and *Syringa vulgaris.*

6. *Conduplicata*, in which the two sides of the leaf lie parallel to each other; as in *Fagus sylvatica*, and *Quercus robur.*

7. *Plicata*, plaited, the leaf being folded up like a fan; as in *Betula alba*, and *Alchemilla vulgaris.*

8. *Reclinata*, reclinate, turned down, the leaf hanging down and wrapt round the footstalk; as in *Aconitum*, and *Arum.*

9. *Circinata*, circinal, in which the leaf is rolled from the apex to the base; as in all ferns.

As the gems open, the leaves gradually unfold themselves, and assume their natural forms; but the opening of the bud does not in every instance immediately set free the leaves, for in some gems each leaf is separately enclosed in a membraneous cover.

GEMMACEUS. A term used by botanists to a flower-stalk which grows out of a leaf-bud, as is seen in the *Berberis vulgaris.*

GEMMATIO. (*o, onis.* f.; from *gemma*, a bud.) A term used by Linnæus expressive of the origin, form, &c. of buds. See *Gemma.*

GEMU'RSA. (From *gemo*, to groan: so called from the pain it was said to occasion in walking.) An excrescence between the toes.

GENA. (*a, æ.* f.; from γενυς, the cheek.) The cheek.

GENEI'AS. (From γενυς, the cheek.)

1. The downy hairs of the cheek.
2. A bandage, mentioned by Galen, which covers the cheek, and comes under the chin.

GENERATION. (*Generatio, onis.* f.; from γεινομαι, to beget.) Many ingenious hypotheses have been instituted by physiologists to explain the mystery of generation; but the whole of our knowledge concerning it appears to be built upon the phænomena it affords, and may be seen in the works of Haller, Buffon, Cruickshanks, and Haighton. It is a sexual action, performed in different ways in most animals; many of them have different sexes, and require conjunction: such are the human species, quadrupeds, and others. The females of quadrupeds have a matrix, separated into two cavities, *uterus bicornis*, and a considerable number of teats; they have no menstrual flux; most of them bear several young at a time, and the peridd of their gestation is generally short. The generation of birds is very different. The males have a strong genital organ, which is often double. The vulva in the females is placed behind the anus; the ovaries have no matrices, and there is a duct for the purpose of conveying the egg from the ovarium into the intestines: this passage is called the oviduct. The eggs of pullets have exhibited unexpected facts to physiologists, who examined the phænomena of incubation. The most important discoveries are those of the immortal Haller,

who found the chicken perfectly formed, in eggs which were not fecundated. There is no determinate conjunction between fishes; the female deposits her eggs on the sands, over which the male passes, and emits its seminal fluid, doubtless for the purpose of fecundating them: these eggs are hatched after a certain time. The males of several oviparous quadrupeds have a double or forked organ. Insects exhibit all the varieties which are observed in other animals: there are some, indeed the greater number, which have the sexes in two separate individuals; among others, the reproduction is made either with or without conjunction, as in the vine-fretter; one of these insects, confined alone beneath a glass, produces a great number of others. The organ of the male, in insects, is usually armed with two hooks to seize the female: the place of these organs is greatly varied; with some, it is at the upper part of the belly, near the chest, as in the female dragon-fly; in others, it is at the extremity of the *antenna*, as in the male spider. Most worms are hermaphrodite; each individual has both sexes. Polypi, with respect to generation, are singular animals; they are reproduced by buds or offsets: a bud is separated from each vigorous polypus, which is fixed to some neighbouring body, and grows: polypi are likewise found on their surface, in the same manner as branches issue from plants. These are the principal modes of generation in animals. In the human species, which engages our attention more particularly, the phænomena are as follow:—

The part of the male, in the act of reproduction, is to deposit the semen in the vagina, at a greater or less distance from the orifice of the uterus.

The function which the female discharges is much more obscure: some feel, at this moment, very strong voluptuous sensations; others appear entirely insensible; whilst others, again, experience a sensation which is very painful. Some of them pour out a mucous substance in considerable abundance, at the instant of the most vivid pleasure: whilst, in the greater part, this phænomenon is entirely wanting. In all these respects, there is, perhaps, no exact resemblance between any two females.

These different phænomena are common to the most frequent acts of copulation; that is, to those which do not produce impregnation, as well as those which are effective.

The most recent opinion is, that the uterus during impregnation opens a little, draws in the semen by aspiration, and directs it to the ovarium by means of the Fallopian tubes, the fimbriated extremity of which closely embraces that organ.

The contact of the semen determines the rupture of one of the vesicles, and the fluid that passes from it, or the vesicle itself, passes into the uterus, where the new individual is to be developed.

However satisfactory this explanation may appear, it is purely hypothetical, and even contrary to the experiments of the most exact observers.

In the numerous attempts made upon animals by Harvey, De Graaf, Valisneri, &c., the semen has never been perceived in the cavity of the uterus; much less has it been seen in the Fallopian tube at the surface of the ovarium. It is quite the same with the motion which the Fallopian tube is supposed to have in embracing the circumference of the ovarium: it has never been proved by experiment. Even if one should suppose that the semen penetrates into the uterus at the moment of coition, which is not impossible, though it has not been observed, it would still be very difficult to comprehend how the fluid could pass into the Fallopian tubes, and arrive at the ovarium. The uterus in the empty state is not contractible; the uterine orifice of the Fallopian tubes is extremely narrow, and these canals have no known sensible motion.

On account of the difficulty of conceiving the passage of the semen to the ovarium, some authors have imagined that this matter is not carried there, but only the vapour which exhales from it, or the *aura seminalis*. Others think that the semen is absorbed in the vagina, passes into the venous system, and arrives at the ovaria by the arteries. The phænomena which accompany the fecundation of women are, then, nearly unknown. An equal obscurity rests on the fecundation of other mammiferous females. Nevertheless, it would be more easy to conceive a passage of the semen to the ovaria in these, since the uterus and the Fallopian tubes possess a peristaltic motion like that of the intestines. Fecundation, however, taking place by the contact of the semen with the ova, in fishes, reptiles, and birds, it is not very likely that nature employs any other mode for the *mammifera*; it is necessary, then, to consider it as very probable that, either at the instant of coition, or at a greater or less time afterwards, the semen arrives at the ovarium, where it exerts more especially its action upon the vessels most developed.

But, even should it be out of doubt that the semen arrives at the vesicles of the ovarium, it would still remain to be known how its contact animates the germ contained in it. Now, this phænomenon is one of those on which our senses, and even our mind, have no hold: it is one of those impenetrable mysteries of which we are, and, perhaps, shall ever remain ignorant.

We have, however, on this subject, some very ingenious experiments of Spallanzani, which have removed the difficulty as far as it seems possible. This philosopher has proved, by a great number of trials, 1st, that three grains of semen, dissolved in two pounds of water, are sufficient to give to it the fecundating virtue; 2d, that the spermatic animalcula are not necessary to fecundation, as Buffon and other authors have thought; 3d, that the

aura seminalis, or seminal vapour, has no fecundating property; 4th, that a bitch can be impregnated by the mechanical injection of semen into her vagina, &c. &c.

It is thus necessary to consider as conjectural what authors say about the general signs of fecundation. At the instance of conception, the woman feels, it is said, a universal tremor, continued for some time, accompanied by a voluptuous sensation; the features are discomposed, the eyes lose their brilliancy, the pupils are dilated, the visage pale, &c. No doubt, impregnation is sometimes accompanied by these signs; but many mothers have never felt them, and reach even the third month of their pregnancy without suspecting their situation. —*Magendie's Physiology.*

Fecundation having thus taken place, a motion is induced in the vivified ovum, which ruptures the tender vesicle that contains it; the fimbriæ of the Fallopian tube then grasp and convey it into the tube, which, by its peristaltic motion, conducts it into the cavity of the uterus, there to be evolved and brought to maturity, and, at the expiration of nine months, to be sent into the world.

Generation, organs of. The parts subservient to generation in a woman, are divided into external and internal. The external parts are the *mons veneris*, the *labia*, the *perinæum*, the *clitoris*, and the *nymphæ*. To these may be added the *meatus urinarius*, or orifice of the urethra. The *hymen* may be esteemed the barrier between the external and internal parts. The internal parts of generation are the *vagina* and *uterus*, and its appendages.

The parts which constitute the organs of generation in men, are the *penis*, *testes*, and *vesiculæ seminales*.

GENERIC. *Genericus*. See *Genus*.

GENEVA. (*a*, *æ*. f. The name of the place where it was first made.) Gin. A spirit distilled from malt or rye, which afterwards undergoes the same process, a second time, with juniper-berries. This is the original and most wholesome state of the spirit; but it is now prepared without juniper-berries, and is distilled from turpentine and cardamoms, and very few, if any, juniper-berries, which gives it something of a similar flavour. The consumption of this article, especially in the metropolis, is immense, and the consequences are very pernicious to the health of those who drink it; and some artisans, and many of the poorer sort, take ten and twelve glasses a day. It has now become a practice with the retail dealers of this article, to prepare it for their customers by mixing alum, sugar, and some other pernicious articles.

GENICULA'TUS. Geniculate: bent like the knee. Applied to stems and the culm or straw of grasses; as in *Alopecuris geniculatus*.

GENICULUM. (*um*, *i*. n.; from *genu*, a knee.) The knot or joint of stems, grasses, &c.

GENIO. (From γενειον, the chin.) Names compounded of this word belong to muscles which are attached to the chin.

Genio-hyo-glossus. (From γενειον, the chin, υοειδες, the os hyoides, and γλωσσα, the tongue: so called from its origin and insertion.) *Genio-glossus*, of some authors. The muscle which forms the fourth layer between the lower jaw and os hyoides. It arises from a rough protuberance in the inside of the middle of the lower jaw; its fibres run like a fan, forwards, upwards, and backwards, and are inserted into the tip, middle, and root of the tongue, and base of the os hyoides, near its corner. Its use is to draw the tip of the tongue backwards into the mouth, the middle downwards, and to render its back concave. It also draws its root and the os hyoides forwards, and thrusts the tongue out of the mouth.

Genio-hyoideus. (From γενειον, the chin, and υοειδες, the os hyoides: so called from its origin in the chin, and its insertion in the os hyoides.) The muscle which constitutes the third layer between the lower jaw and os hyoides. It is a long, thin, and fleshy muscle, arising tendinous from a rough protuberance at the inside of the chin, and growing somewhat broader and thicker as it descends backward to be inserted by very short tendinous fibres into both the edges of the base of the os hyoides. It draws the os hyoides forwards to the chin.

Genio-pharynge'us. See *Constrictor pharyngeus superior*.

GE'NIPI. A term of barbarous origin, applied to the two following plants:—

Genipi album. See *Artemisia rupestris*.

Genipi verum. The plant directed for medicinal purposes, under this title, is the *Achillea—foliis pinnatis, pinnis simplicibus, glabris, punctatis*, of Haller. It has a very grateful smell, and a very bitter taste, and is exhibited in Switzerland, in epilepsy, diarrhœa, and debility of the stomach.

GENI'STA. (*a*, *æ*. f.; from *genu*, a knee: so called from the inflection and angularity of its twigs.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

2. The pharmacopœial name of the common broom. See *Spartium scoparium*.

Genista canariensis. This tree was supposed to afford the lignum Rhodium, which is now known to be an aspalathus. See *Aspalathus canariensis*.

Genista spinosa indica. *Bahel schulli*. An Indian tree, a decoction of the roots of which is diuretic. The leaves, boiled and sprinkled in vinegar, have the same effect, according to Ray.

Genista tinctoria. The systematic name of the dyer's broom.

GENITA'LE. (From *gigno*, to beget.) The membrum virile. See *Penis*.

Genita'lium. (From *genitale*, the membrum virile.) A disease of the genital parts.

GENITICUS. (From γεινομαι, *gignor*.) Appertaining to the sexual function.

Genitura. (From *gigno.*) 1. The male seed. 2. The membrum virile.

Ge'non. (From γονυ, the knee.) A moveable articulation like that of the knee.

GENSING. See *Panax.*

GENTIA'NA. (*a, æ.* f.; from *Gentius*, king of Illyria, who first used it.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.* Gentian.

2. The pharmacopœial name of the gentian root. See *Gentiana lutea.*

Gentiana alba. See *Laserpitium.*

Gentiana centaurium. Lesser centaury was so called in the Linnæan system; but it now belongs to the genus *Chironia.*

Gentiana lutea. The systematic name of the officinal gentian; called also, Felwort, and *Gentiana rubra.* The gentian met with in the shops, is the root of the *Gentiana—corollis subquinquefidis rotatis verticillatis, calycibus spathaceis,* of Linnæus; and is imported from Switzerland and Germany. It is the only medicinal part of the plant, has little or no smell, but to the taste manifests great bitterness, on which account it is in general use as a tonic, stomachic, anthelmintic, antiseptic, emmenagogue, and febrifuge. The officinal preparations of this root are the *infusum gentianæ compositum,* and *tinctura gentianæ composita,* of the London Pharmacopœia, and the *infusum amarum, vinum amarum, tinctura amara,* of the Edinburgh Pharmacopœia; and the *extractum gentianæ* is ordered by both.

Gentiana rubra. See *Gentiana lutea.*

GENTIANINE. The name given by some to the bitter principle; which see.

GE'NU. (Indeclinable in the singular, n.; *genua, genuorum,* &c. in the plural.) The knee.

GENUFLEXION. (*Genuflexio, onis.* f.; from *genu,* the knee, and *flecto,* to bend.) Kneeling.

GENU'GRA. (*a, æ.* f.; from γονυ, the knee, and αγρα, a seizure.) A name in Paracelsus for the gout in the knee.

GENUS. (*us, eris.* n.; from γενος, a family, progeny, &c.) By this term is understood, in *Natural History,* a certain analogy of a number of species, making them agree together in the number, figure, and situation of their parts, in such a manner that they are easily distinguished from the species of any other genus, at least by some one article. This is the proper and determinate sense of the word genus, whereby it forms a subdivision of any class, or order of natural beings, whether of the animal, vegetable, or mineral kingdoms, all agreeing in certain common and distinct characters.

GEODES. A kind of ætites, the hollow of which contains only loose earth, instead of a nodule.

GEOFFRÆ'A. (*a, æ.* f.; named in honour of Dr. Geoffroy.) *Geoffroya.* 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.*

2. The pharmacopœial name of the cabbage bark tree. See *Geoffræa inermis.*

Geoffræa inermis. The systematic name of the cabbage bark-tree, or worm bark-tree. *Geoffræa—foliis lanceolatis,* of Swartz. It has a mucilaginous and sweetish taste, and a disagreeable smell. According to Dr. Wright of Jamaica, it is powerfully medicinal as an anthelmintic.

Geoffræa jamaicensis. The systematic name of the bastard cabbage-tree, or bulgewater-tree. *Geoffroya—inermis foliolis lanceolatis,* of Swartz. The bark is principally used in Jamaica, and with great success, as a vermifuge.

Geoffræa surinamensis. The systematic name of a tree, the bark of which is esteemed as an anthelmintic.

GEOFFROY, Stephen Francis, was born at Paris, in 1672. He completed a work, which had before been deemed necessary, but never accomplished; namely, a Pharmacopœia, which was published under the name of "*Code Médicamentaire de la Faculté de Paris.*"

GEOGNOSY. The same as geology.

GEOLOGY. (*Geologia, æ.* f.; from γη, the earth, and λογος, a discourse.) A description of the structure of the earth. This study may be divided, like most others, into two parts: observation and theory. By the first, we learn the relative positions of the great rocky or mineral aggregates that compose the crust of our globe; through the second, we endeavour to penetrate into the causes of these collocations. A valuable work was some time since published, comprehending a view of both parts of the subject, by Mr. Greenough, to which the reader is referred for much instruction, communicated in a very lively manner. Recently the world has been favoured with an excellent view of this science by Messrs. Conybeare and Phillips, in their "Outlines of the Geology of England and Wales." The *Traité de Geognosie* of D'Aubuisson bears a high character on the continent. See also *Classification.*

Gera'nis. (From γερανος, a crane: so called from its supposed resemblance to an extended crane.) A bandage for a fractured clavicle.

GERA'NIUM. (*um, i.* n.; from γερανος, a crane: so called because its pistil is long like the bill of a crane.) The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Decandria.* Geranium, or crane's-bill.

Geranium batrachioides. See *Geranium pratense.*

Geranium columbinum. See *Geranium rotundifolium.*

Geranium moschatum. The astringent property of this plant has induced practitioners to exhibit it in cases of debility and profluvia.

Geranium pratense. The systematic name of the crowfoot crane's-bill; called likewise, *Geranium batrachioides.* A plant which pos-

sesses astringent virtues, but in a slight degree.

GERANIUM ROBERTIANUM. Stinking crane's-bill. Herb Robert. This common plant has been much esteemed as an external application in erysipelatous inflammations, cancer, mastodynia, and old ulcers, but is now deservedly fallen into disuse.

GERANIUM ROTUNDIFOLIUM. The systematic name of the dove's foot, which is also called, *Geranium columbinum.* This plant is slightly astringent.

GERANIUM SANGUINEUM. The systematic name of the bloody crane's-bill. The astringent virtues ascribed to this plant do not appear to be considerable.

GERM. See *Corculum.*

GERMANDER. See *Teucrium.*

Germander, water. See *Teucrium.*

GERMANIS OLEUM. See *Pinus cembra.*

GERMEN. (*en, inis.* n.) The rudiment of the young fruit and seed of vegetables, found at the bottom of the pistil. See *Pistillum.* It appears under a variety of shapes and sizes. From its figure it is said to be,

1. *Globose;* as in *Rosa eglantaria,* and *cinnamomea.*

2. *Oblong;* as in *Stellaria biflora.*

3. *Ovate;* as in *Rosa canina,* and *alba.*

From its situation, it is distinguished into,

1. *Superior,* when internal between the corolla; as in *Prunus.*

2. *Inferior,* below and without the corolla; as in *Galanthus nivalis.*

3. *Pedicellate,* upon a footstalk; as in the *Euphorbia.*

It is of great moment for botanical distinctions, to observe whether it be superior, above the bases of the calyx, or below.

GERMINATION. (*Germinatio, onis.* f.) The vital development of a seed, when it first begins to grow.

GEROCO'MIA. (*a, æ.* f.; from γερων, an aged person, and κομεω, to be concerned about.) That part of regimen which regards the regimen and treatment of old age.

GERONTOPO'GON. (*um, i.* n.; from γερων, an old man, and πωγων, a beard: so called because its downy seed, while enclosed in the calyx, resembles the beard of an aged man.) The herb old man's beard, a species of tragopogon.

GERONTO'XON. (From γερων, an old person, and τοξον, a dart.) 1. A small ulcer, like the head of a dart, appearing sometimes in the cornea of old persons.

2. The socket of a tooth.

GEROPO'GON. See *Gerontopogon.*

GE'RYON. Quicksilver.

GESNER, CONRAD, was born at Zurich, in 1516. He had an early predilection for botany, which led him to cultivate other parts of natural history; he was the first collector of a museum, and acquired the character of being the greatest naturalist since Aristotle. He also founded and supported a botanic garden, had numerous drawings and wood engravings made of plants, and appears to have meditated a general work on that subject. He likewise discovered the only true principles of botanical arrangement in the flower and fruit. He died of the plague, in 1565. His chief works are his *Historiæ Animalium,* in three folio volumes, with wood-cuts; and a pharmacopœia, entitled *De Secretis Remediis Thesaurus,* which passed through many editions.

GESTATION. (*Gestatio, onis.* f.; from *gero,* to carry.) Carrying. 1. A species of exercise of the body, which, Aëtius observes, while it exercises the body, the body seems to be at rest. Of this motion there are several kinds. First, swinging in a hammock, which, at the decline of a fever, is beneficial. Secondly, being carried in a litter, in which the patient either sits, or lies along. It is useful when the gout, stone, or such other disorder, attends, as does not admit of violent motions. Thirdly, riding in a chariot, which is of service in most chronical disorders; especially before the more violent exercises can be admitted. Fourthly, sailing in a ship or boat. This produces various effects, according to the different agitation of the waters, and, in many tedious chronical disorders, is efficacious beyond what is observed from the most skilful administration of drugs. These are instances of a passive exercise.

2. Applied also to a woman when pregnant. See *Pregnancy.*

GESTATION, UTERINE. *Gestatio uterina.* The period from the impregnation of a female to the time of labour. See *Pregnancy.*

GE'UM. (*um, i.* n.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Polygynia.*

2. The pharmacopœial name of the two following species of this genus:—

GEUM RIVALE. The root is the part directed for medicinal uses. It is inodorous, and imparts an austere taste. In America, it is in high estimation in the cure of intermittents, and is said to be more efficacious than the Peruvian bark. Diarrhœas and hæmorrhages are also stopped by its exhibition.

GEUM URBANUM. The systematic name of the herb bennet, or avens; called also, *Caryophyllata, Herba benedicta, Caryophyllus vulgaris, Garyophilla,* and *Janamunda.*

Geum—floribus erectis, fructibus globosis villosis, aristis uncinatis nudis, foliis lyratis, of Linnæus. The root of this plant has been employed as a gentle styptic, corroborant, and stomachic. It has a mildly austere, somewhat aromatic taste, and a very pleasant smell, of the clove kind. It is also esteemed on the Continent as a febrifuge.

GIBBOSITY. (*Gibbositas, atis.* f.; from *gibbus,* a swelling or protuberance.) Crookedness.

GIBBUS. (*us, i.* m.) Gibbous: bulged; swelled. 1. An irregularity or swelling on the back, or any other part of the body.

2. Applied to leaves, petals, &c. when irregularly swelled on one side or both; as the

under part of the corol of the *digitalis*, and corol of the *Lonicera periclemenum*.

GIDDINESS. See *Vertigo*.

GILBERT, William, was born in 1540. He died in 1603, leaving his books, apparatus, and minerals to the college of physicians. His capital work on the magnet was published three years before his death: it is not only the earliest complete system on that subject, but also one of the first specimens of philosophy founded upon experiments; which method the great Lord Bacon afterwards so strenuously recommended.

GILEAD. *Gileadensis*. The name of the place where the tree grew which affords the balsam of Gilead. See *Amyris gileadensis*.

GILL. See *Lamella*.

GILLIFLOWER. See *Dianthus*.

GIN. See *Geneva*.

GINGER. See *Zingiber*.

GINGIBER. (*er, eris*. n.) See *Zingiber*.

Gingibra'chium. (From *gingivæ*, the gums, and *brachium*, the arm.) A name for the scurvy, because the gums, arms, and legs are affected with it.

Gingi'dium. A species of *Daucus*.

Gi'ngihil. See *Zingiber*.

Gingipe'dium. (From *gingivæ*, the gums, and *pes*, the foot.) A name for the scurvy, because the gums, arms, and legs are affected.

GINGI'VA. (*a, æ*. f.; from *gigno*, to beget: because the teeth are, as it were, born in them.) The gum. The very vascular and elastic fleshy substance that covers the alveolar arches of the upper and under jaws, and embraces the neck of the teeth.

GI'NGLYMUS. (*us, i*. m. Γιγγλυμος, a hinge.) The hinge-like joint. A species of diarthrosis, or moveable connection of bones, which admits of flexion and extension; as the knee-joint, &c.

GI'NSENG. (An Indian word.) See *Panax quinquefolium*.

Gir. Quick-lime.

Gi'rmir. Tartar.

GISMONDINE. See *Abrazite*.

GITHAGO. (*o, inis*. f.; from *gith*.) A name used by Pliny for the *Lolium*, or darnel-grass. See *Agrostemma*.

GIZZARD. The stomach of poultry. Those from white flesh have long been considered, in France, as medicinal. They have been recommended in obstructions of the urinary passages, complaints of the bladder, and nephritic pains; but particularly as a febrifuge. Bouillon Lagrange considers its principal substance as oxygenated gelatine, with a small quantity of extractive matter.

Glabe'lla. (From *glaber*, smooth; because it is without hair.) The space betwixt the eyebrows.

GLABER. (From *galab*, Hebrew.) Glabrous: smooth. Applied to stems, leaves, seeds, &c. of plants, and opposed to all kinds of hairiness and pubescence; as in the stem of the *Euphorbia peplus*, and the seeds of *Galium montanum*.

Glabula. See *Galbulus*.

GLACIES. Ice. See *Ice*.

GLADI'OLUS. (*us, i*. m.; diminutive of *gladius*, a sword: so named from the sword-like shape of its leaf.) The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Monogynia*.

Gladiolus luteus. See *Iris pseudacorus*.

Gla'ma. Γλαμα. The sordes of the eye.

GLAND. (*Glandula, æ*. f.; a diminutive of *glans*, a gland.) I. In *Anatomy*, an organ, composed of blood-vessels, nerves, and absorbents, and destined for the secretion or alteration of some peculiar fluid. A gland is either,—

1. *Follicula*, or a follicle, which is a small bag appended to the extremity of a duct into which the secretion is made, and from which it is evacuated by the duct.

2. *Lacuna*, or a little sac opening into the passage, and into which generally mucus is secreted, and is discharged when matter moves along the passage.

3. *Crypta*, a soft body, consisting of vessels not completely surrounded with a membrane. The great intestines and kidneys furnish examples of this apparatus for secretion.

4. *Acinus*, a round body, not regularly invested with a membrane. The liver is principally composed of acini.

The glands of the human body are divided, by anatomists, into different classes, either according to their structure, or the fluid they contain. According to their fabric, they are distinguished into four classes: — Simple, compound, conglobate, and conglomerate.

According to their fluid contents, they are more properly divided into,—Mucous, sebaceous, lymphatic, salival, and lachrymal.

1. *Simple glands* are small hollow follicles, covered with a peculiar membrane, and having a proper excretory duct, through which they evacuate the liquor contained in their cavity. Such are the mucous glands of the nose, tongue, fauces, trachea, stomach, intestine, and urinary bladder, the sebaceous glands about the anus, and those of the ear. These simple glands are either dispersed here and there, or are contiguous to one another, forming a heap in such a manner that they are not covered by a common membrane, but each hath its own excretory duct, which is never joined to the excretory duct of another gland. The former are termed solitary simple glands, the latter aggregate or congregate simple glands.

2. *The compound glands* consist of many simple glands, the excretory ducts of which are joined in one common excretory duct; as the sebaceous glands of the face, lips, palate, and various parts of the skin, especially about the pubes.

3. *Conglobate*, or, as they are also called, *lymphatic glands*, are those into which lymphatic vessels enter, and from which they go out again; as the mesenteric, lumbar, &c. They have no excretory duct, but are composed of a texture of lymphatic vessels connected together by cellular membrane: they are the largest in the fœtus.

4. *Conglomerate glands* are composed of a congeries of many simple glands, the excretory ducts of which open into one common trunk: as the parotid gland, thyroid gland, pancreas, and all the salival glands. Conglomerate glands differ but little from the compound, yet they are composed of more simple glands than the compound.

The excretory duct of a gland is the duct through which the fluid of the gland is excreted. The vessels and nerves of glands always come from the neighbouring parts, and the arteries appear to possess a high degree of irritability. The use of the glands is to separate a peculiar liquor, or to change it. The use of the conglobate glands is unknown.

II. In *Botany*, Linnæus defines a gland a little tumour discharging a fluid.

From their situation they are said to be,—

1. *Foliar*, when on the surface of the leaf; as in the *Gossypium religiosum*, which has one gland on the leaf; and *Gossypium barbadense*, the leaves of which have three.

2. *Petiolar*, when in the footstalk; as in *Prunus cerasus*.

3. *Corollar*. The claw of the corolla of the *Berberis vulgaris* has two glands.

4. *Filamentar*, in the filaments; as in *Dictamnus albus*.

From their adhesion,—

1. *Sessile*, without any peduncle; as in *Prunus cerasus*.

2. *Pedicillate*, furnished with a peduncle; as in *Drosera*.

Glands are abundant on the stalk and calyx of the moss-rose, and between the serratures of the leaf of the *Salix pentandria*; on the footstalks of the *Viburnum opulus*, and various species of passion-flower. The liquor discharged is resinous and fragrant.

GLANDORP, Matthias Louis, was born at Cologne, in 1595. He left several works, with plates, containing many important observations on anatomy, &c. The principal are, his *Speculum Chirurgorum*, and a *Treatise on Issues and Setons*.

GLA'NDULA. (*a, æ.* f.; a diminutive of *glans*. See *Gland*.

Glandula lachrymalis. See *Lachrymal gland*.

Glandulæ myrtiformes. See *Carunculæ myrtiformes*.

Glandulæ pacchioniæ. A number of small, oval, fatty substances, not yet ascertained to be glandular, situated under the dura mater, about the sides of the longitudinal sinus. Their use is not known.

GLANDULOSUS. Glandular. 1. In *Anatomy*, having the appearance, structure, or function of a gland.

2. In *Botany*, applied to leaves which have little glandiform elevations; as the bay-leaved willow, and *Hypericum montanum*.

GLANS. (*s, dis.* f.) A gland, or nut. See *Gland*.

Glans penis. The very vascular nut-like body that forms the apex of the penis. The posterior circle is termed the *corona glandis*. See *Corpus spongiosum urethræ*.

Glans unguentaria. See *Guilandina*.

GLASS. *Vitrum*. This substance was formerly employed by surgeons, when roughly powdered, to destroy opacities of the cornea.

Glass of antimony. See *Antimonii vitrum*.

Glass-shaped. See *Cyathiformis*.

Glass-wort, snail-seeded. See *Salsola kali*.

Gla'stum. (*Quasi callastum*; from *Callia*, who first used it.) See *Isatis*.

GLAUBER, J. R., a celebrated chemist of Amsterdam, in the beginning of the sixteenth century, who passed the greater part of his life in the laboratory, and invented the salt which to this day bears his name.

Glauber's salt. See *Sodæ sulphas*.

GLAUBERITE. A native crystallised salt, composed of dry sulphate of lime, and dry sulphate of soda, found in rock salt at Villarubra in Spain.

GLAUCEDO. (*o, inis.* f.; from γλαυκος, bluish, or greenish tint.) See *Glaucoma*.

GLAU'CIUM. (*um, i.* n.; so named from its glaucous or sea-green colour.) The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Monogynia*. The horned poppy.

GLAUCO'MA. (*a, atis.* n.; from γλαυκος, blue: because of the eye becoming of a blue, or sea-green colour.) 1. Dimness, or obscurity of sight from an opacity of the vitreous humour. It is difficult to ascertain, and is only to be known by a very attentive examination of the eye. It is generally produced by a cloudy secretion of the vitreous humour, or by a torpitude of action in the absorbents, that carry off the fluid from the cells of the vitreous substance.

A continued course of mercurial alteratives is likely to be beneficial, with blisters near the eye, as behind the ears, &c.

2. A species of cataract. See *Cataract*.

GLAUCO'SIS. See *Glaucoma*.

GLAUCUS. (Γλαυκος, sea-green.) Glaucous: hoary. A kind of hoary or grey bluish green: applied to leaves, stems, &c. which are clothed with a fine sea-green mealiness, which easily rubs off; as in *Chlora perfoliata*, and the back of a cabbage-leaf. See *Incanus*, and *Colour*.

GLECO'MA. (*a, æ.* f.; from γληχων, the name of a plant in Dioscorides.) The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*. Ground-ivy.

Glecoma hederacea. The systematic name of the ground-ivy or gill. *Hedera terrestris*. *Glecoma—foliis reniformibus crenatis*, of Linnæus. This indigenous plant has a peculiar strong smell, and a bitterish, somewhat aromatic taste. It is one of those plants which was formerly much esteemed for possessing virtues that, in the present age, cannot be detected. In obstinate coughs, it is a favourite remedy with the poor.

GLE'CHON. Γληχων. Pennyroyal.

Glechoni'tes. (From γληχων, penny-royal.) Wine impregnated with pennyroyal.

GLEET. See *Blennorrhœa.*

GLE'NE. Γληνη. 1. The cavity or socket of the eye.

2. That cavity of a bone which receives another within it.

GLE'NOID. (*Glenoides;* from γληνη, a cavity, and ειδος, resemblance.) The name of articulate cavities of bones.

Gleu'cinum. (From γλευκος, must.) An ointment, in the preparation of which was must.

Gleu'xis. (From γλευκυς, sweet.) A sweet wine.

GLIADINE. (From γλια, glue.) The name given by Taddey, an Italian chemist, to one of the constituents of vegetable gluten. See *Gluten.*

Gli'scere. An obsolete term, signifying to increase gradually, as fire does; by physical writers, it is sometimes applied to the natural heat and increase of spirits; and by others to the exacerbation of fevers which return periodically.

GLISCHRO'CHOLOS. (From γλισχρος, viscid, and χολη, the bile.) Viscid bilious excrement.

GLISCRA'SMA. (From γλισχραινω, to become glutinous.) Viscidity.

Glisoma'rgo. White chalk.

GLISSON, Francis, was born in Dorsetshire, 1597. He distinguished himself much by his lectures "*De Morbis Partium.*" He died at the advanced age of eighty. He left the following valuable works:—*A Treatise on the Rickets. The Anatomy of the Liver,* which he described much more accurately than any one before, and particularly the capsule of the vena portarum, which has since been named after him. A large metaphysical treatise *De Naturâ Substantiæ Energetica,* after the man ner of Aristotle. *A Treatise on the Stomach, Intestines, &c.* a well-arranged and comprehensive work, with various new observations, which came out the year before his death.

Glisson's capsule. See *Capsule of Glisson.*

GLOBATE. See *Gland.*

GLOBOSUS. Globose; round. Applied to a root which is rounded, and gives off radicles in every direction; as that of the *Cyclamen europeum:* to the receptacle of the *Cephalanthus, Nauclea,* &c. from their form.

GLOBULA'RIA. (*a, æ.* f.; from *globus,* a globe: so called from the shape of its flower.) The French daisy.

Globula'ria alypum. The leaves of this plant are used in some parts of Spain in the cure of the venereal disease. It is said to act also as a powerful but safe cathartic.

GLO'BUS. (*us, i.* m.) A ball.

Globus hystericus. The air arising in the œsophagus, and prevented by spasm from reaching the mouth, is so called because it mostly attends hysteria, and gives the sensation of a ball ascending in the throat. This globus, or feeling of a ball in the throat, is a very common annoyance to persons of a nervous temperament; and it is, with them and others, a common attendant, not only in hysterical, but also in nervous and hypochondriacal complaints. Fits of passion, both of anger, grief, and fear, produce it, and often to an extent that threatens suffocation. Many emotions of the mind, even in the strongest, whose minds were well regulated, give rise to this affection. Steadying the mind, cold water about the throat, and a small piece of ice, or very cold water in the mouth, generally relaxes the spasm, when an idiopathic disease. When symptomatic, the remedies of the primary disease are to be resorted to.

GLO'CHIS. (*is, inis,* f. Γλωχις, *cuspis teli.*) A pointed hair. A sharp point; a barbed point. Used, in *Botany,* to a bristle-like pubescence, which is turned backwards at its point into many straight teeth.

GLO'MER. (*er, eris.* n.) A clue of thread: mostly applied to glands.

GLOMERATE. (*Glomeratus;* from *glomer.*) 1. In *Anatomy,* a gland is so called which is formed of a glomer of sanguineous vessels, having no cavity, but furnished with an excretory duct; as the lachrymal and mammary glands.

2. In *Botany,* it means congregated.

GLOMERULUS. In *Botany,* a small tuft, or *capitulum,* mostly in the axilla of the peduncle. See *Capitulum.*

GLOSSA. (*a, æ.* f. Γλωσσα, and γλωττα, the tongue.) See *Tongue.*

GLOSSA'GRA. (*a, æ.* f.; from γλωσσα, the tongue, and αγρα, a seizure.) A violent pain in the tongue.

GLO'SSO. (From γλωσσα, the tongue.) Names compounded with this word belong to muscles, nerves, or vessels, from their being attached, or going to the tongue.

Glosso-pharyngeal nerves. The ninth pair of nerves. They arise from the processes of the cerebellum, which run to the medulla spinalis, and terminate by numerous branches in the muscles of the tongue and pharynx.

Glosso-pharyngeus. See *Constrictor pharyngeus superior.*

Glosso-staphylinus. See *Constrictor isthmi faucium.*

Glossoca'tochos. (From γλωσσα, tongue, and κατεχω, to hold.) An instrument in P. Ægineta for depressing the tongue. A spatula linguæ. The ancient glossocatochus was a sort of forceps, one of the blades of which served to depress the tongue, while the other was applied under the chin.

GLOSSOCE'LE. (*e, es.* f.; from γλωσσα, the tongue, and κηλη, a tumour.) An extrusion of the tongue.

Glossocoma. A retraction of the tongue.

Glossoco'mion. (From γλωσσα, a tongue, and κομεω, to guard.) By this was formerly meant a case for the tongue for a hautboy; but the old surgeons, by metaphor, use it to signify an instrument, or case, for containing a fractured limb.

GLOSSY. See *Nitidus.*

GLO'TTA. (Γλωτ*α*, the tongue.) See *Glossa*.

GLO'TTIS. (*is, idis.* f.; from γλωτ*α*, the tongue.) The superior opening of the larynx at the bottom of the tongue.

GLUCINA. (*a,æ.* f.; from γλυκυς, which signifies sweet, because it gives that taste to the salts in forms.) The name of an earth found in the beryl, a transparent stone of a green colour, and in the emerald of Peru. It is white, light, and soft to the touch; insipid, and adheres to the tongue; and is infusible by itself in the fire. Its specific gravity is 2·967. It is soluble in alkalies and their carbonates, and in all the acids except the carbonic and phosphoric, and forms with them saccharine and slightly astringent salts.

GLUE. (Γλια. *Gluten, inis.* n.; and *glutinum, i.* n.) An inspissated jelly made from the parings of hides and other offals, by boiling them in water, straining through a wicker basket, suffering the impurities to subside, and then boiling it a second time. Shreds or parings of vellum, parchment, or white leather, make a clear and almost colourless glue.

GLUMA. (*Gluma, æ.* f.; *à glubendo*, a husk of corn.) The husk. The peculiar calyx of grasses and grass-like plants, of a chaffy texture, formed of little concave leaflets, which are called *valves*. To the husk belongs the *arista*, the *beard* or *awn*. See *Arista*. The gluma is,

1. *Univalve*, in *Lolium perenne*.
2. *Bivalve*, in most grasses.
3. *Trivalve*, in *Panicum miliaceum*.
4. *Many-valve*, in *Uniola paniculata*.
5. *Coloured*, otherwise than green; as in *Holcus bicolor*.

From the number of flowers the husk contains, it is called,—

1. *Gluma uniflora*, one-flowered; as in *Panicum*.
2. *Biflora*, with two; as in *Aira*.
3. *Multiflora*, having many; as in *Poa*, and *Avena*.

From the external appearance, the gluma is termed,—

1. *Glabrous*, smooth; as in *Holcus laxus*.
2. *Hispid*, bristly; as in *Secale orientale*.
3. *Striate*; as in *Holcus striatus*.
4. *Villose*; as in *Holcus sorgham*, *Holcus saccharatus*, and *Bromus purgans*.
5. *Ciliate*, fringed; as in *Bromus ciliatus*.
6. *Beardless*; as in *Briza* and *Poa*.
7. *Awned*; as in *Hordeum*.

GLUMOSUS. Glumose. A flower is so called, which is aggregate, and has a glumous or husky calyx.

GLUTEAL. *Glutealis*. Belonging to the buttocks.

Gluteal artery. A branch of the internal iliac artery.

GLU'TEN. (*Quasi geluten*; from *gelo*, to congeal.) See *Glue*.

Gluten, animal. This substance constitutes the basis of the fibres of all the solid parts.

Gluten, vegetable. If wheat flour be made into a paste, and washed in a large quantity of water, it is separated into three distinct substances.

1. A *mucilaginous saccharine matter*, which is readily dissolved in the liquor, and may be separated from it by evaporation.
2. *Starch*, which is suspended in the fluid, and subsides to the bottom by repose.
3. *Gluten*, which remains in the hand, and is tenacious, very ductile, somewhat elastic, and of a brown-grey colour.

The first of these substances does not essentially differ from other saccharine mucilages. The second, namely, the starch, forms a gluey fluid by boiling in water, though it is scarcely, if at all, acted upon by that fluid when cold. Its habitudes and products with the fire, or with nitric acid, are nearly the same as those of gum and of sugar. It appears to be as much more remote from the saline state than gum, as gum is more remote from that state than sugar.

The gluten, though it existed before the washing in the pulverulent form, and has acquired its tenacity and adhesive qualities from the water it has imbibed, is nevertheless totally insoluble in this fluid. It has scarcely any taste. When dry, it is semitransparent, and resembles glue in its colour and appearance. If it be drawn out thin, when first obtained, it may be dried by exposure to the air; but if it be exposed to warmth and moisture while wet, it putrefies like an animal substance. The dried gluten, applied to the flame of a candle, crackles, swells, and burns, exactly like a feather, or piece of horn. It affords the same products by destructive distillation as animal matters do; is not soluble in alkohol, oils, or æther; and is acted upon by acids and alkalies, when heated. According to Rouelle, it is the same with the caseous substance of milk.

Taddey, an Italian chemist, has lately ascertained that the gluten of wheat may be decomposed into two principles, which he has distinguished by the names *gliadine* and *zimome*. They are obtained in a separate state by kneading the fresh gluten in successive portions of alkohol, as long as that liquid continues to become milky, when diluted with water. The alkohol solutions being set aside, gradually deposit a whitish matter, consisting of small filaments of gluten, and become perfectly transparent. Being now left to slow evaporation, the gliadine remains behind, of the consistence of honey, and mixed with a little yellow resinous matter, from which it may be freed by digestion in sulphuric æther, in which gliadine is not sensibly soluble. The portion of the gluten not dissolved by the alkohol is the zimome.

Properties of Gliadine.—When dry, it has a straw-yellow colour, slightly transparent, and in thin plates, brittle, having a slight smell, similar to that of honeycomb, and, when slightly heated, giving out an odour similar to that of boiled apples. In the

mouth it becomes adhesive, and has a sweetish and balsamic taste. It is pretty soluble in boiling alkohol, which loses its transparency in proportion as it cools, and then retains only a small quantity in solution. It forms a kind of varnish in those bodies to which it is applied. It softens, but does not dissolve, in cold distilled water. At a boiling heat it is converted into froth, and the liquid remains slightly milky. It is specifically heavier than water.

The alkoholic solution of gliadine becomes milky when mixed with water, and is precipitated in white flocks by the alkaline carbonates. It is scarcely affected by the mineral and vegetable acids. Dry gliadine dissolves in caustic alkalies and in acids. It swells upon red-hot coals, and then contracts in the manner of animal substances. It burns with a pretty lively flame, and leaves behind it a light spongy charcoal, difficult to incinerate. Gliadine, in some respects, approaches the properties of resins; but differs from them in being insoluble in sulphuric æther. It is very sensibly affected by the infusion of nut-galls. It is capable of itself of undergoing a slow fermentation, and produces fermentation in saccharine substances.

From the flour of barley, rye, or oats, no gluten can be extracted as from that of wheat, probably because they contain too small a quantity.

Properties of Zimome.—The residue of wheat, which is not dissolved by alkohol, is the zimome. If this be boiled repeatedly in alkohol, it is obtained pure.

Zimome thus purified has the form of small globules, or constitutes a shapeless mass, which is hard, tough, destitute of cohesion, and of an ash-white colour. When washed in water, it recovers part of its viscosity, and becomes quickly brown, when left in contact with the air. It is specifically heavier than water. Its mode of fermenting is no longer that of gluten; for, when it purifies, it exhales a fœtid urinous odour. It dissolves completely in vinegar, and in the mineral acids at a boiling temperature. With caustic potash it combines, and forms a kind of soap. When put into lime water, or into the solutions of the alkaline carbonates, it becomes harder, and assumes a new appearance without dissolving. When thrown upon red-hot coals, it exhales an odour similar to that of burning hair or hoofs, and burns with flame.

Zimome is to be found in several parts of vegetables. It produces various kinds of fermentation, according to the nature of the substance with which it comes in contact.

GLUTE'US. (From γλουτος, the buttocks.) The name of some muscles, arteries, &c. of the buttocks.

GLUTEUS MAXIMUS. *Gluteus magnus*, of Albinus. *Glutæus major*, of Cowper. A broad radiated muscle, on which we sit, is divided into a number of strong fasciculi, is covered by a pretty thick aponeurosis derived from the *fascia lata*, and is situated immediately under the integuments. It arises fleshy from the outer lip of somewhat more than the posterior half of the spine of the ilium, from the ligaments that cover the two posterior spinous processes; from the posterior sacro-ischiatic ligament; and from the outer sides of the os sacrum and os coccygis. From these origins the fibres of the muscle run towards the great trochanter of the os femoris, where they form a broad and thick tendon, between which and the trochanter there is a considerable *bursa mucosa*. This tendon is inserted into the upper part of the *linea aspera*, for the space of two or three inches downwards; and sends off fibres to the fascia lata, and to the upper extremity of the vastus externus. This muscle serves to extend the thigh, by pulling it directly backwards; at the same time it draws it a little outwards, and thus assists in its rotatory motion. Its origin from the coccyx seems to prevent that bone from being forced too far backwards.

GLUTEUS MEDIUS. The posterior half of this muscle is covered by the gluteus maximus, which it greatly resembles in shape; but the anterior and upper part of it is covered only by the integuments, and by a tendinous membrane which belongs to the fascia lata. It arises fleshy from the outer lip of the anterior part of the spine of the ilium, from part of the posterior surface of that bone, and likewise from the fascia that covers it. From these origins its fibres run towards the great trochanter, into the outer and posterior part of which it is inserted by a broad tendon. Between this tendon and the trochanter there is a small thin *bursa mucosa*. The uses of this muscle are nearly the same as those of the gluteus maximus; but it is not confined, like that muscle, to rolling the os femoris outwards, its anterior portion being capable of turning that bone a little inwards. As it has no origin from the coccyx, it can have no effect on that bone.

GLUTEUS MINIMUS. *Glutæus minor*, of Albinus and Cowper. A radiated muscle, is situated under the gluteus medius. In adults, and especially in old subjects, its outer surface is usually tendinous. It arises fleshy between the two semicircular ridges we observe on the outer surface of the ilium, and likewise from the edge of its great niche. Its fibres run, in different directions, towards a thick flat tendon, which adheres to a capsular ligament of the joint, and is inserted into the fore and upper part of the great trochanter. A small *bursa mucosa* may be observed between the tendon of this muscle and the trochanter. This muscle assists the two former in drawing the thigh backwards and outwards, and in rolling it. It may likewise serve to prevent the capsular ligament from being pinched in the motions of the joint.

GLU'TIA. (From γλουτος, the buttock.) The buttocks.

GLUTINOUS. *Glutinosus*. Having the properties of gluten.

GLUTTONY. See *Bulimia.*

Gluttu'patens. (From *gluttus,* the throat, and *pateo,* to extend.) The stomach, which is an extension of the throat.

GLU'TUS. (*us, i.* m. Γλουτος; from γλοιος, filthy.) The buttock. See *Nates.*

Glyca'sma. (From γλυκυς, sweet.) A sweet medicated wine.

GLYCYPI'CROS. (From γλυκυς, sweet, and πικρος, bitter: so called from its taste.) See *Solanum dulcamara.*

GLYCYRRHI'ZA. (*a, æ.* f.; from γλυκυς, sweet, and ῥιζα, a root.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.*

2. The pharmacopœial name of liquorice. See *Glycyrrhiza glabra.*

Glycyrrhiza echinata. This species of liquorice is substituted in some places for the root of the *glabra.*

Glycyrrhiza glabra. The systematic name of the officinal liquorice, *Glycyrrhiza—leguminibus glabris, stipulis nullis, foliolo impari petiolato,* of Linnæus. A native of the south of Europe, but cultivated in Britain. The root contains a great quantity of saccharine matter, joined with some proportion of mucilage, and hence it has a viscid sweet taste. It is in common use as a pectoral or emollient, in catarrhal defluxions on the breast, coughs, hoarsenesses, &c. Infusions, or the extract made from it, which is called *Spanish liquorice,* afford likewise very commodious vehicles for the exhibition of other medicines; the liquorice taste concealing that of unpalatable drugs more effectually than syrups or any of the sweets of the saccharine kind.

Glycysa'ncon. (From γλυκυς, sweet, and αγκων, the elbow: so called from its sweetish taste, and its inflections, or elbows, at the joints.) A species of southern wood.

GLYSTER. See *Enema.*

GNAPHA'LIUM. (*um, i.* n.; from γναφαλον, cotton: so named, from its soft downy surface.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.*

2. The pharmacopœial name of the herb cotton weed. See *Gnaphalium dioicum.*

Gnaphalium arenarium. The flowers of this plant, as well as those of the gnaphalium stœchas, are called in the pharmacopœias, *flores elichrysi.* See *Gnaphalium stœchas.*

Gnaphalium dioicum. The systematic name of the *pes cati. Gnaphalium albinum.* Cotton weed. The flores gnaphalii of the pharmacopœias, called also, *flores hispidulæ, seu pedes cati,* are the produce of this plant. They are now quite obsolete, but were formerly used as astringents, and recommended in the cure of hooping-cough, phthisis pulmonalis, and hæmoptysis.

Gnaphalium stœchas. The systematic name of Goldilocks; called also, *Elichrysum; Stœchas citrina.* The flowers of this small downy plant are warm, pungent, and bitter, and said to possess aperient and corroborant virtues.

Gna'thus. (From γναπτω, to bend: so called from their curvature.) 1. The jaw, or jaw-bones.

2. The cheek.

GNAWED. See *Erosus.*

GNEISS. A compound rock, consisting of felspar, quartz, and mica, disposed in slates, from the preponderance of the mica scales.

Gni'dius. A term applied by Hippocrates, and others since, to some medicinal precepts wrote in the island of Gnidos.

GOAT. See *Capra hircus.*

Goat's-beard, grey. See *Clavaria cinea.*

Goat's-beard, mushroom. See *Clavaria coralloides.*

Goat's-rue. See *Galega.*

Goat's-thorn. See *Astragalus verus.*

Goat-weed. See *Ægopodium.*

Gobio. See *Cyprinus gobio.*

GODDARD, Jonathan, was born in 1617. He formed a Society for Experimental Enquiry, which met at his house, and which gave birth to the Royal Society, and he was nominated one of the first council of that institution. He published *A Discourse, setting forth the unhappy Condition of the Practice of Physic in London.* Two papers of his appeared in the Philosophical Transactions, and many others in Birch's History of the Royal Society.

GOELICKE, Andrew Offon, a German physician. He left several works, which relate principally to the History of Anatomy, &c.; particularly the *Historia Medicinæ Universalis,* which was published in six different portions between the years 1717 and 1720.

Goitre. See *Bronchocele.*

GOLD. *Aurum.* A metal found in nature only in a metallic state; most commonly in grains, ramifications, leaves, or crystals, rhomboidal, octahedral, or pyramidal. Its matrix is generally quartz, sand-stone, siliceous schistus, &c. It is found also in the sands of many rivers, particularly in Africa, Hungary, and France, in minute irregular grains, called *gold dust.* Native gold, found in compact masses, is never completely pure; it is alloyed with silver, or copper, and sometimes with iron and tellurium. The largest piece of native gold that has been hitherto discovered in Europe, was found in the county of Wicklow, in Ireland. Its weight was said to be twenty-two ounces, and the quantity of alloy it contained was very small. Several other pieces, exceeding one ounce, have also been discovered at the same place, in sand, covered with turf, and adjacent to a rivulet.

Gold is also met with in a particular sort of argentiferous copper pyrites, called in Hungary, *Gelf.* This ore is found either massive, or crystallised in rhomboids, or other irregular quadrangular or polygonal masses. It exists likewise in the sulphuretted ores of Nagaya in Transylvania. These all contain the metal called tellurium. Berthollet, and other French chemists, have obtained gold out of the ashes of vegetables.

Gold-cup. See *Ranunculus.*

Gold'n maidenhair. See *Polytrichum.*

Golden rod. See *Solidago.*

GOLDILOCKS. See *Gnaphalium.*

GOMPHI'ASIS. (*is, is.* f.; from γομφος, a nail.) *Gomphiasmus.* A disease of the teeth, when they are loosened from the sockets, like nails drawn out of the wood.

GOMPHIA'SMUS. See *Gomphiasis.*

GO'MPHIOI. (From γομφος, a nail: so called because they are as nails driven into their sockets.) The dentes molares, or grinding teeth.

GOMPHO'MA. See *Gomphosis.*

GOMPHO'SIS. (*is, is.* f.; from γομφοω, to drive in a nail.) *Gomphoma.* A species of immoveable connection of bones, in which one bone is fixed in another, like a nail in a board; as the teeth in the alveoli of the jaws.

GONA'GRA. (*a, æ.* f.; from γονυ, the knee, and αγρα, a seizure.) The gout in the knee.

GONA'LGIA. See *Gonyalgia.*

GO'NE. (*e, es.* f. Γονη.) 1. The seed.

2. In Hippocrates it is the uterus.

GONG. Tam-tam. A species of cymbal which produces a very loud sound when struck. It is an alloy of about eighty parts of copper with twenty of tin.

GONGRO'NA. (*a, æ.* f.; from γογγρος, a hard knot.) 1. The cramp.

2. A knot in the trunk of a tree.

3. A hard round tumour of the nervous parts; but particularly a bronchocele, or other hard tumour of the neck.

GONGY'LION. (*um, ii.* n.; from γογγυλος, round.) A pill.

GONIOMETER. An instrument for measuring the angles of crystals.

GONOI'DES. (From γονη, seed, and ειδος, form.) Resembling seed. Hippocrates often uses it as an epithet for the excrements of the belly, and for the contents of the urine, when there is something in them which resembles the seminal matter.

GONORRHŒ'A. (*a, æ.* f.; from γονη, the semen, and ρεω, to flow.) 1. A flow or discharge of semen. This is also called *spermorrhœa.* As a disease, it is an involuntary emission of the seminal fluid without copulation. It is mostly caused by an indulgence of libidinous ideas, sometimes with an erection of the penis, and sometimes without. During the vigorous state of youth, with strong passions, it is not uncommon. This is the *oneirogonos,* and *gonorrhœa dormientium,* of authors. If it takes place in strong and vigorous constitutions, and especially from a superabundant secretion of seminal fluid, the best remedies are blood-letting and purgatives, with a low and abstemious diet, and regular exercise. Another cause of this malady is the very opposite to the former. Here the constitution is evidently in a relaxed state, and the fluid that is emitted is thin or pellucid, and consists either of a morbid secretion from the testes, or an admixture of a thin fluid furnished by the vesicula seminales: this is the *gonorrhœa laxorum;* and requires that sexual intercourse should be forbidden, and the system invigorated by cold sea bathing, local bathing with a bidet, chalybeate medicines, bark and zinc, with the occasional use of blisters to the perinæum. Cantharides have been, after attending to the system, useful, when given internally with caution.

Both species are occasionally produced sympathetically and symptomatically from tetanic affections, stone in the bladder, &c.; and then, of course, attention must be given to the removal of the primary affection.

2. This name was applied to the venereal disease, when it appeared by a running from the penis; because supposed, by the practitioners of that day, to be a discharge of semen. See *Urethritis venerea.*

Gonorrhœa balani. A species of venereal discharge, or gleet, affecting the glans penis only.

GONYA'LGIA. (*a, æ.* f.; from γονυ, the knee, and αλγος, pain.) *Gonialgia. Genalgia.* Pain in the knee.

GOOSE. See *Anser domesticus.*

GOOSE-FOOT. See *Chenopodium.*

GOOSE-GRASS. See *Galium aparine.*

GO'RDIUS. (*us, i.* m.) 1. The name of a genus of the Order *Vermes,* of animals.

2. The gordius, or hair-tail worm, of old writers; which is the *seta equina* found in stagnant marshes and ditches in Lapland, and other places.

Gordius medinensis. See *Filaria medinensis.*

GORGONIA. (*a, æ.* f.) The name of a genus of corals.

Gorgonia nobilis. The red coral.

GOSSY'PIUM. (*um, ii.* n.; from *golne,* whence *gollipium,* Egyptian.) 1. The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.*

2. The pharmacopœial name of the cotton-tree. See *Gossypium herbaceum.*

Gossypium herbaceum. The systematic name of the cotton-plant: called also, *Bombyx. Gossypium—foliis quinquelobis subtus eglandulosis, caule herbaceo,* of Linnæus. The seeds are directed for medicinal use in some foreign pharmacopœias; and are administered in coughs, on account of the mucilage they contain. The cotton, the produce of this tree, is well known for domestic purposes.

Goulard's extract. A saturated solution of acetate of lead. See *Plumbi acetatis liquor.*

GOULSTON, Theodore, was born about 1585, in Northamptonshire, and studied medicine at Oxford. He bequeathed 200*l.* to purchase a rent-charge for maintaining an annual Pathological Lecture, to be read at the College of Physicians of London, by one of the four junior doctors. He translated and wrote learned notes on some of the works of Aristotle and Galen; of which the latter were not published till after his death.

GOURD. See *Cucurbita.*

Gourd, bitter. See *Cucumis colocynthis.*

GOUT. (This word is derived from the French, *goute;* the origin of which, Dr. Good

says, is almost forgotten. Most diseases, he observes, attended by tumefaction, were ascribed, by the ancients, to a flow of some morbid fluid or humour to the affected part, which was called a rheum or defluxion; and the rheum or defluxion was denominated hot, cold, acrid, saline, or viscid, according to the nature of the symptoms. The Arabian writers ascribed even this cause to various diseases of the eyes, which were called gutta serena and gutta obscura, "clear or cloudy drops or defluxions," according to the external appearance. Hence gutta, goute, or gout, means a defluxion of morbid humour to the part; as rheumatism also does.) Several names have been given to this disease by more modern writers, which are principally derived from the part affected; as *arthritis, podagra, chiragra, dolor podagricus, febris podagrica*, &c. It is characterised by pain in the joints, chiefly of the great toe, or, at any rate, chiefly of the feet and hands, returning at intervals, with more or less of swelling, and redness of the skin; the functions of the stomach being most disturbed previous to the attack.

It is a very painful disease, preceded usually by flatulency and indigestion, and accompanied by fever pains in the joints of the hands and feet, particularly in that of the great toe, and which returns by paroxysms, occurring chiefly in the spring and beginning of winter. The only disorder for which the regular gout can possibly be mistaken, is the rheumatism; and cases may occur wherein there may be some difficulty in making a just discrimination: but the most certain way of distinguishing them will be, to give due consideration to the predisposition in the habit, the symptoms which have preceded, the parts affected, the recurrences of the disease, and its connection with other parts of the system. Its attacks are much confined to the male sex, particularly those of a corpulent habit and robust body; but every now and then we meet with instances of it in robust females. Those who are employed in constant bodily labour, or who live much upon vegetable food, as likewise those who make no use of wine or other fermented liquors, are seldom afflicted with the gout. The disease seldom appears at an earlier period of life than from five-and-thirty to forty; and, when it does, it may be presumed to arise from an hereditary disposition. Indolence, inactivity, and too free a use of tartareous wines, fermented liquors, and animal food, are the principal causes which give rise to the gout; but it may likewise be brought on by great sensuality, and excess in venery, intense and close application to study, long want of rest, grief or uneasiness of mind, exposure to cold, too free a use of acidulated liquors, a sudden change from a full to a spare diet, the suppression of any accustomed discharge, or by excessive evacuations; and that it sometimes proceeds from an hereditary disposition, is beyond all doubt, as females who have been remarked for their great abstemiousness, and youths of a tender age, have been attacked with it.

Most nosologists divide it into four species, the regular, the atonic, the retrocedent, and the misplaced or shifting.

1. The *regular Gout*.—A paroxysm of regular gout sometimes comes on suddenly, without any previous warning; at other times it is preceded by an unusal coldness of the feet and legs, a suppression of perspiration in them, and numbness, or a sense of prickling along the whole of the lower extremities; and with these symptoms the appetite is diminished, the stomach is troubled with flatulency and indigestion, a degree of torpor and languor is felt over the whole body, great lassitude and fatigue are experienced after the least exercise, the body is costive, and the urine pallid. On the night of the attack, the patient perhaps goes to bed in tolerable health, and, after a few hours, is awaked by the severity of the pain, most commonly in the first joint of the great toe; sometimes, however, it attacks other parts of the foot, the heel, calf of the leg, or perhaps the whole of the foot. The pain resembles that of a dislocated bone, and is attended with the sensation as if cold water was poured upon the part; and this pain becoming more violent, is succeeded by rigors and other febrile symptoms, together with a severe throbbing and inflammation in the part. Sometimes both feet become swelled and inflamed, so that neither of them can be put to the ground; nor can the patient endure the least motion without suffering excruciating pain. Towards morning, he falls asleep, and a gentle sweat breaks out, and terminates the paroxysm, a number of which constitutes what is called a fit of the gout. The duration of the fit will be longer or shorter, according to the disposition of the body to the disease, the season of the year, and the age and strength of the patient. When a paroxysm has thus taken place, although there is an alleviation of pain at the expiration of some hours, still the patient is not entirely relieved from it; and, for some evenings successively, he has a return both of pain and fever, which continue, with more or less violence, until morning. The paroxysms, however, prove usually more mild every day, till at length the disease goes off either by perspiration, urine, or some other evacuation; the parts which have been affected becoming itchy, the cuticle falling off in scales from them, and some slight degree of lameness remaining. At first an attack of gout occurs, perhaps, only once in two or three years; it then probably comes on every year, and at length it becomes more frequent, and is more severe, and of longer duration, each succeeding fit. In the progress of the disease, various parts of the body are affected, and translations take place from one joint, or limb, to another; and after frequent attacks, the joints lose their strength and flexibility, and become so stiff as to be deprived of all motion. Concretions, of a chalky appearance, are likewise formed upon the outside of the joints, and nephritic affections of the kidneys arise from a deposit of the same kind of

matter in them, which, although fluid at first, becomes gradually dry and firm. This matter is partly soluble in acids, but without effervescence; and Dr. Wollaston discovered it not to be carbonate of lime, but a compound of the uric or lithic acid and soda.

2. *Atonic Gout.* — It sometimes happens that, although a gouty diathesis prevails in the system, yet from certain causes, no inflammatory affection of the joints is produced; in which case, the stomach becomes particularly affected, and the patient is troubled with flatulency, indigestion, loss of appetite, eructations, nausea, vomiting, and severe pains; and these affections are often accompanied with much dejection of spirits, and other hypochondriacal symptoms. In some cases, the head is affected with pain and giddiness, and now and then with a tendency to apoplexy; and in other cases, the viscera of the thorax suffer from the disease, and palpitations, faintings, and asthma arise. This is what is called atonic gout.

3. *Podagra retrograda.*—Retrocedent gout. It sometimes happens that, after the inflammation has occupied a joint, instead of its continuing the usual time, and so going off gradually, it ceases suddenly, and is translated to some internal part. The term retrocedent gout is applied to occurrences of this nature. When it falls on the stomach, it occasions nausea, vomiting, anxiety, or great pain; when on the heart, it brings on syncope; when on the lungs, it produces an affection resembling asthma; and, when it occcupies the head, it is apt to give rise to apoplexy, or palsy.

4. *Misplaced Gout*, is when the gouty diathesis, instead of producing the inflammatory affection of the joints, occasions an inflammatory affection of some internal parts, and which appears from the same symptoms that attend the inflammation of those parts from other causes. All occurrences of this nature, as well as of the two former, are to be regarded as attacks of irregular gout, and are to be guarded against as much as possible.

In attempting the cure of this disease, our attention must be directed to the paroxysm, and to the management during its absence; and particularly to the state of the constitution and previous habits, which may demand different and opposite plans.

Treatment of the paroxysm of a regular fit of Gout. From the belief that a regular fit of gout was an effect of nature to throw off some peccant humour which formed the essence of the disease, it was formerly left to itself, or perhaps encouraged to proceed through its course without interruption. This opinion is now abandoned, and the practice is to endeavour to subdue the paroxysm by the ordinary means resorted to in inflammations of any other kind; as bleeding, purgatives, sudorifics, local astringents, refrigerants, &c., so managed as to prevent any danger of repelling the gout to some internal organ, and thus converting a regular paroxysm into a retrograde or atonic gout. Sydenham prohibited purging and sweating, and only allowed bleeding in young and vigorous constitutions, during the first or second paroxysm. He admits of the use of laudanum, where the pain is acute; and he trusts chiefly for the cure of the disease to an alterative regimen, and apozems to be resorted to in the intervals. Dr. Cullen allows bleeding, with the same restrictions as Sydenham, though he recommends the application of leeches to the part, as at all times a safer practice than the use of the lancet. Of cathartics and sudorifics he takes no notice, otherwise than as these may enter into the general course of an antiphlogistic plan; he is decidedly averse to the use of cold, and thinks that warm bathing and emollient poultices, blistering, burning with moxa, camphorated and aromatic oils, induce the inflammation to shift from one part to another, and consequently tend to repel the inflammation from the extremities to some more important part; while opium, though it affords relief in present paroxysms, occasions them to return with greater violence; and therefore he observes, by way of conclusion, "The common practice of committing the person to patience and flannel alone, is established upon the best foundation." Now, says Dr. Good, as the gout, after it has shown itself in paroxysms, is never idle; and as one paroxysm, in the opinion of Sydenham, Cullen, and every other physician, hastens on another, renders its intervals shorter, and its duration longer; and progressively saps all the energies both of mind and body, and renders life itself a burden, it is of serious importance to enquire whether this fear of a repulsion, however well founded in some instances, is not allowed too generally? whether it be not possible to draw a definite line between the form of the disease in which it ought to operate, and that in which it ought not? and whether, in the latter case, we may not derive all the benefit from a full use of a reducing process, which is obtained in other inflammations, accompanied with a like degree of constitutional vigour?

From the history of gout, we may draw this general corollary: that when once excited by some occasional cause into action, it has a peculiar tendency to fix and expand itself upon the weakest parts of the system; and, where several parts are equally weak, to pass in sudden transitions from one part to another, though transitions are rare where the system is sound.

In healthy constitutions, the weakest parts are the extremities; and hence, in such constitutions, these are the parts in which the gout uniformly opens its assault.

In unhealthy habits, however, the extremities are not the weakest parts of the system, but perhaps the stomach, or the heart, or the head, or the lungs, or some other organ; while several of these organs may, moreover, be equally debilitated, according to the idiosyncrasy, or to accidental circumstances. And

true to the general rule, the gouty principle, when roused into action in habits of this kind, fixes itself from the first on one of those important viscera rather than on the extremities; or roaming from one to another, on its alternating its course from these organs to the extremities, or from the extremities to these organs. And as metastases are rare where the system is sound, they become frequent in proportion as it loses this character, and especially in proportion to its debility in particular parts.

These are rules which cannot be too closely studied and committed to memory, and they seem to point out the line of distinction between that form of the disease in which a prudent fear of revulsion ought to be entertained, and that in which we may safely act without any such fear whatever. They directly lead us to two states of constitution that require a very different, and in many instances a very opposite, mode of treatment; and seem to settle the important question before us, under what circumstances it may be expedient to employ a palliative plan, and under what a cooling and reductive.

We shall commence with the first of these two states, forming a regular but violent fit of gout as it shows itself in a sound constitution, and inflicts its torture on the hand or the foot. Guiding ourselves by the laws just laid down, there seems no reason why, instead of "committing the person to patience and flannel alone," we should not pursue the evacuating and refrigerant means employed in active inflammations of any other kind, and have cause to expect a like success: such as bleeding, so strongly recommended by Dr. Heberden, and allowed occasionally by Sydenham, and emptying the bowels, relaxing the skin generally, and cooling the fiery heat of the affected limb by cold water, or any other frigorific application. With a transfer of morbific matter we have now no longer to contend. Yet, even where such a cause is admitted, as in most exanthemata, the plan thus proposed is, in many instances, pursued without hesitation.

In weakly habits or idiosyncrasies, or incidental debilities of particular organs, a metastasis is a frequent result, and peculiarly marks the character of gouty inflammation; and here refrigerants, violent purgatives, and venesection ought to be most sedulously abstained from; and the best practice is that of "committing the person to patience and flannel alone."

The inflammation of a regular fit of gout subsides gradually, though rapidly, under the treatment now proposed, without any repulsion whatever. Yet, in a few instances, it has seemed to be repelled in part, whilst it has chiefly passed off by resolution.

Of the benefit produced by the external use of cold water, Dr. Good speaks, from a trial of several years upon his own person, and is anxious that others should participate in what proved so decisive a comfort to himself. In the enjoyment of undisturbed health, amidst great exercise of body and mind, which, however, acted as a relief to each other, he was, for the first time, in his forty-seventh year, attacked with a regular fit of gout in one of his feet, some of his ancestors having been subject to the same complaint. Having long before drawn the distinctive line of treatment just adverted to, and carried it successfully into practice, he was on the point of trying it on himself, and particularly the affusion of cold water; but his family were so alarmed at the proposal, that he consented for the term of three days, but no longer, to follow the Cullenian prescription, and to employ nothing but flannel and as much patience as he could command. The foot was, in consequence, warmly wrapped up, and the sofa received him when he quitted the bed. The inflammation was extensive, and very painful: the pain, however, remitted occacasionally in the day, yet returned towards night with a vehemence that entirely deprived him of sleep, and kept him in a profuse perspiration, but a perspiration that afforded no relief. The limited time having expired, and the inflammation having gradually augmented instead of subsiding, early on the third morning he called for a large basin of cold water, stripped off the flannel, and boldly plunged the foot into it for four or five times in succession. The application was peculiarly refreshing; the fiery heat and pain, and all the inflammatory symptoms, diminished instantly: he repeated the cold bathing two hours afterwards, and continued to do so through the whole of the day; the complaint gradually diminishing upon every repetition. He slept soundly all night, the pain was trifling, and inflammation had almost subsided by the morning: he was able to hobble a little in the course of the day; and in four and twenty hours more the fit completely disappeared, and he was capable of resuming his accustomed exercise of walking. For five or six years afterwards he suffered annually from a like attack, but always had immediate recourse to cold immersion or affusion. No paroxysm continued longer than about three days, nor any one ever confined him totally to his house for a single day. Since this period, the use of a carriage prevented the excess of fatigue which he had hitherto often undergone, but, from a love of walking, he indulged in it; and for three years he had neither gout nor any other complaint to interrupt his usual career of good health. During the preceding paroxysm, the appetite being good, the bowels regular, and the pulse not much quickened, he made use of no collateral means, nor ever found the use of the cold water productive of the least inconvenience; though he was occasionally sensible of a gradual creeping through the system, of the peculiar aura, which may perhaps be called the *aura podagrica*, but which constituted no unpleasant sensation.

This practice is by no means of modern

invention, however it may have become a subject of warm controversy in the present day. An active evacuant plan, both by venesection and purging, has never ceased to be in use among many practitioners, and is particularly alluded to by Sydenham, though with a view of entering his protest against it, as injurious to a free discharge of the peccant matter, which, in his opinion, required to be carried off; while, with respect to the external use of cold water, not to mention that it seems to be alluded to by several of the Greek writers, and especially by Hippocrates, it has descended in a stream of recommendation from Zacutus Lusitanus in 1641, to Kolhaas and Keck in 1788 and 1789. Bartholine speaks of the use of snow as a common application in 1661, and Pechlin both of snow and cold sea-water towards the close of the same century.

But this treatment has often been employed rashly, and sometimes with great and even fatal mischief. It ought never to be ventured upon except, as already stated, where the constitution is decidedly sound and vigorous.

Leeches may, in many instances, be applied where venesection would be of doubtful expediency. A liniment of oil of almonds impregnated with opium, rubbed on the tumefaction with a protracted and very gentle friction, is often found highly serviceable in mitigating the pain; and epithems of tepid water, as recommended by Dr. Scudamore, alone or mixed with a portion of æther or alkohol, formed by cloths wetted with the fluid, and applied to the inflamed part, renewable as they become dry, in many cases prove a grateful substitute for cold water; and are preferable to poultices, warm water, or even vapour-baths, which too generally relax and weaken the joint, and prevent it from recovering its elasticity, after the paroxysm is over, so soon as it otherwise would do.

At the same time, the body should be cooled with gentle aperients or injections; and while drenching sweats are avoided, which never fail to be injurious, the breathing moisture should be imitated, which often breaks forth naturally in an early part of the morning, and is sure to afford relief after a night of distraction. Nor should opium be omitted where the pain is very acute; for, while it affords temporary ease, it diminishes the duration as well as the violence of the paroxysm.

The regimen should be light and inirritant, and the diet below the standard to which the patient has been accustomed; though, to guard against a metastasis to the stomach, we must be cautious that we do not reduce it too much. His chamber should be well ventilated, and his dress light and easy.

In the varieties, constituting atonic and retrocedent gout, there is a podagric diathesis grafted upon an unsound frame; the unsoundness being general or local: and, however fearless we may be of the disease fixing on any internal organ in the preceding variety, we have here a constant apprehension that it may do so, and in many cases see it commence in such organs.

In atonic gout, our uniform attempt should be to produce a transfer from the part on which it has seized, and fix it in the extremities: in retrocedent gout, on the contrary, to render the vacillating attack on the extremities more permanent, and prevent it from shifting to any other quarter.

To obtain the first intention, we have to strengthen and even stimulate the system generally by warm tonics and a generous diet, and, above all things, to take off the severe suffering, in whatever it may consist, from the affected organ: for the longer the fit continues there, the weaker it will become, and the less capable of any instinctive remedial exertion. At the same time we may solicit the paroxysm to the extremities by putting the feet into warm water, and thus unstringing the tone of their vessels; so as to bring the standard of their atony below that of the affected organ.

In atonic gout, the sufferings, though widely different according to the seat of the disease, are almost insupportable. In the head the pain is maddening, or the disorder is accompanied with great horror, or mimics the stupor of an apoplexy: in the stomach there is a faintness like that of death, with the sense of a cold lump of lead lodged within it; or there is a gnawing or a burning agony, or a spasmodic stricture which cuts the body in two, and renders breathing almost impossible; often, also, accompanied with a rapid and sinking palpitation of the heart.

It is of importance to determine accurately that these anomalous symptoms are really those of gout; of which we have chiefly to judge from the general character of the patient's constitution, his hereditary predisposition, habits of life, and the ailments to which he has been previously subject. In most cases, too, during the paroxysm, and especially where the stomach is affected, the warmest cordials are necessary: as brandy, the aromatic spirit of ammonia, the tincture of ginger or of capsicum, or, what is still better, usquebaugh. And it is always advantageous, and especially where the bowels are confined, to add to it some warm aperient, as aloes or rhubarb. Most of the family gout-cordials are made upon this principle, and judiciously consist of some active aperient and the hottest aromatics, dissolved in ardent spirits. And the patient, who is subject to these attacks, should never be without having something of this kind at hand, since the paroxysm often makes its onset without any warning. Yet he should resolutely forbear having recourse to any such medicine, except in the time of necessity: for an habitual indulgence in any of them will still farther debilitate the affected organ, and indeed the entire system; and hence quicken the returns of the paroxysm, and render the antidote less availing. Most of the preparations of æther may be employed with benefit in the variety before

us, and particularly in that icy coldness of the stomach, accompanied with a numbness of the limbs and a rapid palpitation of the heart, under which it occasionally exhibits itself. External irritants may also be beneficially employed at the same time, and particularly those of rapid action, as the compound camphire liniment, and sinapisms: at the same time the extremities should be plunged into the warm bath. But our sheet-anchor is opium; and it should be given freely, and in union with some preparation of antimony, so as to act towards the surface generally, and thus restore to the living power its interrupted equilibrium.

In retrocedent gout the same plan is to be pursued, where the attack has actually shifted from the feet or hands to some internal organ.

In gout, the *intervals of the disease* are of as much importance to be attended to as its paroxysms: and here, also, the mode of management under the first form should differ essentially from that under the second; for though the occasional causes may, in many cases, be the same, they have in the former to operate upon a vigorous scale of power, and in the latter, upon a scale decidedly reduced.

In every variety, all known occasional causes must be equally avoided. Where the diet has been too rich, it must be lowered; and where too spare and abstemious, made more liberal. Indolence and a sedentary life must give way to regular exercise; and over-exertion of body or mind, to repose and quiet. In the young, robust, and corpulent, whether the disease result from too great indulgence at the table, or an habitual taint, it may be requisite to abstain from animal food, wines, and fermented liquors altogether; but where the sufferer has passed considerably beyond the zenith of life, and the luxuries of the table have become habitual, his ordinary fare should be reduced or diminished, rather than entirely commuted. And in every change, it is better to proceed slowly, than to rush rapidly from one extreme to another: since nothing has so great a tendency to prepare the internal organs for gouty paroxysms, as such sudden and violent transitions. The bowels should be kept in regular order, and the hour of rest be early.

A due and unswerving attention to these general rules of the hygiene, will often be sufficient to keep those free from all disturbance of the gout for many years, and perhaps for the whole of their subsequent life, who have only known it in the form of a few regular paroxysms. But where the system, and especially the digestive function, is weak, and the patient has had anticipations of a tonic or recedent gout, or has actually suffered from its assaults, it will be necessary to superadd a course of *invigorating medicines*.

There are three classes of remedies that generally pass under this name: stimulants, bitters, and astringents. The first increase the action, the two last augment the tone. Stimulants can rarely be employed alone, except in cases of emergency; for a lax state of fibres will bear little increase of action without, at the same time, suffering an equal increase of debility. But they may often, and in the case of gout perhaps always, be combined with astringents and bitters with great and decisive benefit.

Most of the celebrated specifics for preventing a return of gout, have been formed of these classes of medicines in combination, and especially of bitters and aromatics: and it is singular that, although the variety of them which nature offers to us is almost infinite, they have been employed with little change from the time of Galen and Cælius Aurelianus, in the second century, to that of Sydenham, in the seventeenth.

There have, in all ages, been offered to the public, specifics for the sudden cure or removal of the paroxysm when present, as well as for preventing its return hereafter. Lucian, in his Tragopodagra, gives us, with great humour, a list that occupies a page of such as were chiefly in vogue in his day; and the catalogue is certainly not diminished in our own. Those that have acquired the highest reputation, appear to have been composed of some species of hellebore, or of meadow-saffron; the first of which is among the remedies quoted by Lucian, though it is probable that the ῥίζαν ἐλλεβορε of the Greeks was a different plant from either the white or black hellebore of modern dispensatories.

The favourite specifics of the present day are M. Husson's *Eau médicinale*, and the *Vinum colchici*, or wine of meadow-saffron, introduced in the current Pharmacopœia of the London College. The exact components of the former are kept a secret; though its basis is well known to be either the one or the other of the above plants, most probably the meadow-saffron. The effects of the Eau médicinale and of the colchicum wine, do not essentially differ; for, after taking about sixty drops of either, the pulse becomes slower, and at length sinks, in about twelve hours, from ten to twenty strokes in a minute below its natural number, at which time the inflammation subsides. The action of both medicines is accompanied with great languor, and a deadly nausea or sickness, which terminates in vomiting, or a discharge from the bowels, or both. If the dose be in a small degree in excess, the symptoms are syncope, cold sweat, extreme prostration of strength, violent vomiting and purging, a wiry and almost imperceptible pulse, or a state of utter and very alarming insensibility. And, in some constitutions, these effects have followed from the use of even a common dose. So that these preparations seem to be rather stronger drugged than the celebrated oxymel colchici of Stoerck.

It is possible that the colchicum may act by a specific power on the peculiar inflammation of a regular fit; yet as other intestinal irritants have occasionally produced a like effect, and particularly the *Gratiola offi-*

cinalis and *Ranunculus flammula*, the disappearance of the paroxysm may also be ascribed to a transfer of action to the stomach and intestines. Generally speaking, specifics operate by a secret and inexplicable power, as the bark in intermittents, the vaccine virus in shielding the constitution against small-pox, and mercury in syphilis: for though a ptyalism gives proof that the system is impregnated with the last, there are few practitioners so attached to the Cullenian doctrine in the present day, as to contend that the venereal virus is carried off by the salivation, since we are perpetually beholding it carried off under the influence of mercury without any salivation whatever.

Admitting yet, that the colchicum has a specific power over a regular inflammatory paroxysm of gout, it is clear that it has no such power over the gouty diathesis, since the paroxysm has never been so removed as not to return again. And it hence becomes a serious question, whether the mischief produced in the constitution by the employment of such violent means be not greater than the temporary good obtained by the suppression of the inflammation? And neither the Eau médicinale nor the colchicum wine have been noticed with a sufficient degree of discrimination fairly to determine this point.

From the rapidity and force of the operation, it is clear that they ought never to be tried, except in the first variety of gout, or where the system is firm and healthy, and the disorder shows itself in a regular fit. And as it is highly desirable to restrain the violence of the paroxysm, shorten its duration, and carry it off as soon as possible, the use of the one or the other of these medicines may be judicious so long as the system is able to recover itself with speed from their influence, and provided the patient limits himself to the smallest dose that will answer the purpose.

Yet these medicines, from too little attention to their real effects, and from a mistaken idea that they are a specific for gout under every form, have not been confined to one variety, but have been very generally employed in all. And hence the reason of the very general complaint among those who have tried these remedies, that, although they remove the fit at the time, they shorten the intervals, and render their frames more obnoxious to relapses.

Gout-stone. See *Chalk-stone*.

Gout-weed. See *Ægopodium*.

GRAAF, Reinier de, born in Holland, 1641. At the age of twenty-two he published his treatise *De Succo Pancreatico*, which gained him considerable reputation. He published three dissertations relative to the organs of generation in both sexes; upon which he had a controversy with Swammerdam.

GRA'CILIS. (So named from its smallness.) *Rectus interior femoris, sive gracilis interior*, of Winslow. A long, straight, and slender muscle of the thigh, situated immediately under the integuments, at the inner part. It arises, by a broad and thin tendon, from the anterior part of the ischium and pubis, and soon becoming fleshy, descends nearly in a straight direction along the inside of the thigh. A little above the knee, it terminates in a slender and roundish tendon, which afterwards becomes flatter, and is inserted into the middle of the tibia, behind and under the sartorius. Under the tendons of this and the rectus there is a considerable *bursa mucosa*, which on one side adheres to them and to the tendon of the semitendinosus, and on the other to the capsular ligament of the knee. This muscle assists in bending the thigh and leg inwards.

GRADUATION. (*Graduatio*; from *gradus*, a step or degree.) The academical process by which a degree in medicine is obtained.

GRADUATE. One who has graduated, —that is, obtained a degree at any university.

GRÆCUS. Grecian: the trivial name of some herbs found in or brought from Greece.

GRAFTING. Budding and inoculating is the process of uniting the branches or buds of two or more separate trees. The bud or branch of one tree, accompanied by a portion of its bark, is inserted into the bark of another, and the tree which is thus engrafted upon is called the stock. By this mode different kinds of fruits, pears, apples, plums, &c. each of which is only a variety accidentally raised from seed, but no further perpetuated in the same manner, are multiplied; buds of the kind wanted to be propagated, being engrafted on so many stalks of a wild nature.

GRA'MEN. (*en, inis.* n.) Grass. Any kind of grass-like herb.

Gramen arundinaceum. See *Calamagrostis*.

Gramen caninum. See *Triticum repens*.

Gramen crucis cyperioidis. *Gramen ægyptiacum*. Egyptian cock's-foot grass, or grass of the cross. The roots and plants possess the same virtues as the dog's grass, and are serviceable in the earlier stages of dropsy. They are supposed to correct the bad smell of the breath, and to relieve nephritic disorders, colics, &c. although now neglected.

Gramia. The sordes of the eyes.

Gramma. A scruple.

GRAMMATITE. See *Tremolite*.

Gra'mme. (From γραμμη, a line: so called from its linear appearance.) The iris of the eye.

Granadi'lla. (Diminutive of *granado*, Spanish, a pomegranate: so called because at the top of the flower there are points, like the grains of a pomegranate.) The passion-flower, the fruit of which is said to possess refrigerating qualities.

GRANATITE. See *Grenatite*.

Granatri'stum. A boil or carbuncle.

GRANATUM. (*um, i.* n.; from *granum*, a grain, because it is full of seed.) The pomegranate. See *Punica granatum*.

Grande'balæ. (*Quod in grandioribus

ætate nascuntur, because they appear in those who are advanced in years.) The hairs under the arm-pits.

GRANDINO'SUS. (From *grandis*, great, in reference to size.) Great; large:-applied to bones, &c. See *Cuboides os*.

GRA'NDO. (*o, inis.* f. *Quod similitudinem granorum habeat*, because it is in shape and size like a grain of seed.) 1. Hail.

2. A moveable tumour on the margin of the eyelid, like a hail-stone. See *Chalazion*.

GRANIFERUS. Graniferous: grained; bearing a grain or bead.

GRANITE. A compound rock consisting of quartz, felspar, and mica, each crystallised, and cohering by mutual affinity without any basis or cement.

GRANULA'TION. (*Granulatio, onis.* f.; from *granum*, a grain.) 1. In *Surgery*, the little grain-like fleshy bodies which form on the surfaces of ulcers and suppurating wounds, and serve both for filling up the cavities, and bringing nearer together and uniting their sides, are called granulations. Nature is supposed to be active in bringing parts as nearly as possible to their original state, whose disposition, action, and structure have been altered by accident or disease; and after having, in her operations for this purpose, formed pus, she immediately sets about forming a new matter upon surfaces, in which there has been a breach of continuity. This process is called *granulating* or *incarnation*; and the substance formed is called *granulations*. The colour of healthy granulations is a deep florid red. When livid they are unhealthy, and have only a languid circulation. Healthy granulations, on an exposed or flat surface, rise nearly even with the surface of the surrounding skin, and often a little higher; but when they exceed this, and take on a growing disposition, they are unhealthy, become soft, spongy, and without any disposition to form skin. Healthy granulations are always prone to unite to each other, so as to be the means of uniting parts.

2. In *Chemistry*, the method of dividing metallic substances into grains or small particles, in order to facilitate their combination with other substances, and sometimes for the purpose of readily subdividing them by weight.

GRANULATUS. Granulated. 1. In *Surgery*, applied to ulcers.

2. In *Botany*, beaded: applied to roots which are beaded, as it were, or jointed; as that of the *Oxalis acetocella*.

GRANULUM. A little grain.

GRA'NUM. (*um, i.* n.) a grain or kernel.

Granum cnidium. See *Daphne mezereum*.

Granum infectorium. See *Kermes*.

Granum kermes. See *Kermes*.

Granum moschi. See *Hibiscus*.

Granum paradisi. See *Amomum*.

Granum regium. The castor-oil seed.

Granum tiglii. See *Croton tiglium*.

Granum tinctoriæ. See *Kermes*.

GRAPHIC ORE. An ore of tellurium.

GRAPHIOI'DES. (From γραφις, a pencil, and ειδος, a form.) 1. The styliform process of the os temporis.

2. A process of the ulna.

3. The digastricus was formerly so called, from its supposed origin from the above-mentioned process of the temple bone.

GRAPHITE. Rhomboidal graphite of Jameson, or plumbago, or black lead, of which he gives two subspecies, the scaly and compact.

Gra'ssa. Borax.

GRATI'OLA. (*a, æ.* f.; diminutive of *gratia*, so named from its supposed admirable qualities.) Hyssop.

1 The name of a genus of plants in the Linnæan system. Class, *Diandria*; Order, *Monogynia*.

2. The pharmacopœial name of the hedge-hyssop. See *Gratiola officinalis*.

Gratiola officinalis. The systematic name of the hedge-hyssop; called also, *Digitalis minima*, *Gratia dei*, and *Gratiola centauriodes*. This exotic plant, the *Gratiola —foliis lanceolatis, serratis, floribus pedunculatis*, of Linnæus, is a native of the south of Europe; but is raised in our gardens. The leaves have a nauseous bitter taste, but no remarkable smell; they purge and vomit briskly in the dose of half a drachm of the dry herb, or of a drachm infused in wine or water. This plant, in small doses, has been commonly employed as a cathartic and diuretic in hydropical diseases; and instances of its good effects in ascites and anasarca are recorded by many respectable practitioners. Gesner and Bergius found a scruple of the powder a sufficient dose, as in this quantity it frequently excited nausea or vomiting; others have given it to half a drachm, two scruples, a drachm, and even more.

An extract of the root of this plant is said to be more efficacious than the plant itself, and exhibited in the dose of half a drachm, or a drachm, in dysenteries, produces the best effect. We are also told by Kostrzewski, that in the hospitals at Vienna, three maniacal patients were perfectly recovered by its use; and in the most confirmed cases of lues venerea, it effected a complete cure: it usually acted by increasing the urinary, cutaneous, or salivary discharges.

GRATIA DEI. The old name of some plants, given to them from their supposed salutary qualities. See *Gratiola*, *Geranium robertianum*, &c.

GRAVEDINOSUS. (From *gravedo*, a heaviness of the head.) *Gravitivus*. A heavy painful feeling of the head.

GRAVE'DO. (*o, onis.* f.; from *gravis*, heavy.) A catarrh, or cold, with a sense of heaviness in the head.

GRAVEL. See *Calculus*.

GRAVIDITAS. See *Pregnancy*.

GRAVITY. (*Gravitas, atis.* f.) A term used by physical writers to denote the cause by which all bodies move toward each other, unless prevented by some other force or obstacle.

Gravity, specific. The density of the matter of which any body is composed, compared to the density of another body, assumed as the standard. This standard is pure distilled water, at the temperature of 60° F. To determine the specific gravity of a solid, we weigh it, first in air, and then in water. In the latter case, it loses of its weight a quantity precisely equal to the weight of its own bulk of water; and hence, by comparing this weight with its total weight, we find its specific gravity. The rule therefore is, Divide the total weight by the *loss* of weight in water, the quotient is the specific gravity. If it be a liquid or a gas, we weigh it in a glass or other vessel of known capacity; and dividing that weight by the weight of the same bulk of water, the quotient is, as before, the specific gravity.

GREEN. See *Colour.*

Green sickness. (So called from the greenish yellow colour of the skin.) See *Chlorosis.*

Green vitriol. Sulphate of iron.

Green-earth. Mountain green. A mineral of a celandine green colour, found in Saxony, Verona, and Hungary.

Greenstone. A rock of the *trap* formation, consisting of a hornblend, and felspar, both in the state of grains or small crystals.

GREGORY, John, was born in 1725, at Aberdeen. At the age of 20, he was elected professor of philosophy at Aberdeen; about nine years after he went to Edinburgh, and was soon appointed professor of the practice of medicine there. He enjoyed very extensive practice, and died in 1773. He published, in 1765, *A Comparative View of the State and Faculties of Man, with those of the Animal World*, which contains many just and original remarks, and was very favourably received. Five years after, his *Observations on the Duties and Offices of a Physician*, &c. His last publication, *Elements of the Practice of Physic*, was intended as a syllabus to his lectures; but he did not live to complete it.

GRENATITE. Prismatoidal garnet.

Gressu'ra. (From *gradior*, to proceed.) The perinæum, which goes from the pudendum to the anus.

GREW, Nehemiah, was born at Coventry. His first essay, *On the Anatomy of Plants*, was communicated to the Royal Society in 1670, and met with great approbation. His *Anatomy of Vegetables, Roots, and Trunks*, is a large collection of original and useful facts: though his theories have been invalidated by subsequent discoveries, he was one of the first who adopted the doctrine of the sexes of plants; nor did even the principles of methodical arrangement entirely escape his notice. In 1681, he published a *Descriptive Catalogue of the Museum of the Royal Society;* to which were added some lectures on the comparative anatomy of the stomach and intestines. Another publication was entitled *Cosmographia Sacra*, or a Discourse of the Universe, as it is the Creature and Kingdom of God. His works were soon translated into French and Latin.

GREYWACKE. A mountain formation, consisting of two similar rocks, which alternate with, and pass into each other, called greywacke, and greywacke-slate.

GRIAS. (*as, adis.* f.; a name mentioned by Apuleius.) The name of a genus of plants. Class, *Polyandria;* Order, *Monogynia.*

Grias cauliflora. The systematic name of the tree, the fruit of which is the anchovy pear. The inhabitants of Jamaica esteem it as a pleasant and cooling fruit.

Grie'lum. A name formerly applied to parsley and smallage.

Gripho'menos. (From γριφος, a net: because it surrounds the body as with a net.) Applied to pains which surround the body at the loins.

GRISEUS. A lively grey colour.

GROMWELL. See *Lithospermum.*

GROSSULARE. A mineral of an asparagus-green colour, of the garnet genus.

GROSSULA'RIA. (*a, æ.* f.; diminutive of *grossus*, an unripe fig: so named because its fruit resembles an unripe fig.) The gooseberry, or gooseberry-bush. See *Ribes.*

Grossus. See *Ficus.*

GROTTO. A cavern or den.

Grotto del cane. (The Italian for the dogs' grotto: so called because the experiments with the gas of the grotto were generally made with dogs.) A grotto, near Naples, in which carbonic acid gas rises about eighteen inches. A man, therefore, is not affected; but an animal, as a rabbit or a dog, forcibly held in, or that cannot rise above it, is soon killed, unless taken out. He is recovered, if not kept in too long, by being brought into the open air.

Grotto del serpi. The grotto of the serpents, not far distant from Braccano, in Italy. It is filled with warm vapour, and these affected with cutaneous diseases resort to it.

GROUND. Many plants are so designated which are low, and, as it were, on the ground; as ground-ivy, ground-pine, &c.

Ground-ivy. See *Glecoma hederacea.*

Ground-liverwort. See *Lichen caninus.*

Ground-nut. See *Bunium bulbocastanum.*

Ground-pine. See *Teucrium chamæpitys.*

GROUNDSEL. See *Senecio vulgaris.*

GRUB. A worm or maggot hatched from the egg of the beetle kind, or scarabeus: applied, occasionally, to the sebaceous secretion of the subcutaneous follicles of the skin.

Gruinales. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of geranium, or crane's-bill genus, principally.

GRUINALIS. (From *grus*, a crane.) Appertaining to the geranium, or crane's-bill.

GRUS. (*us, is.* m. and f.; from *gruis*, a crane.) The name of a family of birds of the heron and crane kind. The flesh of all these birds is tough and disagreeable.

GRU'TUM. (*um, i.* n.) A hard white tubercle of the skin, resembling, in size and appearance, a millet-seed.

GRYLLUS. (*us, i.* m.) The name of an extensive genus of insects.

Gryllus verrucivorus. The wart-eating grasshopper. It has green wings, spotted with brown, and is caught, by the common people in Sweden, to destroy warts, which they do, by biting off the excrescence, and discharging a corrosive liquor on the wound.

GRYPHO'SIS. (From γρυποω, to incurvate.) A disease of the nails, which turn inwards, and irritate the soft parts below.

Gryphus lapis. The philosopher's stone.

GUAI'ACUM. (*um, i.* n.; from the Spanish *Guayacan*, which is formed from the Indian *Hoaxacum.*) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Monogynia*.

2. The pharmacopœial name of the officinal guaiacum. See *Guaiacum officinale.*

Guaiacum officinale. This tree, *Guaiacum —foliis bijugis, obtusis,* of Linnæus, is a native of the West Indian islands. The wood, gum, bark, fruit, and even the flowers, have been found to possess medicinal qualities. The wood, which is called *Guaiacum americanum, Lignum vitæ, Lignum sanctum, Lignum benedictum, Palus sanctus,* is brought principally from Jamaica, in large pieces, of four or five hundred weight each, and, from its hardness and beauty, is used for various articles of turnery ware. It scarcely discovers any smell, unless heated, or while rasping, in which circumstances it yields a light aromatic one: chewed, it impresses a slight acrimony, biting the palate and fauces. The gum, or rather resin, is obtained by wounding the bark in different parts of the body of the tree, or by what has been called jagging. It exudes copiously from the wounds, though gradually; and when a quantity is found accumulated upon the several wounded trees, hardened by exposure to the sun, it is gathered, and packed up in small kegs for exportation: it is of a friable texture, of a deep greenish colour, and sometimes of a reddish hue; it has a pungent acrid taste, but little or no smell, unless heated. The *bark* contains less resinous matter than the wood, and is, consequently, a less powerful medicine, though, in a recent state, it is strongly cathartic. "The *fruit*," says a late author, "is purgative, and, for medicinal use, far excels the bark. A decoction of it has been known to cure the venereal disease, and even the yaws, in its advanced stage, without the use of mercury." The *flowers*, or blossoms, are laxative, and in Jamaica are commonly given to the children in the form of syrup. It is only the wood and resin of guaiacum which are now in general medicinal use in Europe; and, as the efficacy of the former is supposed to be derived merely from the quantity of resinous matter which it contains, they may be considered indiscriminately as the same medicine. Guaiacum was first introduced into the materia medica soon after the discovery of America; and, previous to the use of mercury in the lues venerea, it was the principal remedy employed in the cure of that disease: its great success brought it into such repute, that it is said to have been sold for seven gold crowns a pound: but notwithstanding the very numerous testimonies in its favour, it often failed in curing the patient, and was at length entirely superseded by mercury; and though it be still occasionally employed in syphilis, it is rather with a view to correct other diseases in the habit, than for its effects as an antivenereal. It is now more generally employed for its virtues in curing gouty and rheumatic pains, and some cutaneous diseases. Dr. Woodville and others frequently conjoined it with mercury and soap, and, in some cases, with bark or steel, and found it eminently useful as an alterative. In the Pharmacopœia it is directed in the form of mixture and tincture: the latter is ordered to be prepared in two ways, viz. with rectified spirit, and the aromatic spirit of ammonia. Of these latter compounds, the dose may be from two scruples to two drachms; the gum is generally given from six grains to twenty, or even more, for a dose, either in pills or in a fluid form, by means of mucilage or the yolk of an egg. The decoctum lignorum of the Edinburgh Pharmacopœia, of which guaiacum is the chief ingredient, is commonly taken in the quantity of a pint a day.

As many writers of the sixteenth century contended that guaiacum was a true specific for the venereal disease, and the celebrated Boerhaave maintained the same opinion, the following observations are inserted: Mr. Pearson mentions, that when he was first entrusted with the care of the Lock Hospital, 1781, Mr. Bromfield and Mr. Williams were in the habit of reposing great confidence in the efficacy of a decoction of guaiacum wood. This was administered to such patients as had already employed the usual quantity of mercury; but who complained of nocturnal pains, or had gummata, nodes, ozæna, and other effects of the venereal virus, connected with secondary symptoms, as did not yield to a course of mercurial frictions. The diet consisted of raisins and hard biscuit; from two to four pints of the decoction were taken every day; the hot bath was used twice a week; and a dose of antimonial wine and laudanum, or Dover's powder, was commonly taken every evening. Constant confinement to bed was not deemed necessary; neither was exposure to the vapour of burning spirit, with a view of exciting perspiration, often practised, as only a moist state of the skin was desired. This treatment was sometimes of singular advantage to those whose health had sustained injury from the disease, long confinement, and mercury. The strength increased; bad ulcers healed; exfoliations were completed; and these anomalous symptoms, which would have been

exasperated by mercury, soon yielded to guaiacum.

Besides such cases, in which the good effects of guaiacum made it be erroneously regarded as a specific for the lues venerea, the medicine was also formerly given, by some, on the first attack of the venereal disease. The disorder being thus benefited, a radical cure was considered to be accomplished: and though frequent relapses followed, yet, as these partly yielded to the same remedy, its reputation was still kept up. Many diseases, also, which got well, were probably not venereal cases. Pearson seems to allow that, in syphilitic affections, it may indeed operate like a true antidote, suspending for a time the progress of certain venereal symptoms, and removing other appearances altogether; but he observes that experience has evinced, that the unsubdued virus yet remains active in the constitution.

Pearson has found guaiacum of little use in pains of the bones, except when it proved sudorific; but that it was then inferior to antimony or volatile alkali. When the constitution has been impaired by mercury and long confinement, and there is a thickened state of the ligaments, or periosteum, or foul ulcers still remaining, Pearson says, these effects will often subside during the exhibition of the decoction; and it will often suspend, for a short time, the progress of certain secondary symptoms of the lues venerea; for instance, ulcers of the tonsils, venereal eruptions, and even nodes. Pearson, however, never knew one instance in which guaiacum eradicated the virus; and he contends that its being conjoined with mercury neither increases the virtue of this mineral, lessens its bad effects, nor diminishes the necessity of giving a certain quantity of it. Pearson remarks, that he has seen guaiacum produce good effects in many patients having cutaneous diseases, the ozæna, and scrofulous affections of the membranes and ligaments.

GUAJAVA. *Guava. Guajabo.* Names of the guava tree, from the apple-like fruit, of which an excellent jelly-like preserve is made. The tree is the *Psidium pomiferum* of Linnæus.

GUAPARAIBA. See *Rhizophora.*

GUDGEON. See *Cyprinus gobio.*

GUIANA CORTEX. See *Simarouba.*

GUILA'NDINA. (*a, æ.* f.; named after Guilandus, a Prussian.) The name of a genus of plants. Class, *Decandria;* Order, *Monogynia.*

GUILANDINA BONDUC. The systematic name of the plant, the fruit of which is called *Bonduch indorum.* Molucca or bezoar nut. It possesses warm, bitter, and carminative virtues.

GUILANDINA MORINGA. This plant, *Guilandina—inermis, foliis subpinnatis, foliolis inferioribus ternatis,* of Linnæus, affords the ben-nut and the lignum nephriticum.

1. *Ben nux.* The oily acorn, or ben-nut; called also, *Glans unguentaria, Balanus myrepsica,* and *Coatis.* A whitish nut, about the size of a small filbert, of a roundish triangular shape, including a kernel of the same figure, covered with a white skin. They were formerly employed to remove obstructions of the primæ viæ. The oil afforded by simple pressure, is remarkable for its not growing rancid in keeping, or at least, not until it has stood for a number of years; and on this account it is used in extricating the aromatic principles of such odoriferous flowers as yield little or no essential oil in distillation. The unalterability of this oil would render it the most valuable substance for cerates, or liniments, were it sufficiently common. It is actually employed for this purpose in many parts of Italy.

2. *Lignum nephriticum.* Nephritic wood. It is brought from America in large, compact, ponderous pieces, without knots, the outer part of a whitish, or pale yellowish colour, the inner of a dark brown or red. When rasped, it gives out a faint aromatic smell. It is never used medicinally in this country, but stands high in reputation abroad, against difficulties of making urine, nephritic complaints, and most disorders of the kidneys, and urinary passages.

Guinea-fowl. See *Numidia meleagris.*

GUINEA-PEPPER. See *Capsicum.*

GUINEA-WORM. See *Filaria.*

GUINTERIUS, JOHN, was born in 1487, in Germany. His inclination being to medicine, he went to Paris in 1525, where he was made doctor five years after, and practised there during several years; giving also lectures on anatomy. His works are numerous, consisting partly of translations of the best ancient physicians, but principally of commentaries and illustrations of them.

GULA. (*a, æ.* f.; from γευομαι, to taste.) See *Œsophagus.*

Gulph-weed. See *Fucus bacciferus.*

GUM. (*Gummi.* n.; indeclinable.) I. The mucilage of vegetables. It is usually transparent, more or less brittle when dry, though difficultly pulverable; of an insipid, or slightly saccharine taste; soluble in, or capable of combining with, water in all proportions, to which it gives a gluey adhesive consistence, in proportion as its quantity is greater. It is separable, or coagulates by the action of weak acids; it is insoluble in alcohol, and in oil; and capable of the acid fermentation, when diluted with water. The destructive action of fire causes it to emit much carbonic acid, and converts it into coal without exhibiting any flame. Distillation affords water, acid, a small quantity of oil, a small quantity of ammonia, and much coal.

These are the leading properties of gums, rightly so called; but the inaccurate custom of former times applied the term gum to all concrete vegetable juices, so that in common we hear of gum copal, gum sandarach, and other gums, which are either pure resins, or mixtures of resins with the vegetable mucilage.

The principal gums are,—1. The common

gums, obtained from the plum, the peach, the cherry-tree, &c. 2. Gum arabic, which flows naturally from the acacia in Egypt, Arabia, and elsewhere. This forms a clear transparent mucilage with water. 3. Gum Seneca, or Senegal. It does not greatly differ from gum arabic: the pieces are larger and clearer; and it seems to communicate a higher degree of the adhesive quality to water. It is much used by calico-printers and others. The first sort of gums are frequently sold by this name, but may be known by their dark colour. 4. Gum adragant or tragacanth. It is obtained from a small plant, a species of astragalus, growing in Syria, and other eastern parts. It comes to us in small white contorted pieces resembling worms. It is usually dearer than other gums, and forms a thicker jelly with water.

Willis has found, that the root of the common blue-bell, *Scilla nutans*, dried and powdered, affords a mucilage possessing all the qualities of that from gum arabic. The roots of the vernal squill, white lily, and orchis, equally yield mucilage. Lord Dundonald has extracted a mucilage also from lichens.

Gums treated with nitric acid afford the saclactic, malic, and oxalic acids.

II. The flesh which embraces the teeth. See *Gingiva*.

Gum, acacia. See *Acacia vera.*

Gum, arabic. See *Acacia vera.*

Gum, elastic, See *Caoutchouc.*

Gum, red, See *Strophulus.*

GUM-BOIL. See *Parulis.*

GUMMA. (*a, atis.* n.; so named from the resemblance of its contents to gum.) A strumous tumour on the periosteum of a bone.

GUMMI. See *Gum.*

Gummi acaciæ. See *Acacia vera.*

Gummi acanthinum. See *Acacia vera.*

Gummi arabicum. See *Acacia vera.*

Gummi carannæ. See *Caranna.*

Gummi cerasorum. The juice which exudes from the bark of cherry-trees. It is very similar to gum arabic, for which it may be substituted.

Gummi chibou. A spurious kind of gum elemi, but little used.

Gummi courbaril. See *Hymenæa.*

Gummi euphorbii. See *Euphorbia.*

Gummi galda. See *Galda.*

Gummi gambiense. See *Kino.*

Gummi guttæ. See *Stalagmitis.*

Gummi hederæ. See *Hedera helix.*

Gummi juniperinum. See *Juniperus.*

Gummi kikekunemalo. See *Kikekunemalo.*

Gummi kino. See *Kino.*

Gummi lacca. See *Lacca.*

Gummi lamac. See *Acacia vera.*

Gummi lutea. See *Botany Bay.*

Gummi myrrha. See *Myrrha.*

Gummi rubrum gambiense. See *Kino.*

Gummi sagapenum. See *Sagapenum.*

Gummi scorpionis. See *Acacia vera.*

Gummi senega. See *Acacia vara.*

Gummi senegalense. See *Mimosa Senegal.*

Gummi senica. See *Acacia vera.*

Gummi thebaicum. See *Acacia vera.*

Gummi tragacanthæ. See *Astragalus.*

Gummosæ pilulæ. See *Pilulæ galbani compositæ.*

GUM-RESIN. *Gummi resina.* Gum-resins are the juices of plants that are mixed with resin, and an extractive matter, which has been taken for a gummy substance. They seldom flow naturally from plants, but are mostly extracted by incision in the form of white, yellow, or red fluids, which dry more or less quickly. Water, spirit of wine, wine, or vinegar, dissolve them only in part according to the proportion they contain of resin or extract. Gum-resins may also be formed by art, by digesting the parts of vegetables containing the gum-resin in diluted alkohol, and then evaporating the solution. For this reason most tinctures contain gum-resin. The principal gum-resins employed medicinally are aloes, ammoniacum, assafœtida, galbanum, cambogia, guaiacum, myrrha, olibanum, opoponax, sagapenum, sarcocolla, scammonium, and styrax.

GUNDELIA. (*a, æ.* f.; the name given by Tournefort, in honour of his companion and friend, Andrew Gundelscheimer, its discoverer, in the mountains of Armenia.) A genus of plants. Class, *Syngenesia*; Order, *Polygamia segregata.*

Gundelia tourniforth. The young shoots of this plant are eaten by the Indians, but the roots are emetic.

GUSTATORIUS. The third maxillary branch of the fifth pair of nerves.

GUSTUS. (*us, ûs.* m.; from γευομαι, to taste.) See *Taste.*

GUTTA. (*a, æ.* f.) 1. A drop. Drops are uncertain forms of administering medicines, and should never be trusted to. The shape of the bottle, or of its mouth, from whence the drops fall, as well as the consistence of the fluid, occasion a considerable difference in the quantity administered. See *Minimum.*

2. A name of apoplexy, from a supposition that its cause was a drop of blood falling from the brain upon the heart.

Gutta gamba. See *Stalagmitis.*

Gutta nigra. The black drop, occasionally called the Lancashire, or the Cheshire drop. A secret preparation of opium, said to be more active than the common tincture, and supposed to be less injurious, as seldom followed by headache. One drop is equal in strength to five minims of the tinctura opii.

Gutta opaca. A name for the cataract.

Gutta serena. (So called by the Arabians.) See *Amaurosis.*

Guttæ rosaceæ. Red spots upon the face and nose. See *Acne.*

GUTTURAL. *Gutturalis.* Belonging to the throat.

Guttural artery. The superior thyroideal artery. The first branch of the external carotid.

GYMNASTIC. (*Gymnasticus*; from

γυμνος, naked, performed by naked men in the public games.) This term is applied to a method of curing diseases by exercise, or that part of physic which treats of the rules that are to be observed in all sorts of exercises, for the preservation of health. This is said to have been invented by one Herodicus, born at Salymbra, a city of Thrace; or, as some say, at Leutini in Sicily. He was first master of an academy where young gentlemen came to learn warlike and manly exercises; and observing them to be very healthful on that account, he made exercise become an art in reference to the recovering of men out of diseases, as well as preserving them from them, and called it *Gymnastic*, which he made a great part of his practice. But Hippocrates, who was his scholar, blames him sometimes for his excesses with this view. And Plato exclaims against him with some warmth, for enjoining his patients to walk from Athens to Megara, which is about 25 miles, and to come home on foot as they went, as soon as ever they had but touched the walls of the city.

GYMNOCARPI. The second division in Persoon's arrangement of mushrooms, such as bear seeds embedded in an appropriate, dilated, exposed membrane, denominated *hymenium*, like *helvella*, in which that part is smooth and even; *boletus*, in which it is porous; and the vast genus *agaricus*, in which it consists of gills.

GYMNOSPERMIA. (*a, æ.* f.; from γυμνος, naked, and σπερμα, a seed.) The name of an order of the class *Didynamia*, of the sexual system of plants, embracing such as have added to the didynamial character four naked seeds.

Gynæ'cia. (From γυνη, a woman.) The menses, and also the lochia.

GYNÆ'CIUM. (*um, ii.* n.; from γυνη, a woman.) 1. A seraglio.

2. The *pudendum muliebre.*

3. A name for *antimony.*

GYNÆCOMA'NIA. (*a, æ.* f.; from γυνη, a woman, and μανια, madness.) That species of insanity that arises from love.

Gynæcomy'stax. (From γυνη, a woman, and μυσαξ, a beard.) The hairs on the female pudendum.

Gynæcoma'ston. (From γυνη, a woman, and μασος, a breast.) An enormous increase of the breasts of women.

GYNANDRIA. (*a, æ.* f.; from γυνη, a woman, and ανηρ, a man, or husband.) The name of a class in the sexual system of plants. It contains those hermaphrodite flowers, the stamina of which grow upon the pistil, so that the male and female organs are united, and do not stand separate as in other hermaphrodite flowers.

GYPSATUS. (From *gypsum*, a saline body consisting of sulphuric acid and lime.) Partaking of the character of gypsum.

GYPSUM. (*um, i.* n.) A mineral composed of lime and sulphuric acid, containing, according to Jameson, two species: the prismatic and the axifrangible.

H.

HABE'NA. (*a, æ.* f. A bridle.) A bandage for keeping the lips of wounds together, made in the form of a bridle.

HABITAT. (A contraction of *habitatio*, habitation.) Used very generally by naturalists, and especially by botanists, to express the natural habitation or place of growth of a plant in the wild state.

Hacub. See *Gundelia tournefortii.*

HADDOCK. See *Gadus æglefinus.*

HÆDUS. (*us, i.* m.) The kid, or young of the goat. See *Capra hircus.*

HÆMAGOGUE. (*Hæmagogus;* from αιμα, blood, and αγω, to bring off.) A medicine which promotes the discharge of blood: applied to the menstrual and hæmorrhoidal discharges.

HÆMALO'PIA. (*a, æ.* f.; from αιμα, blood, and οπτομαι, to see.) A disease of the eyes, in which all things appear of a red colour. A variety of the *Pseudoblepsis imaginaria.*

HÆ'MALOPS. (*ops, opis.* m.; from αιμα, blood, and ωψ, the face, or countenance.) 1. A red or livid mark in the face or eye.

2. A blood-shot eye.

HÆMA'NTHUS. (*us, i.* m.; from αιμα, blood, and ανθος, a flower: so called from its colour.) The blood-flower.

HÆMATAPORIA. (*a, æ.* f.; from αιμα, blood, and πορεω, to put away.) A wasting of the flesh from poverty of the blood.

HÆMATE'MESIS. (*is, is.* f.; from αιμα, blood, and εμεω, to vomit.) A vomiting of blood. A vomiting of blood is readily to be distinguished from a discharge from the lungs, by its being usually preceded by a sense of weight, pain, or anxiety in the region of the stomach; by its being unaccompanied by any cough; by the blood being discharged in a very considerable quantity; by its being of a dark colour, and somewhat grumous; and by its being mixed with the other contents of the stomach.

The disease may be occasioned by any thing received into the stomach, which stimulates it violently or wounds it; or may proceed from blows, bruises, or any other cause capable of exciting inflammation in this organ, or of

determining too great a flow of blood to it; but it arises more usually as a symptom of some other disease (such as a suppression of the menstrual or hæmorrhoidal flux, or obstructions in the liver, spleen, and other viscera,) than as a primary affection. It is seldom so profuse as to destroy the patient suddenly, and the principal danger seems to arise, either from the great debility which repeated attacks of the complaint induce, or from the lodgment of blood in the intestines, which, by becoming putrid, might occasion some other disagreeable disorder.

This hæmorrhage, being usually rather of a passive character, does not admit of large evacuations. Where it arises, on the suppression of the menses, in young persons, and returns periodically, it may be useful to anticipate this by taking away a few ounces of blood, not neglecting proper means to help the function of the uterus. In moderate attacks, particularly where the bowels have been confined, the infusion of roses and sulphate of magnesia may be employed: if this should not check the bleeding, the sulphuric acid may be exhibited more largely, or some of the more powerful astringents and tonics, as alum, tincture of muriate of iron, decoction of bark, or superacetate of lead. Where pain attends, opium should be given freely, taking care that the bowels be not constipated; and a blister to the epigastrium may be useful. If depending on scirrhous tumours, these must be attacked by mercury, hemlock, &c. In all cases the food should be light, and easy of digestion; but more nourishing as the patient is more exhausted.

HÆMATIC. (*Hæmaticus:* from αιμα, blood.) Appertaining to blood.

HÆMATIN. The colouring matter of logwood, and, according to Chevreuil, a distinct vegetable substance. See *Hæmatoxylon.*

HÆMATI'TES. (*es, is.* m.; from αιμα, blood: so named from its property of stopping blood, or from its colour.) *Lapis hæmatites.* An elegant iron ore called bloodstone. Finely levigated, and freed from the grosser parts by frequent washings with water, it has been long recommended in hæmorrhages, fluxes, uterine obstructions, &c. in doses of from one scruple to three or four.

HÆMATI'TINUS. (From αιματιτης, the bloodstone.) A collyrium, in which was the bloodstone.

HÆMATOCE'LE. (*e, es.* f.; from αιμα, blood, and κηλη, a tumour.) A swelling of the scrotum, or spermatic cord, proceeding from or caused by blood. The distinction of the different kinds of hæmatocele, though not usually made, is absolutely necessary toward rightly understanding the disease; the general idea or conception of which appears to Pott to be somewhat erroneous, and to have produced a prognostic which is ill founded and hasty. According to this eminent surgeon, the disease, properly called hæmatocele, is of four kinds: two of which have their seat within the tunica vaginalis testis; one within the albuginea; and the fourth in the tunica communis, or common cellular membrane, investing the spermatic vessels.

In the passing an instrument, in order to let out the water from an hydrocele of the vaginal coat, a vessel is sometimes wounded, which is of such size as to tinge the fluid pretty deeply at the time of its running out: the orifice becoming close when the water is all discharged, and a plaster being applied, the blood ceases to flow from thence, but insinuates itself partly into the cavity of the vaginal coat, and partly into the cells of the scrotum; making, in the space of a few hours, a tumour nearly equal in size to the original hydrocele. This is one species.

It sometimes happens in tapping an hydrocele, that although the fluid discharged by that operation be perfectly clear and limpid, yet in a very short space of time (sometimes in a few hours) the scrotum becomes as large as it was before, and palpably as full of a fluid. If a new puncture be now made, the discharge, instead of being limpid (as before), is either pure blood or very bloody. This is another species; and, like the preceding, confined to the tunica vaginalis.

The whole vascular compages of the testicle is sometimes very much enlarged, and at the same time rendered so lax and loose, that the tumour produced thereby has, to the fingers of an examiner, very much the appearance of a swelling composed of a mere fluid, supposed to be somewhat thick, or viscid. This is in some measure a deception; but not totally so: the greater part of the tumefaction is caused by the loosened texture of the testes; but there is very frequently a quantity of extravasated blood also. If this be supposed to be an hydrocele, and pierced, the discharge will be mere blood. This is a third kind of hæmatocele, and very different, in all its circumstances, from the two preceding: the fluid is shed from the vessels of the glandular part of the testicle, and contained within the tunica albuginea. The fourth consists in an effusion of blood from a branch of the spermatic vein, in its passage from the groin to the testicles: in which case, the extravasation is made into the tunica communis, or cellular membrane, investing the spermatic vessels.

Each of these species, Pott says, he has seen so distinctly, and perfectly, that he has not the smallest doubt concerning their existence, and of their difference from each other.

HÆMATO'CHYSIS. (*is, is.* f.; from αιμα, blood, and χεω, to pour out.) A hæmorrhage, or flux of blood.

HÆMATOID. (*Hæmatoides:* from αιμα, blood, and ειδος, appearance: so called from the red colour.) Blood-like: resembling blood. 1. An old name for the bloody crane's-bill. See *Geranium sanguineum.*

2. A fungus, which has somewhat the appearance of blood. See *Hæmatoma.*

HÆMATO'LOGY. (*Hæmatologia, æ.* f.; from αιμα, blood, and λογος, a discourse.) The doctrine of the blood.

HÆMATOMA. (*a, atis.* n.; from $\alpha\iota\mu\alpha$, blood.) *Fungus hæmatodes.* The blood-like fungus. This disease has been described also under the names of soft cancer, and medullary sarcoma. It assumes a variety of forms, and attacks most parts of the body, but particularly the testicle, eye, breast, and the extremities. It begins with a soft enlargement or tumour of the part, which is extremely elastic, and in some cases very painful; as it increases, it often has the feel of an encysted tumour, and at length becomes irregular, bulging out here and there, and insinuates itself between the neighbouring parts, and forms a large mass, if under an aponeurotic expansion. When it ulcerates it bleeds, shoots up a mass of a bloody fungus, and then shows its decided character if unknown before. Most of the medicines which have been employed against cancerous diseases have been unprofitably exhibited against hæmatoma; as alteratives, both vegetable and mineral; tonics and narcotics. Extirpation, when practicable, is the only cure.

HÆMATO'MATOUS. (*Hæmatomatosus;* from *hæmatoma*, the name of a disease.) Resembling the hæmatoma, or fungus hæmatodes.

HÆMATOMPHALOCE'LE. (From $\alpha\iota\mu\alpha$, blood, $o\mu\varphi\alpha\lambda o\varsigma$, the navel, and $\kappa\eta\lambda\eta$, a tumour.) A tumour about the navel, from an extravasation of blood.

HÆMATOPEDE'SIS. (From $\alpha\iota\mu\alpha$, blood, and $\pi\varepsilon\delta\alpha\omega$, a leap.) The leaping of the blood from a wounded artery.

HÆMATOPHLŒBŒSTASIS. (From $\alpha\iota\mu\alpha$, blood, $\varphi\lambda\varepsilon\psi$, a vein, and $\sigma\tau\alpha\sigma\iota\varsigma$, a station.) A suppression of an impetuous current of blood in the veins; and sometimes, according to Galen, a full vein.

HÆMATO'SIS. (From $\alpha\iota\mu\alpha$, blood.) A hæmorrhage, or flux of blood.

HÆMATO'XYLON. (*on* or *um, i.* n.; from $\alpha\iota\mu\alpha$, blood, and $\xi\upsilon\lambda o\nu$, wood: so called from the red colour of its wood.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

HÆMATOXYLON CAMPECHIANUM. The systematic name of the logwood tree. Called also, *Acacia Zeylonica.* The part ordered in the Pharmacopœia, is the wood, called *Hæmatoxyli lignum, Lignum campechense, Lignum campechianum, Lignum campescanum, Lignum indicum,* and *Lignum sappan.* Logwood. It is of a solid texture and of a dark red colour. It is imported principally as a substance for dyeing, cut into junks and logs of about three feet in length; of these pieces the largest and thickest are preserved, as being of the deepest colour. Logwood has a sweetish sub-astringent taste, and no remarkable smell; it gives a purplish red tincture both to watery and spirituous infusions, and tinges the stools, and sometimes the urine, of the same colour. It is employed medicinally as an astringent and corroborant. In diarrhœas it has been found peculiarly efficacious, and has the recommendation of some of the first medical authorities; also in the latter stages of dysentery, when the obstructing causes are removed, to obviate the extreme laxity of the intestines usually superinduced by the repeated dejections. In the form of decoction the proportion is two ounces to 2 ℔. of fluid, reduced by boiling to one. An extract is ordered in the pharmacopœias. The dose from ten to forty grains.

The colouring principle of this root is called *hemetin.* On the watery extract of logwood, digest alkohol for a day: filter the solution, evaporate, add a little water, evaporate gently again, and then leave the liquid at rest. Hematin is deposited in small crystals, which, after washing with alkohol, are brilliant, and of a reddish-white colour. Their taste is bitter, acrid, and slightly astringent.

Hematin forms an orange-red solution with boiling water, becoming yellow as it cools, but recovering, with increase of heat, its former hue. Excess of alkali converts it first to purple, then to violet, and, lastly, to brown: in which state the hematin seems to be decomposed. Metallic oxides unite with hematin, forming a blue-coloured compound. Gelatine throws down reddish flocculi. Peroxide of tin, and acid, merely redden it.

HÆMATO'XYLUM. See *Hæmatoxylon campechianum.*

HÆMATU'RIA. (*a, æ.* f. from $\alpha\iota\mu\alpha$, blood, and $o\upsilon\rho o\nu$, urine.) The voiding of blood with urine. This disease is sometimes occasioned by falls, blows, bruises, or some violent exertion, such as hard riding and jumping; but it more usually arises from a small stone lodged either in the kidney or ureter, which, by its size or irregularity, wounds the inner surface of the part it comes in contact with; in which case the blood discharged is most usually somewhat coagulated, and the urine deposits a sediment of a dark brown colour, resembling the grounds of coffee.

A discharge of blood by urine, when proceeding from the kidney or ureter, is commonly attended with an acute pain in the back, and some difficulty of making water, the urine which comes away first being muddy and high coloured, but, towards the close of its flowing, becoming transparent, and of a natural appearance. When the blood comes immediately from the bladder, it is usually accompanied with a sense of heat and pain at the bottom of the belly.

The voiding of bloody urine is always attended with some danger, particularly when mixed with purulent matter. When it arises in the course of any malignant disease, it shows a highly putrid state of the blood, and always indicates a fatal termination.

The appearances to be observed on dissection will accord with those usually met with in the disease which has given rise to the complaint.

When the disease has resulted from a mechanical injury in a plethoric habit, it may be proper to take blood, and pursue the general

antiphlogistic plan, opening the bowels occasionally with castor oil, &c. When owing to calculi, which cannot be removed, we must be chiefly content with palliative measures, giving alkalies or acids according to the quality of the urine; likewise mucilaginous drinks and glysters; and opium, fomentations, &c. to relieve pain. Uva ursi also has been found useful under these circumstances, but more decidedly where the hæmorrhage is purely passive; in which case, also, some of the terebinthinate remedies may be cautiously tried, and means of strengthening the constitution must not be neglected.

HÆMOCERCHNUS. (From αιμα, blood, and κερχνος, a noise.) A wheezing or rattling in the chest from blood in the air passages.

HÆMO'DIA. (From αιμωδεω, to stupefy.) A painful stupor of the teeth, caused by acrid substances touching them.

HÆMO'PTOE. (From αιμα, blood, and πτυω, to spit up.) The spitting of blood. See *Hæmoptysis*.

HÆMO'PTYSIS. (*is, is*. f.; from αιμα, blood, and πτυω, to spit.) A spitting of blood. It is known by coughing up florid or frothy blood, preceded usually by heat or pain in the chest, irritation in the larynx, and a saltish taste in the mouth. It is sometimes produced by congestion, or a plethoric state of the vessels of the lungs, which is the most common cause of an idiopathic hæmoptoe; thus produced it is called *hæmoptysis plethorica*: sometimes it is produced by external violence, and this is called *hæmoptysis violenta*: calculous matter irritating and eroding the vessels, causes the species denominated *hæmoptysis calculosa*: vomicæ bursting in the lungs, and ulcerating the vessels, gives rise to the *hæmoptysis phthisica*; and when the bleeding is caused by the suppression of some customary evacuation, it is termed *hæmoptysis vicaria*. A spitting of blood is readily to be distinguished from hæmatemesis, as in this last the blood is usually thrown out in considerable quantities, and is, moreover, of a darker colour, more grumous, and mixed with the other contents of the stomach: whereas blood proceeding from the lungs is usually in small quantity, of a florid colour, and mixed with a little frothy mucus only.

A spitting of blood arises most usually between the ages of sixteen and twenty-five, and may be occasioned by any violent exertion, either in running, jumping, wrestling, singing loud, or blowing wind-instruments; as likewise by wounds, plethora, weak vessels, hectic fever, coughs, irregular living, excessive drinking, or a suppression of some accustomed discharge, such as the menstrual or hæmorrhoidal. It may likewise be occasioned by breathing air too much rarefied to be able properly to expand the lungs.

Persons in whom there is a faulty proportion, either in the vessels of the lungs, or in the capacity of the chest, being distinguished by a narrow thorax and prominent shoulders, or who are of a delicate make and sanguine temperament, seem much predisposed to this hæmorrhage; but in these, the complaint is often brought on by the concurrence of the various occasional and exciting causes before mentioned.

A spitting of blood is not, however, always to be considered as a primary disease. It is often only a symptom, and in some disorders, such as pleurisies, peripneumonies, and many fevers, often arises, and is the presage of a favourable termination.

Sometimes it is preceded, as has already been observed, by a sense of weight and oppression at the chest, a dry tickling cough, and some slight difficulty of breathing. Sometimes it is ushered in with shiverings, coldness at the extremities, pains in the back and loins, flatulency, costiveness, and lassitude. The blood which is spit up is generally thin, and of a florid red colour; but sometimes it is thick, and of a dark or blackish cast; nothing, however, can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the breast, before it was discharged.

An hæmoptoe is not attended with danger, where no symptoms of phthisis pulmonalis have preceded or accompanied the hæmorrhage, or where it leaves behind no cough, dyspnœa, or other affection of the lungs; nor is it dangerous in a strong healthy person, of a sound constitution; but when it attacks persons of a weak lax fibre, and delicate habit, it may be difficult to remove it.

It seldom takes place to such a degree as to prove fatal at once; but when it does, the effusion is from some large vessel. The danger, therefore, will be in proportion as the discharge of blood comes from a large vessel or a small one.

When the disease proves fatal, in consequence of the rupture of some large vessels, there is found, on dissection, a considerable quantity of clotted blood in the lungs, and there is usually more or less of an inflammatory appearance at the ruptured part. Where the disease terminates in pulmonary consumption, the same morbid appearances are to be met with as described under that head.

In this hæmorrhage, which is mostly of the active kind, the antiphlogistic regimen must be strictly observed; particularly avoiding heat, muscular exertion, and agitation of the mind; and restricting the patient to a light, cooling, vegetable diet. Acidulated drink will be useful to quench the thirst, without so much liquid being taken. Where the blood is discharged copiously, but no great quantity has been lost already, it will be proper to attempt to check it by bleeding freely, if the habit will allow: and sometimes, where there is pain in the chest, local evacuations and blisters may be useful. The bowels should be well cleared with some cooling saline cathartic, which may be given in the infusion of roses. Digitalis is also a proper remedy, particularly where the pulse is very

quick, from its sedative influence on the heart and arteries. Antimonials in nauseating doses have sometimes an excellent effect, as well by checking the force of the circulation, as by promoting diaphoresis; calomel also might be added with advantage; and opium, or other narcotic, to relieve pain and quiet cough, which may perhaps keep up the bleeding. Emetics have, on some occasions, been successful; but they are not altogether free from danger. In protracted cases, internal astringents are given, as alum, kino, &c. but their effects are very precarious: the superacetate of lead, however, is perhaps the most powerful medicine, especially combined with opium, and should always be resorted to in alarming or obstinate cases, though, as it is liable to occasion colic and paralysis, its use should not be indiscriminate; but it acts probably rather as a sedative than astringent. Sometimes the application of cold water to some sensible part of the body, producing a general refrigeration, will check the bleeding. When the discharge is stopped, great attention to regimen is still required, to obviate its return, with occasional evacuations: the exercise of swinging, riding in an easy carriage, or on a gentle horse, or especially sailing, may keep up a salutary determination of the blood to other parts: an occasional blister may be applied, where there are marks of local disease, or an issue or seton perhaps answer better. Should hæmoptysis occasionally exhibit rather the passive character, evacuations must be sparingly used, and tonic medicines will be proper, with a more nutritious diet.

HÆMORRHAGE. (*Hæmorrhagia, æ. f.*; from αιμα, blood, and ῥήσσω, to break out.) A bleeding, or flow of blood. Blood, from whatever organ it flows, may have two causes for its issue. The vessels may be ruptured by a morbid distension and impetus; or they may give way from debility and relaxation, their tunics breaking without any peculiar force urged against them, or their exhalents admitting the flow of red blood, instead of the more attenuate serum. To the former description of hæmorrhages, Dr. Cullen has given the name of *active;* to the latter, that of *passive.* The active hæmorrhages he places amongst febrile diseases, because, although only an accidental symptom, it is generally present; and all those which are evidently without fever, he refers to another part of his system, under the head of *profusio,* or profusions.

The great predisponent cause of active hæmorrhage, wherever it makes its appearance, is congestion or plethora. A plethoric diathesis will, however, only predispose to a bleeding somewhere or other; and hence there must be a distinct local cause that fixes it upon one particular organ, rather than upon another. The chief local cause is a greater degree of debility in the vessels of such organ than belongs to the vascular system generally. But there are other and more extensive causes that operate upon some organs, and which consist in an unequal distribution of the blood, and its peculiar accumulation in some vessels rather than in others. See *Epistaxis, Hæmoptysis, Hæmatemesis, Menorrhagia, &c.*

Hæmorrhage from the lungs. See *Hæmoptysis.*

Hæmorrhage from the nose. See *Epistaxis.*

Hæmorrhage from the stomach. See *Hæmatemesis.*

Hæmorrhage from the urinary organs. See *Hæmaturia.*

Hæmorrhage from the uterus. See *Menorrhagia.*

Hæmorrha'giæ. Hæmorrhages, or fluxes of blood. The name of an order in the class *Pyrexiæ* of Cullen's Nosology is so called. It is characterised by pyrexia with a discharge of blood, without any external injury; the blood on venesection exhibiting the buffy coat. It contains the following genera, viz. epistaxis, hæmoptysis, hæmorrhois, and menorrhagia.

HÆMORRHOI'DAL. (*Hæmorrhoidalis.*) 1. Of or belonging to the hæmorrhoidal vessels.

2. The trivial name of some plants which were supposed to be efficacious against piles; as *Carduus hæmorrhoidalis,* &c.

Hæmorrhoidal arteries. *Arteria hæmorrhoidalis.* The arteries of the rectum are so called: they are sometimes two, and at other times three in number. 1. The upper hæmorrhoidal artery, which is the great branch of the lower mesenteric continued into the pelvis. 2. The middle hæmorrhoidal, which sometimes comes off from the hypogastric artery, and very often from the pudical artery. It is sometimes wanting. 3. The lower or external hæmorrhoidal is almost always a branch of the pudical artery, or that artery which goes to the penis.

Hæmorrhoidal vein. *Vena hæmorrhoidalis.* These are two. 1. The external, which evacuates itself into the vena iliaca interna.

2. The internal, which conveys its blood into the vena portæ.

HÆMO'RRHOIS. (From αιμα, blood, and ρεω, to flow.) 1. A flow of blood. In this sense the term was generally used by the Greek and Latin writers.

2. The name of a particular disease. See *Piles.*

HÆMOSTA'SIA. (*a, æ. f.*; from αιμα, blood, and ιστημι, to stand.) A stagnation of blood.

HÆMOSTA'TIC. (*Hæmostaticus;* from αιμα, blood, and σταω, to stop.) Having the power of stopping an hæmorrhage. See *Styptics.*

HAEN, Anthony de, was born in Leyden in 1704, and became one of the distinguished pupils of the celebrated Boerhaave. At Vienna he published, in successive volumes, a work entitled *Ratio Medendi in Nosocomio Practico,* amounting ultimately to 16. He left also several other works, the *Division of Fevers,* &c.

Hagiospe'rmum. (From $\alpha\gamma\iota o\varsigma$, holy, and $\sigma\pi\epsilon\rho\mu\alpha$, seed: so called from its reputed virtues.) An obsolete name of the seed of the *Artemisia santonica.*

Hagio'xylum. (From $\alpha\gamma\iota o\varsigma$, holy, and $\xi\upsilon\lambda o\nu$, wood: so named because of its medical virtues.) Guaacum.

HAIR. See *Capillus*, and *Pilus.*

Hair-brained passion. See *Pathemata animi.*

Hair-like. See *Capillary.*

Hairy river weed. See *Conferva rivalis.*

HAKE. See *Gadus merluccius.*

Hala'tium. (From $\alpha\lambda\varsigma$, salt.) A clyster composed chiefly of salt.

Halberd-shape. See *Hastatus.*

Halberd-shaped leaf. See *Hastatus.*

Halche'mia. (From $\alpha\lambda\varsigma$, salt, and $\chi\epsilon\omega$, to pour out.) The art of fusing salts.

Halec. See *Clupea harrengus.*

Halelæ'um. (From $\alpha\lambda\varsigma$, salt, and $\epsilon\lambda\alpha\iota o\nu$, oil.) A medicine composed of salt and oil.

Halica'cabum. (From $\alpha\lambda\varsigma$, the sea, and $\kappa\alpha\kappa\alpha\beta o\varsigma$, night-shade: so called because it grows upon the banks of the sea.) See *Physalis alkekengi.*

Halices. Yawning after sleep.

Ha'limus. (From $\alpha\lambda\iota\mu o\varsigma$, belonging to the sea.) See *Atriplex halimus.*

Halini'trum. (From $\alpha\lambda\varsigma$, the sea, and $\nu\iota\tau\rho o\nu$, nitre.) Nitre, or rather rock salt.

HA'LITUS. (*us, ûs.* m.; from *halito*, to breathe out.) A vapour.

HALLER, Albert, was born at Berne, in 1709. He displayed at a very early age extraordinary marks of industry and talents. He was intended for the church, but having lost his father when only thirteen, he soon after determined upon the medical profession. Having studied a short time at Tubingen, he was attracted to Leyden by the reputation of Boerhaave, to whom he has expressed his obligations in the most affectionate terms; but he took his degree at the former place, when about seventeen years of age. He soon after visited England and France; then returning to his native country, first acquired a taste for botany, which he pursued with great zeal, making frequent excursions to the neighbouring mountains. He also composed a "Poem on the Alps," and other pieces, which were received with much applause. Having settled in his native city, about 1730, he began to give lectures on anatomy, but with indifferent success; and some detached pieces on anatomy and botany having gained him considerable reputation abroad, he was invited by George II., in 1736, to become professor in the university which he had recently founded at Gottingen. He accepted this advantageous offer, and though his arrival was rendered melancholy by the loss of a beloved wife, from some accident which occurred in the journey, he commenced at once the duties of his office with great zeal; he encouraged the most industrious of his pupils to institute an experimental investigation on some part of the animal economy, affording them his assistance therein. He was likewise himself indefatigable in similar researches, during the seventeen years which he spent there, having in view a grand reform in physiology, which his writings ultimately effected, dissipating the metaphysical and chemical jargon whereby it was before obscured. He procured the establishment of a botanic garden, an anatomical theatre, a school for surgery and for midwifery, with a lying-in hospital, and other useful institutions at that university. He received also many honourable testimonies of his fame, being chosen a member of the Royal Societies of Stockholm and London, made physician and counsellor to George II., and the Emperor conferred on him the title of Baron; which, however, he declined, as it would not have been esteemed in his native country. To this he returned in 1753, and during the remainder of his life discharged various important public offices there. He ultimately received every testimony of the general estimation in which he was held; the learned societies of Europe, as well as several sovereigns, vying with each other in conferring honours upon him. His constitution was delicate, and impatience of pain, or interruption to his studies, led him to use violent remedies when ill; however, by temperance and activity, he reached an advanced age, having died towards the end of 1777. He was one of the most universally informed men in modern times. He spoke with equal facility the German, French, and Latin languages; and read all the other tongues of Europe, except the Sclavonic; and there was scarcely any book of reputation with which he was not acquainted. His own works were extremely numerous, on anatomy, physiology, pathology, surgery, botany, &c. besides his poems, and political and religious publications. The principal are, 1. His large work on the *Botany of Switzerland*, in 3 vols. folio, with many plates. 2. *Commentaries on Boerhaave's Lectures*, 7 vols. octavo; 3. *Elements of Physiology*, 8 vols. quarto, a work of the greatest merit; 4. his *Bibliotheca*, or Chronological Histories of Authors, with brief Analyses; 2 vols. quarto on *Botany*, two on *Surgery*, two on *Anatomy*, and four on the *Practice of Medicine*, displaying an immense body of research.

HALLUCINA'TION. (*Hallucinatio, onis.* f.; from *hallucinor*, to err.) An erroneous imagination.

Halmyrax. The nitre of Media.

Halmyro'des. (From $\alpha\lambda\mu\upsilon\rho o\varsigma$, salted.) A term applied to the humours: it means acrimonious. It is also applied to fevers which communicate such an itching sensation as is perceived from handling salt substances.

HA'LO. (*o, onis.* m.; from ἅλως, an area or circle.) See *Areola.*

HALOIDE. (*Haloides;* from ἅλς, ἁλος, salt, and $\epsilon\iota\delta o\varsigma$, resemblance.) Salt-like: applied to minerals.

Hama'lgama. See *Amalgam.*

HAMOSUS. Hooked. Applied to the bristly pubescence of seeds and plants; as the

pericarp of the *Arctium lappa;* the seeds of *Daucus muricatus,* and *Alisma cordifolia.*

HAMPSTEAD. A village near to London, where there is an excellent chalybeate water, not inferior to that of Tunbridge-wells in any respect, except being nearer to the metropolis.

HAMULARIA. (*Hamularia, æ.* f.; from *hamus,* a hook.) A genus of worm described by Rudolphi. Dr. Treutler found two worms of this genus in the bronchial glands of a person who died of phthisis. These animals, *Hamularia subcompressa,* were oblong, round, and a little compressed on both sides, dark brown, studded with black spots, tapering slightly towards the anterior extremity, and a little transparent towards the tail. The two extremities bent up a little after the death of the animal. The head terminated in an obtuse point, and was furnished with two prominent hooks or projections: except these two crochets, no other traces of organs were perceptible.—*Rhind on Worms.*

HA'MULUS. (*us, i.* m.; diminutive of *hamus,* a hook.) A little hook. In *Anatomy,* applied to any hook-like process; as the hamulus of the pterygoid process of the sphenoid bone.

HA'MUS. (*us, i.* m.) A hook. A species of pubescence of plants formed of bristles, bent at their point into a hook; as in *Rumex tuberosus, Caucalis daucoides,* and *Galium aparine,* &c.

HAND. *Manus.* The hand is composed of the carpus or wrist, metacarpus, and fingers. The *arteries* of the hand are the palmary arch, and the digital arteries. The veins are the digital, the cephalic of the thumb, and the salvatella. The nerves are the cutaneous, externus and internus.

HANDALA. Colocynth.

HANGING. See *Suspensio.*

HAPSIS. The sense of feeling. The ἁψις φρενων, in Hippocrates, means delirium; delirium, loss of reason.

HA'RDESIA. See *Lapis hibernicus.*

HARE. See *Lepus timidus.*

HARE-LIP. *Labium leporinum;* called also, *Lagocheilus,* and *Lagostoma.* A fissure or longitudinal division of one or both lips. Children are frequently born with this kind of malformation, particularly of the upper lip. Sometimes the portions of the lip which ought to be united have a considerable space between them; in other instances they are not much apart. The cleft is occasionally double, there being a little lobe, or small portion of the lip, situated between the two fissures. Every species of the deformity has the same appellation of hare-lip, in consequence of the imagined resemblance which the part has to the upper lip of a hare.

The fissure commonly affects only the lip itself. In many cases, however, it extends along the bones of the palate, even as far as the uvula. Sometimes these bones are totally wanting: sometimes they are only divided by a fissure.

Such a malformation is always peculiarly afflicting. In its least degree, it constantly occasions considerable deformity; and when it is more marked, it frequently hinders infants from sucking, and makes it indispensable to nourish them by other means. When the lower lip alone is affected, which is more rarely the case, the child can neither retain its saliva, nor learn to speak, except with the greatest impediment. But when the fissure pervades the palate, the patient not only never articulates perfectly, but cannot masticate or swallow, except with great difficulty, on account of the food readily getting up into the nose.

HARENGUS. See *Clupea harrengus.*

HARMALA. See *Peganum harmala.*

HARMATTAN. A prevailing wind on the coast of Africa, between Cape Verd and Cape Lopez, in the months of December, January, and February. It is a particularly dry wind, from passing over the burning deserts of Africa; so much so, that, in a very short time, the leaves of plants become dry and crisp, and the skin of human beings dry and chapped, the nose and lips sore, the fauces arid, and the perspiration acrid; yet it is not considered unhealthy.

HARMO'NIA. (*a, æ.* f.; from αρω, to fit together.) Harmony. A species of synarthrosis, or immovable connection of bones, in which bones are connected together by means of rough margins, not dentiform: in this manner most of the bones of the face are connected together.

HARMOTOME. See *Cross-stone.*

HARPASTRUM. A species of exercise with a ball.

HARPAX. *Harpaga.* Amber.

HARRIS, WALTER, born about the year 1651. His principal work, *De Morbis Acutis Infantum,* passed through several editions. He left also a *Treatise on the Plague,* and a collection of medical and surgical papers, which had been read before the College of Physicians.

HARROGATE. Harrowgate. The villages of High and Low Harrogate are situate in the centre of the county of York, adjoining the town of Knaresborough. The whole of Harrogate, in particular, has long enjoyed considerable reputation, by possessing two kinds of very valuable springs; and, some years ago, the chalybeate was the only one that was used internally, whilst the sulphureous water was confined to external use. At present, however, the latter is employed largely as an internal medicine.

The sulphureous springs of Harrogate are four in number, of the same quality, though different in the degree of their powers. This water, when first taken up, appears perfectly clear and transparent, and sends forth a few air bubbles, but not in any quantity. It possesses a very strong sulphureous and fœtid smell, precisely like that of a damp rusty gun-barrel, or bilge-water. To the taste it is bitter, nauseous, and strongly saline, which is soon borne without any disgust. In a few

hours of exposure this water loses its transparency, and becomes somewhat pearly, and rather greenish to the eye; its sulphureous smell abates, and at last the sulphur is deposited in the form of a thin film, on the bottom and sides of the vessel in which it is kept. The volatile productions of this water show carbonic acid, sulphuretted hydrogene, and azotic gas.

The sensible effects which this water excites, are often a headache and giddiness on being first drunk, followed by a purgative operation, which is speedy and mild, without any attendant gripes; and this is the only apparent effect the exhibition of this water displays.

The diseases in which this water is used are numerous, particularly of the alimentary canal, and irregularity of the bilious secretions. Under this water, the health, appetite, and spirits improve; and, from its opening effects, it cannot fail to be useful in the costive habit of hypochondriasis. But the highest recommendation of this water has been in cutaneous diseases, and for this purpose it is universally employed both as an internal medicine, and an external application: in this united form, it is of particular service in the most obstinate and complicated forms of cutaneous affections; nor is it less so in states and symptoms supposed connected with worms, especially with the round worm and ascarides, when taken in such a dose as to prove a brisk purgative; and in the latter case also, when used as a clyster, the ascarides being chiefly confined to the rectum, and therefore within the reach of this form of medicine. From the union of the sulphureous and saline ingredients, the benefit of its use has been long established in hæmorrhoidal affections.

A course of Harrogate waters should be conducted so as to produce sensible effects on the bowels: half a pint taken in the morning, and repeated three or four times, will produce it; and its nauseating taste may be corrected by taking a dry biscuit, or a bit of coarse bread after it. The course must be continued, in obstinate cases, a period of some months, before a cure can be expected.

HART. The male of a five-year-old deer. See *Cervus*.

Hart's tongue. See *Asplenium*.

Hart-wort. See *Laserpitium siler*.

Hart-wort of Marseilles. See *Seseli tortuosum*.

HARTFELL. The name of a place near Moffat, in Scotland. It has a mineral water which contains iron dissolved by the sulphuric acid, and is much celebrated in scrophulous affections, and cutaneous diseases. It is used no less as an external application, than drank internally. The effects of this water, at first, are some degree of drowsiness, vertigo, and pain in the head, which soon go off, and this may be hastened by a slight purge. It produces generally a flow of urine, and an increase of appetite. It has acquired much reputation also in old and languid ulcers, where the texture of the diseased part is very lax, and the discharge profuse and ill conditioned.

The dose of this water is more limited than that of most of the mineral springs which are used medicinally. It is of importance in all cases, and especially in delicate and irritable habits, to begin with a very small quantity, for an over-dose is apt to be very soon rejected by the stomach, or to occasion griping and disturbance in the intestinal canal; and it is never as a direct purgative that this water is intended to be employed. Few patients will bear more than an English pint in the course of the day; but this quantity may be long continued. It is often advisable to warm the water for delicate stomachs, and this may be done without occasioning any material change in its properties.

HARTLEY, David, born in 1705. He published some *Tracts concerning the Stone.* Some other papers were also written by him; but the principal work, upon which his fame securely rests, is a metaphysical treatise, entitled *Observations on Man, his Frame, his Duty, and his Expectations.* The doctrine of vibration, on which he explained sensation, is merely gratuitous; but his Disquisitions on the *Power of Association, and other mental Phænomena*, evince great subtlety and accuracy of research.

Hartshorn. See *Cornu*.

Hartshorn shavings. See *Cornu*.

Harvest bug. See *Acarus autumnalis*.

HARVEY, William, the illustrious discoverer of the circulation of the blood, was born at Folkstone in Kent, in 1578. After studying four years at Cambridge, he went abroad at the age of 19, visited France and Germany, and then fixed himself at Padua, which was the most celebrated medical school in Europe, where he was created Doctor in 1602. On returning to England he repeated his graduation at Cambridge, and settled in London: he became a Fellow of the College of Physicians in 1603, and soon after physician to St. Bartholomew's Hospital. In 1615, he was appointed Lecturer on Anatomy and Surgery to the College, which was probably the more immediate cause of the publication of his grand discovery. He appears to have withheld his opinions from the world, until reiterated experiment had confirmed them, and enabled him to prove the whole in detail, with every evidence of which the subject will admit. The promulgation of this important doctrine brought on him the most unjust opposition, some condemning it as an innovation, others pretending that it was known before; and he complained that his practice materially declined afterwards: however he had the satisfaction of living to see the truth fully established. He likewise received considerable marks of royal favour from James and Charles I., to whom he was appointed physician; and the latter particularly assisted his enquiries concerning generation, by the opportunity of dissecting numerous females of the deer kind in different stages of pregnancy. During the civil war, when he retired to Oxford, his house in London was pillaged,

and many valuable papers, the result of several years' labour, destroyed. He published his first work *On the Circulation*, in 1628, at Frankfort, as the best means of circulating his opinions throughout Europe; after which he found it necessary to write two *Exercitations* in refutation of his opponents. In 1651, he allowed his other great work, *De Generatione Animalium*, to be made public, leading to the inference of the universal prevalence of oval generation. In the year following he had the gratification of seeing his bust in marble, with a suitable inscription recording his discoveries, placed in the hall of the College of Physicians by a vote of that body; and he was soon after chosen President, but declined the office on account of his age and infirmities. In return, he presented to the College an elegantly furnished convocation room, and a museum filled with choice books and surgical instruments. He also gave up his paternal estate of fifty-six pounds per annum for the institution of an annual feast, at which a Latin oration should be spoken, in commemoration of the benefactors of the College, &c. He died in 1658. A splendid edition of his works was printed in 1766, by the College, in quarto, to which a Latin Life of the author was prefixed, written by Dr. Laurence.

HASTA. (*a, æ.* f.) A spear: applied to parts of animals and vegetables, which are supposed to resemble this instrument.

Hasta regia. The *Asphodelus luteus.*

HASTATUS. Hastate: spear or halberd-shaped. Applied to a triangular leaf, hollowed out at the base and sides, but with spreading lobes; as in *Rumex acetocella*, and *Solanum dulcamara.*

Hastella. (*a, æ.* f.; diminutive of *hasta.*) A splinter like a spear, used for fractured limbs.

Hatchet-shaped. See *Dolabriformis.*

HAUD. An Arabic name for wood; and applied in that country to *agallochum*, as being *the wood*, by way of eminence.

HAUSTUS. (*us, ûs.* m.; from *haurio*, to swallow.) A draught or single dose of a liquid medicine.

HAUYNE. A blue-coloured mineral, found imbedded in the basalt rock of Albano and Frescate, which Jameson thinks is allied to the azure stone.

Havers' glands. Glands in and about the synovial membrane of joints; first described by Havers.

HAWK. A species of the genus *Falco.* Many plants are named after parts of this bird, from their supposed resemblance.

Hawkweed. See *Hypochæris.*

Hawkweed, greater. See *Sonchus.*

Hawkweed, lesser. See *Hypochæris.*

Hay, camel's. See *Juncus odoratus.*

Hazel-nut. See *Corylus avellana.*

HEAD. See *Caput.*

HEADACHE. Headache, or pain in the head, as a generic term, has received a variety of trivial names, according as it may be produced by some other disease, or the variety of its cause, or the part of the head that is affected: hence cephalalgia venerea, rheumatica, &c.; cephalalgia nervosa, inflammatoria, &c.; cephalalgia stomachica, intermittens, &c. It is sometimes an obtuse pain, with a sense of heaviness extending over the whole head, attended by a general disquiet and confusion, rather than by acute pain; by a general torpitude of the sensorial power, which disqualifies the person for a continuance of mental power. The sight is often dim, the hearing dull, and the memory vacant. This kind of headache is a nervous affection of the brain. It is mostly the result of weakness, or a want of proper supply of that kind of sensorial fluid on which the feeling of comfort depends, and is produced by irregular circulation of the blood in the head, mental exertion, and the passions of the mind.

Another kind of headache is usually called hemicrania, because it occupies one half only, or the great part of one half of the head. The vulgar name is megrim. It begins with uneasy feelings, or creepings over a part of the scalp, which increases to an acute and often throbbing pain within the head, and mostly over one eye. The person often describes it like to an opening and shutting of the skull. There is often sickness of the stomach with it. This kind of headache lasts an uncertain time, seldom more than a few hours. It frequently assumes an intermittent type, coming on at a certain time like an ague, and hence it is called an ague in the head. It differs much in the degree of violence, and is rather a purely nervous disease, or a bilious one. When the latter, it terminates when the stomach and bowels are relieved, and does not return, is accompanied by vomiting of bile, and is denominated a sick headache.

All cases of idiopathic headache depend on one of the following causes:—

1. A weakness or exhaustion of the power of the encephalon.

2. A sympathy with the stomach and chylopoietic viscera.

Their cure consequently is to be effected by nervous tonics when a nervous disease, and by removing the states of stomach and chylopoietic viscera which excite the sympathetic headache.

Rest is in all cases necessary: cold and pressure to the head often give relief; as the application of a napkin rung out of cold water, sponging the head with iced water, spirituous lotions, &c.

When the pain appears to be purely nervous, from exhaustion or mental exertion, or other causes of debility, nervous tonics are to be given; as cinchona, cascarilla, calumba, gentian, and the like, and also dilute æthers and wine; and if the pain be considerable, a small dose of opium, or Dover's powder, immediately after a warm pediluvium or fomentation, and a warm bed.

When the headache is periodical, these tonics are to be administered in the same way as against an ague, in the period of ease.

The sympathetic headache requires the removal of the chylopoietic derangement, which

is generally best effected by a vomit, and the warm aloetic purges.

Headache is very often indeed a symptomatic affection; so much so that there are very few diseases in which it does not take place. It is a prominent symptom in all fevers and inflammations, and in many nervous diseases, the venereal disease, and rheumatism.

HEADED. See *Capitulatus.*

HEALTH. See *Pathology*, and *Hygeia.*

HEARING. *Auditus.* A function by which we are acquainted with the vibratory motion of bodies.

" Sound is to the hearing what light is to the sight. Sound is the result of an impression produced upon the ear by the vibratory motion impressed upon the atoms of the body by percussion, or any other cause. This word sound signifies also the vibratory motion itself. When the atoms of a body have been thus put in motion, they communicate it to the surrounding elastic bodies: these communicate it in the same manner, and so the vibratory motion is often continued to a great distance. In general, only elastic bodies are capable of producing and propagating sound; but for the most part solid bodies produce it, and the air is generally the medium by which it reaches the ear.

There are three things distinguished in sound: intensity, tone, and timbre or expression.

1. The *intensity* of sound depends on the extent of the vibrations.

2. The *tone* depends on the number of vibrations which are produced in a given time, and, in this respect, sound is distinguished into *acute* and *grave.* The grave sound arises from a small number of vibrations, the acute from a great number.

The gravest sound which the ear is capable of perceiving, is formed of thirty-two vibrations in a second. The most acute sound is formed of twelve thousand vibrations in a second. Between these two limits are contained all the distinguishable sounds; that is, those sounds of which the ear can count the vibration. Noise differs from distinguishable sound in so much as the ear cannot distinguish the number of vibrations of which it is composed.

A distinguishable sound, composed of double the number of vibrations of another sound, is said to be its octave. There are intermediate sounds, between these two, which are seven in number, and which constitute the *diatonic scale.* or gamut: they are designated by the names, *ut*, *re*, *mi*, *fa*, *sol*, *la*, *si.*

When a sonorous body is put in motion by percussion, there is at first heard a sound very distinct, more or less intense, more or less acute, &c., according as it may happen; this is the fundamental sound; but with a little attention other sounds can be perceived. These are called harmonic sounds. This can be easily perceived in touching the string of an instrument.

3. The *timbre*, or expression of sound, depends on the nature of the sonorous body.

Sound is propagated through all elastic bodies. Its rapidity is variable according to the body which propagates it. The rapidity of sound in the air is a thousand one hundred and thirty English feet. It is still more rapidly transmitted by water, stone, wood, &c. Sound loses its force in a direct proportion to the square of the distance: this happens at least in the air. It may also become more intense as it proceeds; as happens when it passes through very elastic bodies, such as metals, wood, condensed air, &c. All sorts of sounds are propagated with the same rapidity, without being confounded one with another.

It is generally supposed that sound is propagated in right lines, forming cones analogous to those of light, with this essential difference, however, that in sonorous cones the atoms have only a motion of oscillation, whilst those of the cones of light have a real transitive motion.

When sound meets a body that prevents its passage, it is reflected in the same manner as light, its angle of reflection being equal to the angle of incidence. The form of the body which reflects sound, has similar influence upon it. The slowness with which sound is propagated produces certain phænomena, for which we can easily account. Such is the phænomenon of echo, of the mysterious chamber, &c.

Apparatus of Hearing.—There are in the apparatus of hearing a number of organs, which appear to concur in that function by their physical properties; and behind them, a nerve for the purpose of receiving and transmitting impressions.

The apparatus of hearing is composed of the outer, middle, and internal ear, and of the acoustic nerve. See *Ear.*

The auricle collects the sonorous radiations, and directs them towards the meatus externus, in proportion as it is large, elastic, prominent from the head, and directed forward. Boerhaave supposed he had proved by calculation, that all the sonorous radiations (or pulsations) which fall upon the external face of the pinna, are, ultimately, directed to the auditory passage. This assertion is evidently erroneous, at least for those pinnæ in which the *antihelix* is more projecting than the *helix.* How could those rays arrive at the concha, which fall upon the posterior surface of the antihelix? The pinna is not indispensable to the hearing; for, both in men and in the animals, it may be removed without any inconvenience beyond a few days.

The *meatus auditorius*, transmits the sound in the same manner as any other conduit, partly by the air it contains, and partly by its parietes, until it arrives at the membrane of the tympanum. The hairs, and the cerumen with which it is provided at the entrance, are intended to prevent the introduction of sand, dust, insects, &c.

The *membrane of the tympanum*, receives the sound which has been transmitted by the meatus auditorius. In what circum-

stances it is stretched by the internal muscle of the malleus? Or when is it relaxed by the contraction of the anterior muscle of the malleus? — All our knowledge on this subject is merely conjectural. An opening made in this membrane does not much impair the faculty of hearing. As this membrane is dry and elastic, it ought to transmit the sound very well, both to the air contained in the tympanum, and to the chain of little bones. The chorda tympani cannot fail to participate in the vibrations of the membrane, and transmit impressions to the brain. The contact of any foreign body upon the membrane is very painful, and a violent noise also gives great pain. The membrane of the tympanum may be torn, or even totally destroyed, without deranging the hearing in any sensible degree.

The *cavity of the tympanum* transmits the sounds from the external to the internal ear. The transmission of sound by the tympanum happens — 1st, By the chain of bones, which has a particular action upon the membrane of the *fenestra ovalis.* 2d, By the air which fills it, and which acts upon the whole petrous portion, but particularly upon the membranum of the *fenestra ovalis.* 3d, By its sides.

The *Eustachian tube* renews the air in the tympanum; being destroyed, it is said to cause deafness.

The notion of its being capable of carrying sound to the internal ear is erroneous; there is nothing to support this assertion: it permits the air to pass in cases when the *tympanum* is struck by violent sounds, and it permits the renewal of that which fills the *tympanum*, and the mastoid cells. The air in the *tympanum* being much rarefied, is very suitable for diminishing the intensity of the sounds it transmits.

The use of the *mastoid cells* is not well known: it is supposed that they help to augment the intensity of the sound that arises in the cavity. If they produce this effect, it ought to be rather from the vibrations of the partitions which separate the cells than from the air which they contain. Sound may arrive in the *tympanum* by another way than the external meatus; the shocks received by the bones of the head are directed towards the temples, and perceived by the ear. It is well known that the movement of a watch is heard distinctly when it is placed in contact with the teeth.

We know little of the *functions* of the internal ear: we can only imagine that the sonorous vibrations are propagated in different modes, but principally by the membrane of the *fenestra ovalis*, by that of the *fenestra rotunda*, and by the internal partition of the *tympanum*; that the liquor of Cotunnius ought to suffer vibrations which are transmitted to the acoustic nerve. It may be conceived how necessary it is that this liquid should give way to those vibrations which are too intense, and which might injure this nerve. Possibly, in this case, it flows into the aqueducts of the *cochlea* and of the vestibule, which, in this respect, would have a great deal of analogy with the *Eustachian tube.*

The internal *gyri* of the *cochlea* ought to receive the vibrations principally by the membrane of the *fenestra ovalis*; the vestibule, by the chain of bones; the semicircular canals, by the sides of the *tympanum*, and perhaps by the mastoid cells, which frequently extend beyond the canals. But the aid which is given to the hearing by each separate part of the internal ear is totally unknown. The osseo-membraneous partition, which separates the *cochlea* into two parts, has given rise to a hypothesis which no one now admits.

The impressions are received and transmitted to the brain by the *acoustic nerve*; the brain perceives them with more or less facility and exactness in different individuals. Many people have a false ear, which means that they do not distinguish sounds perfectly.

There is no explanation given of the action of the acoustic nerve and of the brain in hearing.

In order to be heard, sounds must be within certain limits of intensity. Too strong a sound hurts us, whilst one too weak produces no sensation. We can perceive a great number of sounds at once. Sounds, particularly appreciable sounds, combined, and succeeding each other in a certain manner, are a source of agreeable sensations. It is in such combinations, for the production of this effect, that music is employed. On the contrary, certain combinations of sounds produce a disagreeable impression; the ear is hurt by very acute sounds. Sounds which are very intense, and very grave, hurt excessively the membrane of the *tympanum.* By the absence of the liquor of *Cotunnius*, the hearing is destroyed. When a sound has been of long duration, we still think we hear it, though it may have been some time discontinued.

We receive two impressions, though we perceive only one. It has been said that we use only one ear at once; but this notion is erroneous.

When the sound comes more directly to the one ear, it is, in reality, distinguished with more facility by that one, than by the other: therefore in this case we employ only one ear; and when we listen with attention to a sound which we do not hear exactly, we place ourselves so that the rays may enter directly into the concha; but when it is necessary to determine the direction of the sound, that is, the point whence it proceeds, we are obliged to employ both ears: for it is only by comparing the intensity of the two impressions, that we are capable of deciding from whence the sound proceeds. Should we shut one ear perfectly close, and cause a slight noise to be made, in a dark place, at a short distance, it would be utterly impossible to determine its direction; in using both ears this could be determined. In these cases the eye is of great use, for even in using both ears it is frequently impossible to tell in the dark from whence a sound comes. By the sound we may also estimate the distance of the body from which it proceeds: but in

order to judge exactly in this respect we ought to be perfectly acquainted with the nature of the sound, for without this condition the estimation is always erroneous. The principle upon which we judge is, that an intense sound proceeds from a body which is near, whilst a feeble sound proceeds from a body at a distance: if it happen that an intense sound comes from a distant body, whilst a feeble sound proceeds from a body which is near, we fall into acoustic errors. We are generally very subject to deception with regard to the point whence a sound comes: sight and reason are of great use in assisting our judgment.

The different degree of convergence and divergence of the sonorous rays, do not seem to have any influence on the hearing; neither are they modified in their course, except for the purpose of making them enter into the ear in greater quantity: it is to produce this effect that speaking trumpets are used for those who do not hear well. Sometimes it is necessary to diminish the intensity of sounds: in this case a soft and scarcely elastic body is placed in the external meatus."—*Magendie's Physiology*.

HEART. *Cor.* I. The heart of an animal or fish. The heart of man is a hollow muscular viscus, situated in the cavity of the pericardium for the circulation of the blood. It is divided externally into a *base*, or its broad part; a *superior* and an *inferior surface*, and an *anterior* and *posterior* margin. Internally, it is divided into a *right* and *left ventricle*.

The situation of the heart is oblique, not transverse; its base being placed on the right of the bodies of the vertebræ, and its apex obliquely to the sixth rib on the left side; so that the left ventricle is almost posterior, and the right anterior. Its inferior surface lies upon the diaphragm.

There are two cavities adhering to the base of the heart, from their resemblance called *auricles*. The right auricle is a muscular sac, in which are four *apertures*, two of the venæ cavæ, an opening into the right ventricle, and the opening of the coronary vein. The left is a similar sac, in which there are five *apertures*, viz. those of the four pulmonary veins, and an opening into the left ventricle.

The cavities in the heart are called *ventricles*: these are divided by a fleshy septum, called *septum cordis*, into a right and left. Each ventricle has two *orifices*: the one auricular, through which the blood enters; the other arterious, through which the blood passes out. These four orifices are supplied with *valves*, which are named from their resemblance: those at the arterious orifices are called the *semilunar*; those at the orifice of the right auricle, *tricuspid*; and those at the orifice of the left auricle, *mitral*. *The valve of Eustachius* is situated at the termination of the vena cava inferior, just within the auricle.

The substance of the heart is muscular, its exterior fibres are longitudinal, its middle transverse, and its interior oblique. The internal superficies of the ventricles and auricles of the heart are invested with a strong and smooth membrane, which is extremely irritable.

The vessels of the heart are divided into *common* and *proper*. The *common* are,—1. The *aorta*, which arises from the left ventricle. 2. The *pulmonary artery*, which originates from the right ventricle. 3. The four pulmonary veins, which terminate in the left auricle. 4. The two *venæ cavæ*, which evacuate themselves into the right auricle. The *proper vessels* are,—1. The *coronary arteries*, which arise from the aorta, and are distributed on the heart. 2. The *coronary veins*, which return the blood into the right auricle. The *nerves* of the heart are branches of the eight and great intercostal pairs. The heart of the fœtus differs from that of the adult, in having a *foramen ovale*, through which the blood passes from the right auricle to the left.

II. The heart of a vegetable. See *Corculum*.

Heart-ache. See *Pathemata animi*.

Heart-shaped. See *Cordatus*.

Heart's ease. See *Viola tricolor*.

HEAT. See *Calor*, and *Caloric*.

Heat, absolute. This term is applied to the whole quantity of caloric existing in a body in chemical union.

Heat, animal. See *Calor animalis*.

HEAT, FREE. If the heat which exists in any substance be from any cause forced in some degree to quit that substance, and to combine with those that surround it, then such heat is said to be free, or sensible, until the equilibrium is restored.

HEAT, LATENT. When any body is in equilibrium with the bodies which surround it with respect to its heat, that quantity which it contains is not perceptible by any external sign, or organ of sense, and is termed combined caloric, or latent heat.

Heat, prickly. See *Lichen tropicus*.

Heat, sensible. See *Heat, free*.

Heat, vital. See *Calor animalis*.

HEAVISIDE, JOHN, was born at Hatfield, in Hertfordshire, in the year 1744, and became a popular surgeon in London, where he practised until superannuated at the age of 82. He was contemporary with Hunter and Pott, and formed a museum of natural and morbid parts of the human body, which was sold by auction after his death.

Heavy carbonated hydrogene. See *Carburetted hydrogene*.

Heavy inflammable air. See *Carburetted hydrogene gas*.

HEAVY SPAR. Baryte. A mineral. Professor Jameson makes four species:—

1. *Rhomboidal*, or *witherite*. This is a carbonate of barytes; and is found in Cumberland and Durham.

2. *Prismatic*, or *heavy spar*, a sulphate; found also in Cumberland and Durham.

3. *Diprismatic*, or *strontianite*. A carbonate of barytes; found in Strontian, in Argyleshire.

4. *Axifrangible*, or *celestine*. A sulphate of strontites, with about two per cent. of sul-

phate of barytes; found near Edinburgh, in Inverness-shire, and Bristol.

HEBDOMADARIUS. (From ἑβδομας, a week.) Weekly: formerly applied to a fever.

HEBE. (From ἡβαω, to grow ripe.) The hair which grows upon the pubes; the part on which they grow, or the age when they appear.

HEBERDEN, William, born in 1710. He published a little tract, entitled *Antitheriaca*, condemning the complication of certain ancient formulæ of medicines. At his suggestion the *Medical Transactions of the College of Physicians* first appeared, in 1768. Dr. Heberden contributed some valuable papers to this work, especially on the *Angina Pectoris*, a disease not before described; and on *Chicken Pox*, which he first accurately distinguished from Small Pox. Some other papers of his appeared in the Philosophical Transactions. In 1782, he drew up the result of his experience in a volume of *Commentaries*, written in Latin, the great excellence of which is its style.

HECTIC. (*Hecticus*; from ἑξις, habit.) Appertaining to the habit or constitution.

Hectic fever. *Febris hectica.* A disease of great perplexity and irregularity. Nothing can more fully prove this than the different characters given of it, and the different places allotted to it by different authors. Sauvages and Sagar introduce it into the list of continued fevers. Linnæus, Crichton, and Parr, into that of remitting and exacerbating fevers. Boerhaave regards it as of a mixed nature, a continued intermittent. "Febris hectica," says he, "est referenda ad febres continuatas intermittentes." Vogel and Cullen degrade it into a mere symptomatic affection. "As I have never," says the latter, "observed a fever of this kind except when symptomatic, I could not consent to admit it into the list of idiopathic fevers, which alone ought to be enumerated."

Those who have adopted Dr. Cullen's opinion have usually contemplated it as a mere effect of absorbed pus. Dr. Heberden seems to think it dependent upon a local cause; but that irritability in any diseased organ, which cannot be brought into a healthy state, will excite it as effectually as pus introduced into the system.

Galen, on the contrary, John Hunter, and Willan contend, that hectic may be, and often is, a strictly idiopathic affection. The second of these regards hectic fever as of two sorts, symptomatic and idiopathic. The first he ascribes entirely to local irritability, and opposes the idea that it is ever produced by absorbed pus. His argument is, that if absorbed pus be capable of producing it in one instance, it ought in every instance. He does not think that more pus is absorbed during the existence of hectic fever than when no such fever is present: but, admitting that this should be the case, he would rather ascribe the increased absorption to the hectic constitution, operating upon the abscess or sore, than to the abscess or sore operating upon the constitution; in which case the hectic diathesis is the cause, and the increased absorption is only the effect. So that, even here, he regards the hectic as a primary or constitutional disease.

As a symptomatic affection, however, he refers it to a general irritability of the constitution, produced by sympathy, in consequence of "some incurable local disease of a vital part, or of a common part when of some magnitude;" and which becomes incurable from two causes: firstly, because, though the local irritation is small, the constitution is bad, and does not dispose the parts to a healing state; and secondly, because, though the constitution is good, the local irritation is so considerable that it cannot muster up a sufficiency of remedial energy to subdue it; and hence, while sympathising in the irritable action, falls a prey to its own efforts.

Yet, says he, it is possible for hectic fever to be an original disease of the constitution; for the constitution may fall into the same mode of action, without any local cause whatever, at least that we know of. And in this manner he accounts for its existence as an idiopathic affection. And, in effect, nothing is more common than for hectic fever to exist in patients in which we can trace no local cause whatever: and in all such cases we must either indulge in a gratuitous hypothesis, and throw our suspicions at random upon the lungs, or the liver, or the kidneys, or the heart, or the mesenteric glands, or whatever other organ a few casual symptoms may suggest to the fancy; or we must at least act upon the principle of its being an idiopathic affection, even though we should refuse, in terms, to admit that it is so.

There seems great reason for admitting a hectic diathesis or temperament, the features of which are for the most part strongly marked, and are to be found in a fair skin, blue eyes, yellow hair, lax fibre, and sanguine disposition. And, wherever this exists, it is probable that most of the causes of other fevers, operating upon it, will produce a hectic. And we can hence readily account for the examples brought by different authors of its being excited by diseased actions or affections of the heart, stomach, mesentery, liver, pancreas, lungs, or brain; by a suppression of various exanthems or other eruptions, or of various habitual discharges, natural or morbid; by other fevers; by chronic inflammations or abscesses. It is well known to be a common sequel to the measles, occasionally so to the small-pox, and, in a few instances, to rosalia or scarlet fever. It may be a result of dyspepsia. And it is possible that hectic fever may occasionally spring, like other remittents, from febrile miasm.

The character of the disease is well given by John Hunter in the following words: "Hectic may be said to be a slow mode of dissolution; the general symptoms are those of a low or slow fever, attended with weakness, but more

with the action of weakness than real weakness: for, upon the removal of the hectic cause, the action of strength is immediately produced, as well as every natural function, however much it was decreased before. The particular symptoms are debility; a small, quick, and sharp pulse; the blood forsaking the skin; loss of appetite; often rejection of all aliment by the stomach; wasting; a great readiness to be thrown into sweats; sweating spontaneously when in bed; frequently a constitutional purging."—To which he adds, "the water clear." There is, in reality, much difference of opinion upon this last point. Dr. Heberden has observed that the same irregularity which accompanies most other symptoms of the disease attends this also; that the urine is equally clear or turbid in the exacerbations and the intervals: sometimes clear in the first and turbid in the second; and sometimes turbid in the first and clear in the second: while Dr. Duncan, from long and assiduous attention, asserts, that the urine is peculiarly distinguished by a natural furfuraceous separation. Where authorities thus clash, it is not a symptom to be depended upon as a pathognomic.

From the frequent approaches which the hectic makes towards a perfect apyrexy, it is sometimes apt to be confounded with an intermittent; but there is rarely any remission in which the pulse is not at least ten strokes in a minute quicker than it ought to be; and by this it is sufficiently distinguishable, as it is also by the greater irregularity of its different stages, and indeed of all its symptoms.

It is owing to this last feature that sometimes the exacerbation commences with a chilly fit, and sometimes without; and that, when there is a chilly fit, sometimes it is immediately succeeded by heat, but sometimes by perspiration, without any intervening hot fit; while occasionally the cold fit only leads to heat, or even terminates singly without either heat or perspiration. Hence the exacerbations must vary in duration: but even where every stage is present and succeeds in regular order, the duration of the entire exacerbation is almost equally uncertain, insomuch that it is seldom that three exacerbations of equal length recur in succession. The remissions will sometimes extend to ten or twelve days, without a single intervening pyrectic symptom: and sometimes the cold, or the hot fit, or the sweating, will be renewed several times in the same day. Yet, let the perspiration appear whenever it may, the patient is never relieved by it; but is as anxious and restless during its continuance, as in the heat or chill.

Dr. Heberden tells us, that he has sometimes seen a hectic attack persons who seemed in tolerable health, in a sudden and violent manner, like a common inflammatory fever; and, like that, in a little time bring them into imminent danger of their lives; after which it has abated, and afforded hopes of recovery. But the hopes have been deceitful: for the hectic has still been fed by some lurking mischief; and, resisting the power of medicine, has gradually undermined the patient's health and destroyed him.

More commonly, however, hectic fever commences slowly and insidiously, and is not suspected for some months; and the only symptoms noticeable are, lassitude upon slight exercise, loss of appetite, and a wasting of the flesh. But if these symptoms be connected with a general increase of pulse, so that the artery beats from ninety to a hundred, or a hundred and twenty strokes in a minute, there will be real ground for apprehension.

This is one of many diseases in which the art of medicine has hitherto laboured in vain to strike into any direct track of cure. The real cause is commonly involved in great and impenetrable obscurity, and we can do little more than attack single symptoms as they make their appearance.

Where the disease is evidently symptomatic, the case must depend upon curing, or, if incurable, upon removing, when this can be accomplished, the part affected. Where idiopathic, we must combat, as far as we are able, the irritable diathesis; and above all things endeavour to strengthen, without increasing, the action of the machine. The best sedatives, as well as tonics, are acids; and of these the vegetable will usually be found preferable to the mineral, since, on account of their corrosive property, the latter can only be taken in small quantities. They abate the febrile heat, diminish the restlessness, and frequently succeed in checking the night-sweats. And if, as is often the case, the patient be tormented with pains in the limbs or joints, resembling rheumatism, and preventing him from sleeping, we may combine the acids with opium. The bowels must be kept regular by gentle laxatives, and the neutral salts seem to answer this purpose better than most others. It will, however, be convenient to vary them occasionally, and sometimes to exchange them for the senna confection, or some other aperient.

Stimulants rarely answer any good purpose, and in many instances evidently heighten and accelerate the exacerbation. The Peruvian balsam has been given advantageously with nitre; but myrrh is a medicine of fairer promise; and beyond these we can scarcely ever venture to proceed.

The lighter bitters are certainly serviceable in many cases, and may conveniently be employed in combination with the acids; but bark, though tried in numerous instances, and with great perseverance, has not been found successful. Dr. Heberden, however, says that he never saw it do any harm in the hectic fever, and his opinion is confirmed by that of Sir Edward Hulse, after having prescribed it for forty years: yet neither of them ever obtained proofs of any beneficial result.

Sarsaparilla has, in some instances, proved highly serviceable, and many cases of hectic have been cured by it. Every thing depends on having the genuine article. The decoction

is the best preparation of it, and next to it the powder. Its use should be persevered in for a considerable time, and with it a vegetable and milk diet.

A light and regular diet, regular hours, and gentle exercise, are coadjutants of great importance. When the disease is dependent upon some local affection, the Bath waters have often afforded relief; but in idiopathic cases, they usually augment the fever, aggravate the patient's sufferings, and hasten his death.

HE'DERA. (*a, æ.* f. ; from *hæreo*, to stick : because it attaches itself to trees and old walls.) The name of a genus of plants in the Linnæan system. Class, *Pentandria ;* Order, *Monogynia*. The ivy.

Hedera arborea. See *Hedera helix.*

Hedera helix. The ivy; called also, *Hedera arborea.* The leaves of this tree have little or no smell, but a very nauseous taste. Haller informs us, that they are recommended in Germany against the atrophy of children. By the common people of this country they are sometimes applied to running sores, and to keep issues open. The berries were supposed by the ancients to have a purgative and emetic quality ; and an extract was made from them by water, called by Quercetanus *extractum purgans*. Later writers have recommended them in small doses as alexipharmic and sudorific : it is said, that in the plague at London, the powder of them was given in vinegar, or white wine, with good success. It is from the stalk of this tree that a resinous juice, called *Gummi hederæ*, exudes very plentifully in warm climates. It is imported from the East Indies, though it may be collected from trees in this country. It is brought over in hard compact masses, externally of a reddish-brown colour, internally of a bright brownish yellow, with reddish specks or veins. It has a strong, resinous, agreeable smell, and an astringent taste. Though never used in the practice of the present day, it possesses corroborant, astringent, and antispasmodic virtues.

Hedera terrestris. See *Glecoma.*

Hederaceæ. (From *hedera*, the ivy.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of the ivy, and a few other genera, which in their form and appearance resemble it.

HEDERACEUS. (From *hedera*, the ivy.) Hederaceous : appertaining to or resembling the ivy.

Hedge hyssop. See *Gratiola officinalis.*

Hedge mustard. See *Erysimum.*

Hedge mustard, stinking. See *Erysimum.*

HEDGEHOG. See *Erinaceus.*

Hedgehog mushroom. See *Hydnum erinaceum.*

He'dra. 1. The anus. 2. Excrement. 3. A fracture.—*Hippocrates.*

Hedyo'smos. Mint.

HEDYPNOIS. (*ois, idis.* f. ; from ἡδυς, sweet, and πνεω, to breathe.) Sweet-breath : a name in some writings of the dandelion.

HEDYSARUM. (*um, i.* n. ; from ἡδυς, sweet.) The name of a genus of plants. Class, *Diadelphia ;* Order, *Decandria.*

Hedysarum alhagi. This plant produces a manna, used in Persia as a gentle aperient.

HEISTER, Laurence, a German, born 1683. He was author of several esteemed works, particularly a Compendium of Anatomy, which became very popular, being remarkable for its conciseness and clearness. His *Institutions of Surgery* also gained him great credit, being translated into Latin, and most of the modern languages of Europe. Another valuable practical work was entitled, *Medical, Surgical, and Anatomical Cases and Observations.*

HELCO'MA. Ulceration.

HELCO'NIA. (From ελκος, an ulcer.) An ulcer: applied to ulceration in the external or internal superficies of the cornea.

Helcy'drion. (From ελκος, an ulcer, and υδωρ, water.) *Helcydrium.* A moist ulcer.

Helcy'ster. (From ελκω, to draw.) An instrument for extracting the fœtus.

HELE'NIUM. (*um, ii.* n. ; so called from *Helene*, the island where it grew.) See *Inula helenium.*

Heleoselinum. See *Eleoselinum.*

HELIANTHEMUM. See *Helianthus.*

HELIANTHUS. (*us, i.* m. ; from ηλιος, the sun, and ανθος, a flower. This name originated from the resemblance which its broad golden disk and ray bear to the sun, and is rendered further appropriate by its having the power of constantly presenting its flowers to that luminary.) The name of a genus of plants. Class, *Syngenesia ;* Order, *Polygamia frustranea.* The sun-flower.

Helianthus annuus. The systematic name of the *Corona solis*, and *Chimalatus.* The seeds have been made into a nutritious bread. The whole plant, when young, is boiled and eaten in some countries, as being aphrodisiac.

Helianthus tuberosus. Jerusalem artichoke. Although formerly in estimation for the table, this root is now neglected, it being apt to produce flatulency and dyspepsia.

HELICA'LIS. Appertaining to the helix, or border of the ear.

Helicalis major. See *Helicis major.*

Helicalis minor. See *Helicis minor.*

HE'LICIS MAJOR. A proper muscle of the ear, which depresses the part of the cartilage of the ear into which it is inserted ; it lies upon the upper or sharp point of the helix, or outward ring, arising from the upper and acute part of the helix anteriorly, and passing to be inserted into its cartilage a little above the tragus.

HELICIS MINOR. A proper muscle of the ear, which contracts the fissure of the ear: it is situated below the helicis major, upon part of the helix. It arises from the inferior and anterior part of the helix, and is inserted into the crus of the helix, near the fissure in the cartilage opposite to the concha.

HELIOSCOPIOS. (From ηλιος, the sun, and σκοπεω, to behold : because it turns to the sun.) See *Helianthus*, and *Heliotropium.*

HELIOTROPE. A subspecies of rhomboidal quartz.

Heliotro'pii succus. See *Croton.*

HELIOTROPIUM. (*um, ii.* n.; from ηλιος, the sun, and τροπη, a turning or inclination: and so called, because it turns its leaves round with the declining sun. 'Ηλιοτροπιον τω μεγα, of Dioscorides.) The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.* Turnsole.

Heliotropium indicum. See *Convolvulus batatus.*

Heliotropium majus. This is the heliotropium europeum of Linnæus, which is bitter throughout.

Heliotropium tricoccum. See *Croton.*

Helitis. (From ηλος, a nail: so called in the Cyprian copper-works, because obtained by hammering copper nails.) A copper-flake.

HELIX. (*ix, icis.* m. Ελιξ, a spiral line; from ειλω, to turn about.) The external circle or border of the outer ear, that curls inwards.

Helix hortensis. The garden snail.

HELLEBORA'STER. (From ελλεϐορος, hellebore.) See *Helleborus fœtidus.*

Helleborastrum. See *Helleborus.*

HELLEBORE. See *Helleborus.*

Hellebore, black. See *Helleborus niger.*

Hellebore, white. See *Veratrum album.*

HELLE'BORUS. (*us, i.* m. Ελλεϐορος: παρα το τη βορα ελλειν, because it destroys, if eaten.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Polygynia.* Hell'ebore.

Helleborus albus. See *Veratrum album.*

Helleborus fœtidus. Stinking hellebore, or bear's-foot; called also, *Helleboraster.* It is the *Helleborus—caule multifloro folioso, foliis pedatis,* of Linnæus. The leaves of this indigenous plant are recommended by many as possessing extraordinary anthelmintic powers. The smell of the recent plant is extremely fœtid, and the taste is bitter and remarkably acrid, insomuch that, when chewed, it excoriates the mouth and fauces. It commonly operates as a cathartic, sometimes as an emetic, and, in large doses, proves highly deleterious.

Helleborus niger. Black hellebore, or Christmas rose; called also, *Melampodium.* *Helleborus—scapo subbiflore subnudo, foliis pedatis,* of Linnæus. The root of this exotic plant is the part employed medicinally: its taste, when fresh, is bitterish, and somewhat acrid; it also emits a nauseous acrid smell; but, being long kept, both its sensible qualities and medicinal activity suffer very considerable diminution. The ancients esteemed it as a powerful remedy in maniacal cases. At present it is exhibited principally as an alterative, or, when given in a large dose, as a purgative. It often proves a very powerful emmenagogue in plethoric habits, where steel is ineffectual, or improper. It is also recommended in dropsies, and some cutaneous diseases.

HELMET. See *Galea.*

Helmet-flower. See *Anthora.*

HELMINS. (Ελμινς, a worm.) See *Vermes.*

HELMI'NTHAGOGUE. (*Helminthagogus;* from ελμινς, a worm, and αγω, to drive out.) Whatever destroys and expels worms. See *Anthelmintic.*

HELMINTHIA. (*a, æ.* f.; from ελμινς, a worm.) Invermination.

HELMINTHI'ASIS. (*is, is.* f. Ελμινθιασις; from ελμινς, which signifies any species of worm.) A disease in which worms, or the larvæ of worms, are bred in any part of the body.

HELMINTHIC. (*Helminthicus;* from ελμινς, a worm.) Appertaining to worms.

HELMINTHOCO'RTON. See *Corallina corsicana.*

HELMONT, John Baptist Van, was born at Brussels in 1577. After taking his degree at Louvain, he travelled for ten years, during which period he acquired much chemical knowledge. On his return, he married a noble lady with a large fortune, which enabled him to pursue his researches into the three kingdoms of nature, with very little interruption. He continued his investigations with astonishing diligence during thirty years, and made several discoveries in chemistry. He was strenuously opposed to the Galenical school, the absurd hypothesis and inert practice of which he attacked with great warmth and ability. Indeed, he contributed greatly to overturn their influence; but, from a desire to explain every thing on chemical principles, he substituted doctrines equally gratuitous or unintelligible. He published various works, from time to time, which brought him considerable reputation.

HELO'DES. (From ελος, a marsh.) Marshy: applied to fevers generated from marsh miasma.

HELO'SIS. (From ειλω, to turn.) An eversion or turning up of the eyelids.

HELVELLA. (*a, æ.* f. A word used by Cicero, for some sort of plant, and supposed to be a fungus.) The name of a genus of plants. Class, *Cryptogamia;* Order, *Fungi.*

Helvella esculenta. According to Persoons, this and the mitra are eaten on the Continent for the morel, with which they are confounded.

HELVINE. A subspecies of dodecahedral garnet.

He'lxine. (*e, es.* f.; from ελκω, to draw: so called because it sticks to whatever it touches.) See *Parietaria.*

HEMATIN. The colouring principle of logwood. See *Hæmatoxylon campechianum.*

HEMATU'RIA. See *Hæmaturia.*

HEMERALO'PIA. (*a, æ.* f.; from ημερα, the day, and ωψ, the eye.) A defect in the sight, which consists in being able to see in broad daylight, but not in the evening. This disease of the sight is said to be endemic in some parts of France, Russia, Poland, the West Indies, Brazils, and the intertropical

regions generally. It proceeds from too great an habitual exposure to light, whence the retina becomes torpid, and requires a strong stimulus to raise it. At noontide, therefore, it is sensible to the impressions of objects, but does not clearly discern them in the shade, or towards the close of day. Scarpa says, it is properly nothing but a kind of imperfect periodical amaurosis, most commonly sympathetic with the stomach. Its paroxysms come on towards the evening, and disappear in the morning. At sunset, objects appear to persons affected with this complaint, as if covered with an ash-coloured veil, which gradually changes into a dense cloud, which intervenes between the eyes and surrounding objects. Patients with hemeralopia have the pupil, both in the day and night time, more dilated and less moveable than it usually is in healthy eyes. The majority of them, however, have the pupil more or less moveable in the day-time, and always expanded and motionless at night. When brought into a room faintly lighted by a candle, where all the bystanders can see tolerably well, they cannot discern at all, or in a very feeble manner, scarcely any one object; or they only find themselves able to distinguish light from darkness, and at moonlight their sight is still worse. At daybreak, they recover their sight, which continues perfect all the rest of the day till sunset. Tonics and gentle stimulants are the best remedies for hemeralopia; especially cinchona and cascarilla, with the mineral acids. Blisters are useful; and stimulating the ball of the eye with æther, dilute citrine ointment, and also the vapour of camphire.

HEMERALOPS. (*ops, opis.* m.; from ημερα, the day, and ωψ, the eye.) One who can see but in the day-time.

Hemerocallis. (From ημερα, day, and καλος, beautiful: so called because its flowers open in the day, and shut at night.) The name of a genus of plants. Class, *Hexandria;* Order, *Monogynia.* The day-lily.

Hemerocallis fulva. *Lilium rubrum, purpureum,* and *croceum.* The tawny day-lily. The leaves are cooling, and the roots aperient; but they are fallen into disuse.

Hemicerau'nios. (From ημισυ, in composition, ημι, half, and κειρω, to cut: so called because it was cut halfway down.) A bandage for the back and breast.

HEMICRA'NIA. (*a, æ.* f.; from ημισυς, half, and κρανιον, the head.) A pain that affects only one side of the head. It is generally nervous or hysterical, sometimes bilious; and, in both cases, sometimes comes at a regular period, like an ague. When it is accompanied by a strong pulsation, like that of a nail piercing the part, it is denominated *clavus.*

Hemiobolon. Half an obolus, or the twelfth part of a drachm.

Hemiolion. According to Galen, this means twelve drachms. In another sense, it is the same as *sesquialtera,* the whole of a thing, and as much more; as *sesquiuncia,* an ounce and a half.

HEMIONITIS. (From ημιονος, a mule: so called because it is supposed to be, as a mule is, sterile.) See *Asplenium hemionitis.*

HEMIO'PSIA. (*a, æ.* f.; from ημισυς, half, and ωψ, an eye.) A defect of vision, in which the person sees the half, but not the whole of an object.

Hemipa'gia. (From ημισυς, half, and παγιος, fixed.) A fixed pain on one side of the head. See *Hemicrania.*

HEMIPLE'GIA. (*a, æ.* f.; from ημισυς, half, and πλησσω, to strike: so called because one side of the body is affected.) See *Paralysis.*

Hemirhombion. (From ημισυ, half, and ρεμβω, to revolve.) *Semirhombus.* An old bandage, which extended half way round the part it was applied to.

HEMISPHERE. (*Hemisphera, æ.* f.; half a globe.) The upper part of the brain is distinguished by this appellation. See *Cerebrum.*

Hemitomon. (From ημισυ, half, and τεμνω, to cut.) An old bandage, which was cut halfway down.

Hemitritæus. (From ημισυ, half, and τριταιος, third, or tertian.) Half a tertian: applied to intermittent fevers.

HEMLOCK. See *Conium maculatum.*

Hemlock, water. See *Cicuta virosa.*

Hemlock-dropwort. See *Œnanthe.*

HEMP. See *Cannabis sativa.*

Hemp, water. See *Eupatorium.*

Hemp-agrimony. See *Eupatorium.*

HENBANE. See *Hyoscyamus.*

HENRICUS. Henry: applied as a trivial name; as, *Chenopodium bonus Henricus,* because found and extolled by some one of that name.

HE'PAR. (*ar, atis.* n. Ηπαρ, the liver.) See *Liver.*

Hepar sulphuris. See *Sulphuretum.*

Hepar uterinum. The placenta.

HEPATA'LGIA. (*a, æ.* f.; from ηπαρ, the liver, and αλγος, pain.) Pain in the liver.

HEPATIC. (*Hepaticus;* from ηπαρ, the liver.) 1. Belonging to the liver.

2. Applied to designate the liver colour. See *Colour.*

Hepatic air. See *Hydrogene, sulphuretted.*

Hepatic artery. *Arteria hepatica.* The artery which nourishes the substance of the liver. It arises from the cœliac, where it almost touche the point of the *lobulus Spigelii.* Its root is covered by the pancreas; it then turns a little forwards, and passes under the pylorus to the porta of the liver, and runs betwixt the biliary ducts and the vena portæ, where it divides into two large branches, one of which enters the right, and the other the left lobe of the liver. In this place it is enclosed, along with all the other vessels, in the capsule of Glisson.

Hepatic duct. *Ductus hepaticus.* The trunk of the biliary pores. It runs from the sinus of the liver towards the duodenum, and

is joined by the cystic duct, to form the ductus communis choledochus. See *Biliary duct.*

Hepatic vein. See *Vein*, and *Vena portæ.*

Hepatica fontana. See *Marchantia.*

Hepatica herba. (So called because it was thought to be useful in diseases of the liver.) See *Marchantia.*

Hepatica jecoraria. See *Marchantia.*

Hepatica nobilis. See *Anemone.*

Hepatica stellata. See *Marchantia.*

Hepatica terrestris. See *Marchantia.*

Hepatica vulgaris. See *Marchantia.*

HEPATIRRHÆ'A. (*a, æ.* f.; from ηπαρ, the liver, and ρεω, to flow.) 1. A purging, with bilious evacuations.

2. A diarrhœa, in which portions of flesh, like liver, are voided.

HEPATISATION. (*Hepatisatio, onis.* f.; from ηπαρ, the liver: so called from its appearing like liver.) A liver-like substance: applied to any thing, but originally to the lungs. The cause of this change in the lungs is either natural, in which case it proceeds, after death, from the transudation and gravitation of the blood; or it is produced during life by an ecchymosed state of the part, or by inflammation.

HEPATITE. A variety of lamellar barytes, containing a small quantity of sulphur, in consequence of which, when it is heated or rubbed, it emits a fœtid sulphureous odour.

HEPATI'TIS. (*is, idis.* f.; from ηπαρ, the liver.) *Inflammatio hepatis.* An inflammation of the liver. It is a febrile affection, attended with tension and pain of the right hypochondrium, often pungent, like that of a pleurisy, but more frequently dull or obtuse; a pain at the clavicle, and at the top of the shoulder of the right side; much uneasiness in lying down on the left side; difficulty of breathing; a dry cough, vomiting, and hiccough.

Besides the causes producing other inflammations, such as the application of cold, external injuries from contusions, blows, &c. this disease may be occasioned by certain passions of the mind, by violent exercise, by intense summer heats, by long-continued intermittent and remittent fevers, and by various solid concretions in the substance of the liver. In warm climates this viscus is more apt to be affected with inflammation than perhaps any other part of the body, probably from the increased secretion of bile which takes place when the blood is thrown on the internal parts, by an exposure to cold; or from the bile becoming acrid, and thereby exciting an irritation in the part. Hepatitis has generally been considered of two kinds; one the *acute*, the other *chronic.*

The *acute* species of hepatitis comes on with a pain in the right hypochondrium, extending up to the clavicle and shoulder; which is much increased by pressing upon the part, and is accompanied with a cough, oppression of breathing, and difficulty of lying on the left side, together with nausea and sickness, and often with a vomiting of bilious matter. The urine is of a deep saffron colour, and small in quantity: there is loss of appetite, great thirst, and costiveness, with a strong, hard, and frequent pulse; and when the disease has continued for some days, the skin and eyes become tinged of a deep yellow. When the inflammation is in the cellular structure or substance of the liver, it is called, by some, *hepatites parenchymatosa*; and when the gall-bladder, which is attached to this organ, is the seat of the inflammation, it has been called *hepatitis cystica.*

The *chronic* species is usually accompanied with a morbid complexion, loss of appetite and flesh, costiveness, indigestion, flatulency, pains in the stomach, a yellow tinge of the skin and eyes, clay-coloured stools, high-coloured urine, depositing a red sediment and ropy mucus; an obtuse pain in the region of the liver, extending to the shoulder, and not unfrequently with a considerable degree of asthma.

These symptoms are, however, often so mild and insignificant as to pass almost unnoticed; as large abscesses have been found in the liver upon dissection, which in the person's lifetime had created little or no inconvenience, and which we may presume to have been occasioned by some previous inflammation.

Hepatitis, like other inflammations, may end in resolution, suppuration, gangrene, or scirrhus; its termination in gangrene is a rare occurrence in temperate, but a very frequent one in hot climates.

In the East and West Indies, and all hot climates, inflammation of the liver is a very fatal disease; but in Europe, and in these islands, the disease is seldom attended with fatal consequences of an immediate nature.

When suppuration takes place, the patient mostly recovers, unless the strength has been greatly reduced by the remedial process, or the constitution has given way before. Then it often happens that a hectic fever is produced, and the patient sinks without any bursting of the abscess; but when the constitution is good, and the strength is yet to be trusted to, adhesions form between the part where the abscess is and some neighbouring part, and the pus is discharged by the different outlets with which this part is connected, by coughing, vomiting, purging, or by an abscess breaking outwardly.

On dissection, the liver is often found much enlarged, and hard to the touch; its colour is more of a deep purple than what is natural, and its membranes are more or less affected by inflammation. Dissections, likewise, show that adhesions to the neighbouring parts often take place, and abscesses, containing a considerable quantity of pus, are often found in its substance.

The treatment of this disease is different, in the two forms which it assumes. That of the acute hepatitis only differs from that which is resorted to against all acute inflammation, in the particular way in which mercury is exhibited. As soon, therefore, as the disease

is pathognomonically established, the lancet and purgatives are to be resorted to; and, in this climate, as boldly and as frequently as against inflammation of any equally important viscus. Twenty ounces of blood are to be abstracted rapidly from an athletic, young, and good-constitutioned subject; and its repetition to be directed according to the effect, and the state of the pulse. The bowels are next to be cleared by five grains of the submuriate of mercury, followed by saline purgatives with senna, until the nature of the evacuations shows that it is not likely that any fæcal matter remains in the intestines in a solid form, and that the bile passes off freely. Much depends on attending to this circumstance, and guarding against a tardy movement, or lodgment in the sacculi of the colon. In the East Indies, where this disease is so frequent, and proves fatal to so many, the bowels are mostly loose, from the great secretion of an acrimonious bile; and it is found necessary to somewhat arrest the peristaltic movement of the bowels, by combining opium with the purgatives. In all cases where it becomes doubtful whether the lancet should be again resorted to, cupping and leeches are useful; after which, a blister of a good size is next to be applied. As soon as the intestinal canal has been cleansed of all the crude fæcal matter, mercury should be administered in such a way as to effect, as soon as possible, a mercurial action of the gums and mouth. In very acute cases, and especially in those which exist in the East, where a few days determine whether the patient is to live or die, this is attempted by rubbing mercurial ointment into the legs and thighs, and giving calomel and opium in large doses, and frequently: five grains of the former with half a grain of the latter, or five grains of the compound powder of ipecacuanha, every two, three, or four hours. In this country much smaller doses are given, because the disease does not proceed so rapidly; and James's antimonial powder is administered in the dose of five grains, with one of the submuriate of mercury, every four or six hours. The appearance of a soreness of the gums is always hailed as a precursor of a decline of the disease. In this climate, much good results from effecting and keeping up a perspiration; and, where the urgency of the inflammatory action is not very great, the period between the mercurial diaphoretics may be lengthened, and saline sudorifics given in the intervals. Hepatitis soon shows in what way it will terminate; and if no diminution of the symptoms is effected, death soon takes place, from the violence of the inflammatory action, or from gangrene. A gradual mitigation of the force of the symptoms indicates its resolution. A shivering, or remission of febrile action, announces the formation of pus: an abscess then forms, and bursts either through the integuments, or into the stomach, colon, lungs, or kidney. As soon as this becomes known, the strength of the patient is no longer to be reduced: the strict antiphlogistic diet before adopted must yield to a more nourishing one, but not a stimulating one; and tonics, especially bitters, as calomba and gentian, or cascarilla, are to supply the place of the former medicines.

Chronic hepatitis requires the same treatment with the acute, but in miniature. General blood-letting is only to be had recourse to when there is acute pain, and there is no reason why blood should not be abstracted; but cupping, and frequently applying leeches, are beneficial. Mercurial alteratives are especially serviceable; Plummer's pill, or the pilula hydrargyri submuriatis composita of the London Pharmacopœia, or small doses of the blue pill, are to be administered regularly, so as to effect a perceptible action on the gums, and no more. This is to be kept up for a considerable time, unless no benefit results, and the bowels are to be kept open with mild aperients and bitters, such as are recommended against indigestion. The nitric acid was once very well thought of against the chronic hepatitis of hot climates: five drops of the pure nitric acid is to be mixed with three ounces of distilled water, sweetened, and taken three times a day. The nitro-muriatic acid foot-bath has been found beneficial, when used at the same time. Taraxacum was also once a favourite medicine against this disease. Dr. Baillie thought he had seen it decidedly useful. The extract and strong decoctions are given, and often in combination with bicarbonate of soda. The diet is to be nourishing, not heating. Those who are resident in hot climates should move into the European states, which oftens affects a cure without any medicine.

HEPATOCE'LE. (*e, es.* f.; from ηπαρ, the liver, and κηλη, a tumour.) An hernia, caused by a portion of the liver protruding through the abdominal parietes.

Hepato'rium. See *Eupatorium.*

HEPATULE. Sulphuretted hydrogene, combined with any base.

Hephæ'stias. (From Ηφαιςος, Vulcan, or fire.) A drying plaster of burnt tiles.

Hepi'alus. (From ηπιος, gentle.) A mild quotidian fever.

HEPTA'NDRIA. (*a, æ.* f.; from επτα, seven, and ανηρ, a man, or husband.) The name of a class in the sexual system of plants, consisting of such hermaphrodite flowers as have seven stamens.

Heptapha'rmacum. (*um, i.* n.; from επ7α, seven, and φαρμακον, medicine.) A medicine composed of seven ingredients, the principal of which were cerusse, litharge, wax, &c.

HEPTAPHY'LLUM. (*um, i.* n.; from επ7α, seven, and φυλλον, a leaf: so named because it consists of seven leaves.) Seven-eaved. See *Tormentilla erecta.*

Heptaple'urum. (From επ7α, seven, and πλευρα, a rib: so named from its having seven ribs upon the leaf.) See *Plantago major.*

HERA'CLEA. (*a, æ.* f.; so called from its growing in abundance in Heraclea.) 1. Water horehound.

2. The wild marjoram. See *Origanum vulgare*.

HERA'CLEUM. (*um, i.* n.; from *Heraclea*, the city near which it grows; or from Ἡρακλης, Hercules, being the plant sacred to him.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

Heracleum gummiferum. This species is supposed by Wildenow to afford the gum ammoniacum: called also, gum-ammoniac. A concrete gummy resinous juice, composed of little lumps, or tears, of a strong and somewhat ungrateful smell, and nauseous taste, followed by a bitterness. There has, hitherto, been no information had concerning the plant which affords this drug; but Wildenow considers it to be this, having raised the plant from the seeds which are sometimes found in the drug. Ammoniacum is imported here from Turkey, and from the East Indies. That which is decidedly in drop, of a clear and deep buff colour externally, paler within, and free from impurities, is most esteemed. Ammoniacum has little smell, but its taste is bitter, nauseous, and somewhat pungent. In warm weather it is of a very unmanageable consistence, but in low temperatures it becomes brittle, and it may be powdered and sifted in frosty weather, which is a better mode of freeing it from mixed impurities than straining it when softened by boiling water. The powdered ammoniacum should be packed up in small oblong parcels, as it will afterwards again agglutinate. The chemical characters of this juice are those of a gum resin: it is imperfectly soluble in water and alkohol; but triturated with the former, the soluble gummy portion suspends the resin, and the mixture is tolerably permanent. Ammoniacum is placed, by systematic writers on the Materia Medica, among the stimulating expectorants; antispasmodic virtues are also ascribed to it; but, independent of other aids, little reliance can be placed in its use as fulfilling such characters; and this remedy is chiefly useful in combination with, or as a vehicle for, more powerful medicines. In the cough to which aged persons are sometimes subject, unattended by inflammatory action, and characterised by the secretion of viscid mucus in the bronchia, with difficult expectoration, and some degree of spasmodic action, from ten grains to a scruple, three times a day, has frequently proved serviceable, by allaying spasm and facilitating the evacuation of the mucous matter. Ammoniacum, softened with vinegar, forms a good adhesive and slightly stimulating plaster. See *Emplastrum ammoniaci*, and *Emplastrum ammoniaci cum hydrargyro*.

Heracleum spondylium. *Branca ursina Germanica*. *Spondylium*. Cow-parsnip. All-heal. *Heracleum—foliolis pinnatifidis, lævibus; floribus uniformibus*, of Linnæus. In Siberia it grows extremely high, and appears to have virtues in the cure of dysentery which the plants of this country do not possess.

Herb-bennet. See *Geum urbanum*.

Herb-of-grace. See *Gratiola*.

Herb-mastich. See *Thymus mastichina*.

Herb-trinity. See *Anemone hepatica*.

HERBA. (*a, æ.* f.; from the Arabic term *erbah*, from *rabah*, to germinate.) A herb. A plant is properly so called which bears its flower and fruit once only, and then with its root wholly perishes. There are two kinds: *annuals*, which perish the same year; and *biennials*, which have their leaves the first year, and their flowers and fruit the second, and then die away.

2. By the term *herba* Linnæus denominates that portion of every vegetable which arises from the root, and is terminated by the fructification.

Herba alexandrina. See *Smyrnium*.

Herba benedicta. See *Geum*.

Herba britannica. See *Rumex*.

Herba felis. See *Nepeta*.

Herba julia. Milfoil.

Herba melancholifuga. See *Fumaria*.

Herba militaris. See *Achillæa*.

Herba paris. See *Paris*.

Herba patri. See *Primula veris*, and *Crithmum maritimum*.

Herba regia. See *Ocymum*.

Herba sacra. See *Verbena trifoliata*.

Herba sanctæ barbareæ. See *Erysimum*.

Herba trinitatis. See *Anemone*.

HERBACEUS. Herbaceous. Plants are so considered which have succulent stems or stalks, and die down to the root every year.

HERBARIUM. *Hortus siccus*. A collection of dried or preserved plants.

HERCULES. The name of a celebrated character in the heathen mythology. Many medicines have received this name from their supposed extraordinary powers.

Hercules's all-heal. See *Laserpitium chironium*.

Hercules bovii. A once famed emetic and cathartic compound, prepared from gold and mercury, dissolved in a distillation of copperas, nitre, and sea-salt.

HERE'DITARY. (*Hereditarius*; from *hæres*, a heir.) That which is transferred from parents to their children; as a disease, or a predisposition to a disease, &c.

HERMA'PHRODITE. (*Hermaphroditus*; from Ἑρμης, Mercury, and Αφροδιτη, Venus: *i. e.* partaking of both sexes.) 1. In *Anatomy*, the true hermaphrodite of the ancients was, the man with male organs of generation, and the female stature of body; that is, narrow chest and large pelvis: or the woman with female organs of generation, and the male stature of body,—broad chest and narrow pelvis. The term is now, however, used to express any *lusus naturæ*, wherein the parts of generation appear to be a mixture of both sexes.

2. In *Botany*, an hermaphrodite flower is one which contains both the male and female organs, for the production of the fruit, within the same calyx and petals.

HERMES. The name of the god Mercury in mythology; and also of a king of

Egypt, who was said to have lived a thousand years before Æsculapius.

HERME'TIC. (*Hermeticus;* from Ἑρμης, Mercury, who was the father of chemistry.) Appertaining to Mercury, as relates to hermetic chemistry.

Hermetic medicine. The system adopted by the old chemists.

Hermetic seal. The closing the end of a glass vessel while in a state of fusion, according to the usage of chemists.

HERMODACTYL. See *Hermodactylus.*

HERMODA'CTYLUS. (Ἑρμοδακτυλος. Etymologists have always derived this word from Ἑρμης, Mercury, and δακτυλος, a finger. It is, however, probably named from *Hermus*, a river in Asia, upon whose banks it grows, and δακτυλος, a date, which it is like.) *Hermodactyl. Anima articulorum.* The root of a species of colchicum, not yet ascertained, but supposed to be the *Colchicum illyricum* of Linnæus, of the shape of a heart, flattened on one side, with a furrow on the other, of a white colour, compact and solid, yet easy to cut or powder. This root, which has a viscous, sweetish, farinaceous taste, and no remarkable smell, is imported from Turkey. Its use is totally laid aside in the practice of the present day. Formerly the roots were esteemed as cathartics, which power is wanting in those that reach this country.

HE'RNIA. (*a, æ.* f.; from ἑρνος, a branch: from its protruding out of its place.) *Ecnexis ramex.* A rupture. Surgeons understand by the term *hernia,* a tumour formed by the protrusion of some of the viscera of the abdomen out of that cavity into a kind of sac, composed of the portion of peritonæum, which is pushed before them. However, there are certainly some cases which will not be comprehended in this definition; either because the parts are not protruded at all, or have no hernial sac. The places in which these swellings most frequently make their appearance, are the groin, the navel, the labia pudendi, and the upper and fore part of the thigh; they do also occur at every point of the anterior part of the abdomen; and there are several less common instances, in which hernial tumours present themselves at the foramen ovale, in the perinæum, in the vagina, at the ischiatic notch, &c. The parts which, by being thrust forth from the cavity in which they ought naturally to remain, mostly produce hernia, are either a portion of the omentum, or a part of the intestinal canal, or both together. But the stomach, the liver, the spleen, uterus, ovaries, bladder, &c. have been known to form the contents of some hernial tumours. From these two circumstances of situations and contents, are derived all the different appellations by which herniæ are distinguished. If a portion of intestine only forms the contents of the tumour, it is called *enterocele;* if a piece of omentum only, *epiplocele;* and if both intestine and omentum contribute to the formation of a tumour, it is called *entero-epiplocele.* When the contents of a hernia are protruded at the abdominal ring, but only pass as low as the groin, or labium pudendi, the case receives the name of *bubonocele,* or *inguinal hernia;* when the parts descend into the scrotum, it is called an *oscheocele,* or *scrotal hernia.* The *crural,* or *femoral hernia,* is the name given to that which takes place below Poupart's ligament. When the bowels protrude at the navel, the case is named an *exomphalos,* or *umbilical hernia;* and *ventral* is the epithet given to the swelling, when it occurs at any other promiscuous part of the front of the abdomen. The *congenital rupture* is a very particular case, in which the protruded viscera are not covered with a common hernial sac of peritonæum, but are lodged in the cavity of the tunica vaginalis, in contact with the testicle; and, as must be obvious, it is not named, like hernia in general, from its situation, or contents, but from the circumstance of its existing from the time of birth.

When the hernial contents lie quietly in the sac, and admit of being readily put back into the abdomen, it is termed a *reducible hernia;* and when they suffer no constriction, yet cannot be put back, owing to adhesions, or their large size in relation to the aperture through which they have to pass, the hernia is termed *irreducible.* An *incarcerated* or *strangulated* hernia, signifies one which not only cannot be reduced, but suffers constriction; so that, if a piece of intestine be protruded, the pressure to which it is subjected stops the passage of its contents onward towards the anus, makes the bowel inflame, and brings on a train of most alarming and often fatal consequences.

The general symptoms of a hernia which is reducible, and free from strangulation, are —an indolent tumour at some point of the parietes of the abdomen; most frequently descending out of the abdominal ring, or from just below Poupart's ligament, or else out of the navel; but occasionally from various other situations. The swelling mostly originates suddenly, except in the circumstances above related; and it is subject to a change of size, being smaller when the patient lies down upon his back, and larger when he stands up, or draws in his breath. The tumour frequently diminishes when pressed, and grows large again when the pressure is removed. Its size and tension often increase after a meal, or when the patient is flatulent. Patients with hernia are apt to be troubled with colic, constipation, and vomiting, in consequence of the unnatural situation of the bowels. Very often, however, the functions of the viscera seem to suffer little or no interruption.

If the case be an *enterocele,* and the portion of the intestine be small, the tumour is small in proportion; but though small, yet, if the gut be distended with wind, inflamed, or have any degree of stricture made on it, it will be tense, resist the impression of the finger, and give pain upon being handled.

On the contrary, if there be no stricture, and the intestine suffers no degree of inflammation, let the prolapsed piece be of what length it may, and the tumour of whatever size, yet the tension will be little, and no pain will attend the handling it: upon the patient's coughing, it will feel as if it was blown into; and, in general, it will be found very easily returnable. A gurgling noise is often made when the bowl is ascending.

If the hernia be an *epiplocele*, or one of the omental kind, the tumour has a more flabby and a more unequal feel; it is in general perfectly indolent, is more compressible, and (if in the scrotum) is more oblong and less round than the swelling occasioned in the same situation by an intestinal hernia; and, if the quantity be large, and the patient an adult, it is, in some measure, distinguishable by its greater weight.

If the case be an *entero-epiplocele*, that is, one consisting of both intestine and omentum, the characteristic marks will be less clear than in either of the simple cases; but the disease may easily be distinguished from every other one, by any body in the habit of making the examination.

Hernia aquosa. See *Hydrocele*.

Hernia carnosa. See *Sarcocele*.

Hernia cerebri. See *Fungus cerebri*.

Hernia congenita. This species of hernia consists in the adhesion of a protruded portion of intestine or omentum to the testicle after its descent into the scrotum. This adhesion takes place while the testicle is yet in the abdomen. Upon its leaving the abdomen, it draws the adhering intestine, or omentum, along with it into the scrotum, where it forms the hernia congenita.

From the term *congenital*, we might suppose that this hernia always existed at the time of birth. The protrusion, however, seldom occurs till after this period, on the operation of the usual exciting causes of hernia in general. The congenital hernia does not usually happen till some months after birth; in some instances not till a late period. Hey relates a case, in which a hernia congenita was first formed in a young man, aged sixteen, whose right testis had, a little while before the attack of the disease, descended into the scrotum. It seems probable that, in cases of hernia congenita, which actually take place when the testicle descends into the scrotum before birth, the event may commonly be referred, as observed above, to the testicle having contracted an adhesion to a piece of intestine, or of the omentum, in its passage to the ring. Wrisberg found one testicle which had not passed the ring, adhering, by means of a few slender filaments, to the omentum, just above this aperture, in an infant that died a few days after birth.

Excepting the impossibility of feeling the testicle in hernia congenita, as we can in most cases of bubonocele, (which criterion Mr. Samuel Cooper, in his Surgical Dictionary, observes Mr. Pott should have mentioned,) the following account is very excellent:—"The appearance of a hernia, in very early infancy, will always make it probable that it is of this kind; but in an adult, there is no reason for supposing his rupture to be of this sort, but his having been afflicted with it from his infancy; there is no external mark, or character, whereby it can be certainly distinguished from the one contained in a common hernial sac; neither would it be of any material use in practice, if there was."

Hernia cruralis. Femoral hernia. The parts composing this kind of hernia, are always protruded under Poupart's ligament, and the swelling is situated towards the inner part of the bend of the thigh. The rupture descends on the side of the femoral artery and vein, between these vessels and the os pubis. Females are particularly subject to this kind of rupture, in consequence of the great breadth of their pelvis, while in them the inguinal hernia is rare. It has been computed, that nineteen out of twenty married women, afflicted with hernia, have this kind; but that not one out of an hundred unmarried females, or out of the same number of men, have this form of the disease. The situation of the tumour makes it liable to be mistaken for an enlarged inguinal gland; and many fatal events are recorded to have happened from the surgeon's ignorance of the existence of the disease. A gland can only become enlarged by the gradual effects of inflammation; the swelling of a crural hernia comes on in a momentary and sudden manner; and, when strangulated, occasions the train of symptoms described in the account of the hernia incarcerata, which symptoms an enlarged gland could never occasion. Such circumstances seem to be sufficiently discriminative: though the feel of the two kinds of swelling is often not in itself enough to make the surgeon decided in his opinion. A femoral hernia may be mistaken for a bubonocele, when the expanded part of the swelling lies over Poupart's ligament. As the taxis and operation for the first case ought to be done differently from those for the latter, the error may lead to very bad consequences. The femoral hernia, however, may always be discriminated, by the neck of the tumour having Poupart's ligament above it. In the bubonocele, the angle of the pubes is behind and below this part of the sac; but in the femoral hernia, it is on the same horizontal level, a little on the inside of it.

Until very lately, the stricture, in cases of femoral hernia, was always supposed to be produced by the lower border of the external oblique muscle, or, as it is termed, Poupart's ligament. A total change of surgical opinion on this subject has, however, latterly taken place, in consequence of the accurate observations first made, in 1768, by Gimbernat, surgeon to the king of Spain. In the crural hernia (says he) the aperture through which the parts issue is not formed by two bands (as in the inguinal hernia), but it is a

foramen, almost round, proceeding from the internal margin of the crural arch (Poupart's ligament), near its insertion into the branch of the os pubis, between the bone and the iliac vein; so that, in this hernia, the branch of the os pubis is situated more internally than the intestine, and a little behind; the vein externally, and behind; and the internal border of the arch before. Now, it is this border which always forms the strangulation.

Hernia femora. See *Hernia cruralis.*

Hernia flatulenta. *Pneumatocele.* Windy rupture; a rupture, in the contents of which there is much gurgling from an accumulation of gas.

Hernia gutturis. See *Bronchocele.*

Hernia humoralis. See *Orchitis.*

Hernia incarcerata. Incarcerated hernia. Strangulated hernia, or a hernia with stricture. The symptoms are a swelling in the groin, &c. resisting the impression of the fingers. If the hernia be of the intestinal kind, it is generally painful to the touch, and the pain is increased by coughing, sneezing, or standing upright. These are the very first symptoms, and, if they are not relieved, are soon followed by others; viz. a sickness at the stomach, a frequent retching, or inclination to vomit, a stoppage of all discharge per anum, attended with frequent hard pulse, and some degree of fever. These are the first symptoms; and if they are not appeased by the return of the intestine, that is, if the attempts made for this purpose do not succeed, the sickness becomes more troublesome, the vomiting more frequent, the pain more intense, the tension of the belly greater, the fever higher, and a general restlessness comes on which is very terrible to bear. When this is the state of the patient, no time is to be lost: a very little delay is now of the utmost consequence; and if the one single remedy which the disease is now capable of be not administered immediately, it will generally baffle every other attempt. This remedy is the operation whereby the parts engaged in the stricture may be set free. If this be not now performed, the vomiting is soon exchanged for a convulsive hiccough, and a frequent gulping up of bilious matter: the tension of the belly, the restlessness and fever, having been considerably increased for a few hours, the patient suddenly becomes perfectly easy, the belly subsides, the pulse, from having being hard, full, and frequent, becomes low, languid, and generally interrupted; and the skin, especially that of the limbs, cold and moist; the eyes have now a languor and glassiness, a lack-lustre not easy to be described: the tumour of the part disappears, and the skin covering it sometimes changes its natural colour for a livid hue; but whether it keeps or loses its colour, it has an emphysematous feel, a crepitus to the touch, which will easily be conceived by all who have attended to it, but is not easy to convey an idea of by words. This crepitus is the too sure indicator of gangrenous mischief within. In this state, the gut either goes up spontaneously, or is returned with the smallest degree of pressure; a discharge is made by stool, and the patient is generally much pleased at the ease he finds: but this pleasure is of short duration; for the hiccough and the cold sweats, continuing and increasing, with the addition of spasmodic rigours and subsultus tendinum, the tragedy soon finishes.

Hernia inguinalis. *Bubonocele.* Inguinal hernia. The *hernia inguinalis* is so called because it appears in both sexes at the groin. It is one of the divisions of hernia, and includes all those herniæ in which the parts displaced pass out of the abdomen through the ring, that is, the arch formed by the aponeurosis of the musculus obliquus externus in the groin, for the passage of the spermatic vessels in men, and the round ligament in women. The parts displaced that form the hernia, the part into which they fall, the manner of the hernia being produced, and the time it has continued, occasion great differences in this disorder. There are three different parts that may produce a hernia in the groin, viz. one or more of the intestines, the epiploon, and the bladder. That which is formed by one or more of the intestines, was called by the ancients *enterocele.* The intestine which most frequently produces the hernia, is the *ilium,* because, being placed in the iliac region, it is nearer the groin than the rest: but notwithstanding the situation of the other intestines, which seems not to allow of their coming near the groin, we often find the jejunum, and frequently also a portion of the colon and cæcum, included in the hernia. It must be remembered that the mesentery and mesocolon are membraneous substances, capable of extension, which, by little and little, are sometimes so far stretched by the weight of the intestines, as to escape with the ilium in this species of hernia. The hernia made by the epiploon is called *epiplocele;* as that caused by the epiploon and any of the intestines together is called *entero-epiplocele.* The hernia of the bladder is called *crytocele.* Hernia of the bladder is uncommon, and has seldom been known to happen but in conjunction with some of the other viscera. When the parts, having passed through the abdominal rings, descend no lower than the groin, it is called an incomplete hernia; when they fall into the scrotum in men, or into the *labia pudendi* in women, it is then termed complete.

The marks of discrimination between some other diseases and inguinal hernia are these:—

The disorders in which a mistake may possibly be made, are the circocele, bubo, hydrocele, and hernia humoralis, or inflamed testicle.

For an account of the manner of distinguishing circocele from a bubonocele, see *Circocele.*

The circumscribed incompressible hardness, the situation of the tumour, and its being free from all connection with the spermatic process, will sufficiently point out its being a bubo, at

least while it is in a recent state; and when it is in any degree suppurated, he must have a very small share of the *tactus erudilus* who cannot feel the difference between matter, and either a piece of intestine or omentum.

The perfect equality of the whole tumour, the freedom and smallness of the spermatic process above it, the power of feeling the spermatic vessels, and the vas deferens in that process; its being void of pain upon being handled, the fluctuation of the water, the gradual formation of the swelling, its having begun below and proceeded upwards, its not being affected by any posture or action of the patient, nor increased by his coughing or sneezing, together with the absolute impossibility of feeling the testicle at the bottom of the scrotum, will always, to an intelligent person, prove the disease to be hydrocele.

Pott, however, allows that there are some exceptions in which the testicle cannot be felt at the bottom of the scrotum, in cases of hernia. In recent bubonoceles, while the hernial sac is thin, has not been long, or very much distended, and the scrotum still preserves a regularity of figure, the testicle may almost always be easily felt at the inferior and posterior part of the tumour. But in old ruptures, which have been long down, in which the quantity of contents is large, the sac considerably thickened, and the scrotum of an irregular figure, the testicle frequently cannot be felt; neither is it in general easily felt in the *congenital hernia*, for obvious reasons.

In the *hernia humoralis*, the pain in the testicle, its enlargement, the hardened state of the epididymis, and the exemption of the spermatic cord from all unnatural fulness, are such marks as cannot easily be mistaken; not to mention the generally preceding gonorrhœa. But if any doubt still remains of the true nature of the disease, the progress of it from above downwards, its different state and size in different postures, particularly lying and standing, together with its descent and ascent, will, if duly attended to, put it out of all doubt that the tumour is a *true hernia*.

When an inguinal hernia does not descend through the abdominal ring, but only into the canal for the spermatic cord, it is covered by the aponeurosis of the external oblique muscle, and the swelling is small and undefined.

Now and then, the testicle does not descend into the scrotum till a late period. The first appearance of this body at the ring, in order to get into its natural situation, might be mistaken for that of a hernia, were the surgeon not to pay attention to the absence of the testicle from the scrotum, and the peculiar sensation occasioned by pressing the swelling.

Hernia intestinalis. *Enterocele.* A rupture caused by the protrusion of a portion of the intestine. See *Hernia inguinalis.*

Hernia ischiatica. A rupture at the ischiatic notch. This is very rare. A case, however, which was strangulated, and undiscovered till after death, is related in Sir A. Cooper's second part of his work on hernia. The disease happened in a young man aged 27. On opening the abdomen, the ilium was found to have descended on the right side of the rectum into the pelvis; and a fold of it was protruded into a small sac, which passed out of the pelvis at the ischiatic notch. The intestine was adherent to the sac at two points: the strangulated part, and about three inches on each side, were very black. The intestines, towards the stomach, were very much distended with air, and here and there had a livid spot on them. A dark spot was even found on the stomach itself, just above the pylorus. The colon was exceedingly contracted, as far as its sigmoid flexure. A small orifice was found in the side of the pelvis, in front of, but a little above the sciatic nerve, and on the fore part of the pyriformis muscle. The sac lay under the glutæus maximus muscle, and its orifice was before the internal iliac artery, below the obturator artery, but above the vein.

Hernia lachrymalis. See *Fistula lachrymalis.*

Hernia mesenterica. Mesenteric hernia. If one of the layers of the mesentery be torn by a blow, while the other remains in its natural state, the intestines may insinuate themselves into the aperture and form a kind of hernia. The same consequences may result from a natural deficiency in one of these layers. Sir A. Cooper relates a case in which all the small intestines, except the duodenum, were thus circumstanced. The symptoms during life were unknown.

Hernia mesocolica. Mesocolic hernia. So named by Sir A. Cooper, when the bowels glide between the layers of the mesocolon. Every surgeon should be aware that the intestines may be strangulated from the following causes:—1. Apertures in the omentum, mesentery, or mesocolon, through which the intestine protrudes. 2. Adhesions, leaving an aperture, in which a piece of intestine becomes confined. 3. Membraneous bands at the mouths of hernial sacs, which, becoming elongated by the frequent protrusion and return of the viscera, surround the intestine, so as to strangulate them within the abdomen when returned from the sac.

Hernia omentalis. *Epiplocele.* A rupture of the omentum; or a protrusion of the omentum through apertures in the integuments of the belly. Sometimes, according to Sharpe, so large a quantity of the omentum hath fallen into the scrotum, that its weight, drawing the stomach and bowels downwards, hath excited vomiting, inflammation, and symptoms similar to those of the incarcerated hernia.

Hernia oschealis. See *Hernia scrotalis.*

Hernia perinealis. Perineal hernia. In men, the parts protrude between the bladder and rectum; in women, between the rectum and vagina. The hernia does not project so as to form an external tumour; and, in men, its existence can only be distinguished by examining in the rectum. In women, it may be detected both from this part and the vagina.

Hernia phrenica. Phrenic hernia. The abdominal viscera are occasionally protruded through the diaphragm, either through some of the natural apertures in this muscle, or deficiencies, or wounds and lacerations in it. The second kind of case is the most frequent. Morgagni furnishes an instance of the first. Two cases related by Dr. Macauley, and two others published by Sir A. Cooper, are instances of the second sort. And another case has been lately recorded by the latter gentleman, affording an example of the third kind. Hildanus, Parè, Petit, Schenck, &c. also mention cases of phrenic hernia.

Hernia pudendalis. Pudendal hernia. This is the name assigned by Sir A. Cooper, to that which descends between the vagina and ramus ischii, and forms an oblong tumour in the labium, traceable within the pelvis, as far as the os uteri. Sir A. C. thinks this case has sometimes been mistaken for a hernia of the foramen ovale.

Hernia scrotalis. *Hernia oschealis. Oscheocele.* Paracelsus calls it *Crepatura.* When the omentum, the intestine, or both, descend into the scrotum, it has these appellations; when the omentum only, it is called *epiploscheocele.* It is styled a perfect rupture, in contradistinction to a bubonocele, which is the same disorder; but the descent is not so great. The hernia scrotalis is distinguished into the true and false: in the former, the omentum, or intestine, or both, fall into the scrotum; in the latter, an inflammation, or a fluid, causes a tumour in this part, as in hernia humoralis, or hydrocele. Sometimes sebaceous matter is collected in the scrotum; and this hernia is called *steatocele.*

Hernia thyroidealis. *Hernia foraminis ovalis.* Thyroideal hernia. In the anterior and upper part of the obturator ligament there is an opening, through which the obturator artery, vein, and nerve proceed, and through which, occasionally, a piece of omentum, or intestine, is protruded, covered with a part of the peritonæum, which constitutes the hernial sac.

Hernia umbilicalis. Umbilical rupture; which has received, also, the following names: *Exomphalos, Epiploomphalion, Omphalocele,* and *Pneumatomphalos.* The umbilical rupture is so called from its situation, and has, like other herniæ, for its general contents, a portion of intestine, or omentum, or both. In old umbilical ruptures, the quantity of omentum is sometimes very great. Mr. Ranby says, that he found two ells and a half of intestine in one of these, with about a third part of the stomach, all adhering together. Gay and Nourse found the liver in the sac of an umbilical hernia; and Bohnius says that he did also. But whatever are the contents, they are originally contained in the sac, formed by the protrusion of the peritonæum.

In recent and small ruptures, this sac is very visible; but in old and large ones, it is broken through, at the knot of the navel, by the pressure and weight of the contents, and is not always to be distinguished; which is the reason why it has, by some, been doubted whether this kind of rupture has a hernial sac or not.

Infants are very subject to this disease, in a small degree, from the separation of the funiculus; but, in general, they either get rid of it as they gather strength, or are easily cured by wearing a proper bandage. It is of still more consequence to get this disorder cured in females, than in males; that its return, when they are become adult and pregnant, may be prevented as much as possible; for at this time it often happens from the too great distension of the belly, or from unguarded motion, when the parts are upon the stretch.

Dr. Hamilton has met with about two cases annually, for the space of seventeen years, of umbilical hernia, which strictly deserve the name of *congenital* umbilical hernia. The funis ends in a sort of bag, containing some of the viscera, which pass out of the abdomen through an aperture in the situation of the navel. The swelling is not covered with skin, so that the contents of the hernia can be seen through the then distended covering of the cord. The disease is owing to a preternatural deficiency in the abdominal muscles, and the hope of cure must be regulated by the size of the malformation and quantity of viscera protruded.

Hernia uteri. *Hysterocele. Cerexis,* of Hippocrates. Instances have occurred of the uterus being thrust through the rings of the muscles; but this is scarcely to be discovered, unless in a pregnant state. It may be occasioned by violent muscular efforts, by blows on the abdomen at the time of gestation, and also by wounds and abscesses of the abdomen, which permit the uterus to dilate the part. Ruysch relates the case of a woman, who, becoming pregnant after an ulcer had been healed in the lower part of the abdomen, the tumid uterus descended into a dilated sac of the peritonæum in that weakened part, till it hung, with the included fœtus, at her knees. Yet, when her full time was come, the midwife reduced this wonderful hernia, and, in a natural way, she was safely delivered of a son.

Hernia vaginalis. *Elytrocele. Colpocele.* Vaginal hernia. A tumour occurs within the os externum of the vagina. It is elastic, but not painful. When compressed, it readily recedes, but is reproduced by coughing, or even without this, when the pressure is removed. The inconveniences produced are an inability to undergo much exercise or exertion; for every effort of this sort brings on a sense of bearing down. The vaginal hernia protrudes in the space left between the uterus and rectum. This space is bounded below by the peritonæum, which membrane is forced downwards, towards the perinæum; but, being unable to protrude further in that direction, is pushed towards

the back part of the vagina. These cases, probably, are always intestinal. Some herniæ protrude at the anterior part of the vagina.

Hernia varicosa. See *Circocele.*

Hernia ventosa. See *Pneumatocele.*

Hernia ventralis. A hernia may appear at almost any point of the anterior part of the belly, but is most frequently found between the recti muscles. The portion of intestine, &c. is always contained in a sac made by the protrusion of the peritonæum. Sir A. Cooper imputes its causes to dilatation from congenital deficiencies, lacerations, and wounds of the abdominal muscles, or their tendons. In small ventral herniæ, a second fascia is found beneath the superficial one; but in large ones, the latter is the only one covering the sac.

Hernia ventriculi. *Gastrocele.* A ventral rupture, caused by the stomach protruding through some part of the abdominal parietes. It rarely occurs but at or near the navel.

Hernia vesicalis. *Hernia cystica; Cystocele.* The urinary bladder is liable to be thrust forth from its proper situation, either through the opening in the oblique muscle, like the inguinal hernia, or under Poupart's ligament, in the same manner as the femoral.

This is not a very frequent species of hernia, but does happen, and has as plain and determined a character as any other.

HERNIA'RIA. (*a, æ.* f.; from *hernia*, a rupture: so called from its supposed efficacy in curing ruptures.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.* Rupture-wort.

Herniaria glabra. The systematic name of the rupture-wort. *Herniaria.* This plant, though formerly esteemed as efficacious in the cure of hernias, appears to be destitute, not only of such virtues, but of any other. It has no smell nor taste.

HERNIO'TOMY. (*Herniotomia, æ.* f.; from *hernia*, and τεμνω, to cut.) The operation to remove the strangulated part in cases of incarcerated herniæ.

HE'RPES. (*es, is.* m.; from ἑρπω, to creep: because it spreads and creeps about the skin.) Tetter. A cutaneous disease, known by an assemblage of numerous little vesicles, in clusters, itching very much, and difficult to heal, but terminating in furfuraceous scales. The eruption is preceded, when it is extensive, by considerable constitutional disorder, and is accompanied by a sensation of heat and tingling, sometimes by severe deep-seated pain, in the parts affected. The lymph of the vesicles, which is at first clear and colourless, becomes gradually milky and opake, and ultimately concretes into scabs: but, in some cases, a copious discharge of it takes place, and tedious ulcerations ensue. The disorder is not contagious in any of its forms.

It has been principally confounded with erysipelas, on the one hand, and with eczema, impetigo, and other slowly spreading eruptions, on the other. From erysipelas it may be distinguished by the numerous, small, clustering vesicles, by the natural condition of the surface in the interstices between the clusters, and by the absence of redness and tumefaction before the vesicles appear: and from the chronic eruptions just alluded to, by the purely vesicular form of the cuticular elevations in the commencement, by the regularity of their progress, maturation, and scabbing, and by the limitation of their duration, in general, to a certain number of days.

The various appearances of herpes may be comprehended under the six following heads:

1. *Herpes phlyctænodes.* This species of the eruption is commonly preceded by a slight febrile attack for two or three days. The small transparent vesicles then appear, in irregular clusters, sometimes containing colourless, and sometimes a brownish lymph; and, for two or three days more, other clusters successively arise, near the former. The eruption has no certain seat: sometimes it commences on the cheeks or forehead, and sometimes on one of the extremities; and occasionally it begins on the neck and breast, and gradually extends over the trunk to the lower extremities, new clusters successively appearing for nearly the space of a week. The included lymph sometimes becomes milky or opake in the course of ten or twelve hours; and, about the fourth day, the inflammation round the vesicles assumes a duller red hue, while the vesicles themselves break, and discharge their fluid, or begin to dry and flatten, and dark or yellowish scabs concrete upon them. These fall off about the eighth or tenth day, leaving a reddened and irritable surface, which slowly regains its healthy appearance. As the successive clusters go through a similar course, the termination of the whole is not complete before the thirteenth or fourteenth day.

The disorder of the constitution is not immediately relieved by the appearance of the eruption, but ceases as the latter proceeds. The heat, itching, and tingling in the skin, which accompany the patches as they successively rise, are sometimes productive of much restlessness and uneasiness, being aggravated especially by external heat, and by the warmth of the bed.

The predisposing and exciting causes are equally obscure. The eruption sometimes occurs in a miliary form, and spreads most extensively, over the greater portion of the surface of the body, in young and robust people, who generally refer its origin to cold. But it is liable to appear, in its more partial forms, in those persons who are subject to headaches and other local pains, which are probably connected with derangements of the chylopoietic organs.

The same treatment is requisite for this as for the following species.

2. *Herpes zoster.* This form of the eruption, which is sufficiently known to have obtained a popular appellation, the *shingles*, is

very uniform in its appearances, following a course similar to that of small-pox, and the other exanthematic fevers. It is usually preceded, for two or three days, by languor and loss of appetite, rigors, headache, sickness, and a frequent pulse, together with a scalding heat, and tingling in the skin, and shooting pains through the chest and epigastrium. Sometimes, however, the precursory febrile symptoms are slight, and scarcely noticed, and the attention of the patient is first attracted by a sense of heat, itching, and tingling in some part of the trunk, where he finds several red patches, of an irregular form, at a little distance from each other, upon each of which numerous small elevations appear, clustered together. These, if examined minutely, are found to be distinctly vesicular; and, in the course of twenty-four hours, they enlarge to the size of small pearls, and are perfectly transparent, being filled with a limpid fluid. The clusters are of various diameter, from one to two, or even three inches, and are surrounded by a narrow red margin, in consequence of the extension of the inflamed base a little beyond the congregated vesicles. During three or four days, other clusters continue to arise in succession, and with considerable regularity; that is, nearly in a line with the first, extending always towards the spine, at one extremity, and towards the sternum, or linea alba of the abdomen, at the other, most commonly round the waist, like half a sash, but sometimes like a sword-belt, across the shoulder.

While the new clusters are appearing, the vesicles of the first begin to lose their transparency, and on the fourth day acquire a milky or yellowish hue, which is soon followed by a bluish, or livid colour of the bases of the vesicles, and of the contained fluid. They now become somewhat confluent, and flatten or subside, so that the outlines of many of them are nearly obliterated. About this time they are often broken, and, for three or four days, discharge a small quantity of a serous fluid, which at length concretes into thin dark scabs, at first lying loosely over the contained matter, but soon becoming harder, and adhering more firmly, until they fall off about the twelfth or fourteenth day. The surface of the skin is left in a red and tender state; and, where the ulceration and discharge have been considerable, numerous cicatrices or pits are left.

As all the clusters go through a similar series of changes, those which appeared latest, arrive at their termination several days later than the first; whence the disease is sometimes protracted to twenty, or even twenty-four days, before the crusts exfoliate.

The febrile symptoms commonly subside when the eruption is completed; but sometimes they continue during the whole course of the disease, probably from the incessant irritation of the itching and smarting connected with it. In many instances, the most distressing part of the complaint is an intense darting pain, not superficial, but deep-seated in the chest, which continues to the latter stages of the disease, and is not easily allayed by anodynes.

Although the *shingles* commonly follow the regular course of fever, eruption, maturation, and decline, within a limited period, like the eruptive fevers, or exanthemata of the nosologists, yet the disorder is not, like the latter, contagious, and may occur more than once in the same individual. The disease, on the whole, is in most cases very slight; and seldom exhibits any untoward symptom, or is followed by much debility: in the majority of cases, it does not confine the patients to the house.

The causes of the *shingles* are not always obvious. Young persons, from the age of twelve to twenty-five, are most frequently the subjects of the disease, although the aged are not altogether exempt from its attacks, and suffer severely from the pains which accompany it. It is most frequent in the summer and autumn, and seems occasionally to arise from exposure to cold, after violent exercise. Sometimes it has appeared critical, when supervening to bowel complaints, or to the chronic pains of the chest remaining after acute pulmonary affections. Like erysipelas, it has been ascribed, by some authors, to paroxysms of anger.

It is unnecessary to speak of the treatment of a disorder, the course of which scarcely requires to be regulated, and cannot be shortened, by medicine. Gentle laxatives and diaphoretics, with occasional anodynes, when the severe deep-seated pains occur, and a light diet, seem to comprise every thing that is requisite in the cure.

In general, no external application to the clustered vesicles is necessary: but, when they are abraded by the friction of the clothes, a glutinous discharge takes place, which occasions the linen to adhere to the affected parts, producing some irritation: under these circumstances, a little simple ointment may be interposed, to obviate that effect. With the view of clearing off the morbid humours, the older practitioners cut away the vesicles, and covered the surface with their unguents, or even irritated it with the nitrico-oxide of mercury, notwithstanding the extreme tenderness of the parts. These pernicious interruptions of the healing process probably gave rise to ulceration, and prolonged the duration of the disorder, and thus contributed to mislead practitioners in their views of the nature of the disease.

3. *Herpes circinatus.* This form of the herpes is vulgarly termed a *ringworm*, and is, in this country, a very slight affection, being unaccompanied with any disorder of the constitution. It appears in small circular patches, in which the vesicles arise only round the circumference: these are small, with moderately red bases, and contain a transparent fluid, which is discharged in three or four days, when little, prominent, dark scabs form

over them. The central area, in each vesicular ring, is at first free from any eruption; but the surface becomes somewhat rough, and of a dull red colour, and throws off an exfoliation, as the vesicular eruption declines, which terminates in about a week, with the falling off of the scabs, leaving the cuticle red for a short time.

The whole disease, however, does not conclude so soon; for there is commonly a succession of the vesicular circles, on the upper parts of the body, as the face and neck, and the arms and shoulders, which have occasionally extended to the lower extremities, protracting the duration of the whole to the end of the second or third week. No inconvenience, however, attends the eruption, except a disagreeable itching and tingling in the patches.

The *herpetic* ringworm is most commonly seen in children, and has been deemed contagious. It has sometimes, indeed, been observed in several children, in one school or family, at the same time: but this was, most probably, to be attributed to the season, or some other common cause; since none of the other species of herpes are communicable by contact. It is scarcely necessary to point out here the difference between this *vesicular* ringworm, and the contagious *pustular* eruption of the scalp and forehead, which bears a similar popular appellation.

The itching and tingling are considerably alleviated by the use of astringent and slightly stimulant applications, and the vesicles are somewhat repressed by the same expedients. It is a popular practice to besmear them with ink: but solutions of the salts of iron, copper, or zinc, or of borax, alum, &c. in a less dirty form, answer the same end.

All the forms of herpes appear to be more severe in warm climates than in our northern latitudes; and the inhabitants of the former are liable to a variety of herpetic ringworm, which is almost unknown here. This variety differs materially from the preceding in its course, and is of much greater duration; for it does not heal with the disappearance of the first vesicles, but its area continually dilates by the extension of the vesicular margin. The vesicles terminate in ulcerations, which are often of a considerable depth; and, while these undergo the healing process, a new circle of vesicles rises beyond them, which passes through a similar course, and is succeeded by another circle exterior to itself: and thus the disease proceeds, often to a great extent, the internal parts of the ring healing as the ulcerous and vesicular circumference expands.

4. *Herpes labialis.* A vesicular eruption upon the edge of the upper and under lip, and at the angle of the mouth, sometimes forming a semicircle, or even completing a circle round the mouth, by the successive rising of the vesicles, is very common, and has been described by the oldest writers. At first, the vesicles contain a transparent lymph, which, in the course of twenty-four hours, becomes turbid, and of a yellowish-white colour, and ultimately assumes a puriform appearance. The lips become red, hard, and tumid, as well as sore, stiff, and painful, with a sensation of great heat and smarting, which continues troublesome for three or four days, until the fluid is discharged, and thick dark scabs are formed over the excoriated parts. The swelling then subsides, and in four or five days more the crusts begin to fall off; the whole duration being, as in the other herpetic affections, about ten or twelve days.

This labial herpes occasionally appears as an idiopathic affection, originating from cold, fatigue, &c. and is then preceded, for about three days, by the usual febrile symptoms, shiverings, headache, pains in the limbs and the stomach, with nausea, lassitude, and languor. Under these circumstances, a sort of *herpetic* sore throat is sometimes connected with it; a similar eruption of inflamed vesicles taking place over the tonsils and uvula, and producing considerable pain and difficulty of deglutition. The internal vesicles, being kept in a state of moisture, form slight ulcerations when they break; but these heal about the eighth and ninth days, while the scabs are drying upon the external eruption.

The herpes labialis, however, occurs most frequently in the course of diseases of the viscera, of which it is symptomatic, and often critical; for these diseases are frequently alleviated as soon as it appears. Such an occurrence is most common in bilious fevers, in cholera and dysentery, in peritonitis, and severe catarrhs; but it is not unfrequent in continued malignant fevers, and even in intermittents.

5. *Herpes præputialis.* This local variety of herpes was not noticed by Dr. Willan; but it is particularly worthy of attention, because it occurs in a situation where it is liable to occasion a practical mistake of serious consequence to the patient. The progress of the herpetic clusters, when seated on the prepuce, so closely resembles that of chancre, as described by some authors, that it may be doubted whether it has not been frequently confounded with the latter.

The attention of the patient is attracted to the part by an extreme itching, with some sense of heat; and on examining the prepuce he finds one, or sometimes two red patches, about the size of a silver penny, upon which are clustered five or six minute transparent vesicles, which, from their extreme tenuity, appear of the same red hue as the base on which they stand. In the course of twenty-four or thirty hours, the vesicles enlarge, and become of a milky hue, having lost their transparency; and, on the third day, they are coherent, and assume an almost pustular appearance. If the eruption is seated within that part of the prepuce, which is, in many individuals, extended over the glans, so that the vesicles are kept constantly covered and moist (like those that occur in the throat), they commonly break about the

fourth or fifth day, and form a small ulceration upon each patch. This discharges a little turbid serum, and has a white base, with a slight elevation at the edges; and by an inaccurate or inexperienced observer it may be readily mistaken for chancre; more especially if any escharotic has been applied to it, which produces much irritation, as well as a deep-seated hardness beneath the sore, such as is felt in true chancre. If no irritant be applied, the slight ulceration continues till the ninth or tenth day nearly unchanged, and then begins to heal; which process is completed by the twelfth, and the scabs fall off on the thirteenth or fourteenth day.

When the patches occur, however, on the exterior portion of the prepuce, or where that part does not cover the glans, the duration of the eruption is shortened, and ulceration does not actually take place. The contents of the vesicles begin to dry about the sixth day, and soon form a small, hard, acuminated scab, under which, if it be not rubbed off, the part is entirely healed by the ninth or tenth day, when the little indented scab is loosened, and falls out.

This circumstance suggests the propriety of avoiding not only irritative, but even unctuous or moist applications, in the treatment of this variety of herpes. And accordingly it will be found, that, where ulceration occurs within the prepuce, it will proceed with less irritation, and its course will be brought within the period above mentioned, if a little clean dry lint alone be interposed, twice a day, between the prepuce and the glans.

The causes of this eruption on the prepuce are not yet ascertained. Whencesoever it may originate, it is liable to recur in the same individual, and often at intervals of six or eight weeks.

6. *Herpes iris.* This rare and singular morbid appearance, which has not been noticed by medical writers, occurs in small circular patches, each of which is composed of concentric rings, of different colours. Its usual seat is on the back of the hands, or the palms and fingers, sometimes on the instep. Its first appearance is like an efflorescence; but, when it is fully formed, not only the central umbo, but the surrounding rings become distinctly vesicular. The patches are at first small, and gradually attain their full size, which is nearly that of a sixpence, in the course of a week or nine days, at the end of which time the central part is prominent and distended, and the vesicular circles are also turgid with lymph; and, after remaining nearly stationary a couple of days, they gradually decline, and entirely disappear in about a week more. The central vesicle is of a yellowish-white colour: the first ring surrounding it is of a dark or brownish red; the second is nearly of the same colour as the centre; and the third, which is narrower than the rest, is of a dark red colour; the fourth, and outer ring, or areola, does not appear until the seventh, eighth, or ninth day, and is of a light red hue, which is gradually lost in the ordinary colour of the skin.

The iris has been observed only in young people, and was not connected with any constitutional disorder, nor could it be traced to any assignable cause. In one or two cases, it followed a severe catarrhal affection, accompanied with hoarseness, and also with an eruption of herpes labialis. In others, it had recurred several times in the persons affected, occupying always the same parts, and going through its course in the same periods of time.

No internal medicine is requisite in the treatment of the different species of herpes, except when the constitution is disordered (and then the general antiphlogistic plan must be adopted); for, like the other eruptive diseases, which go through a regular and limited course, they cannot be interrupted or accelerated in their progress by any medicinal expedient; but their termination may be retarded by improper treatment.

Herpes ambulativus. Most probably a species of erysipelas which moves from one part to another.

Herpes depascens. An eating or corroding form of herpes.

Herpes esthiomenos. A variety of herpes, where there is great destruction of the skin by ulceration.

Herpes exedens. A form of herpes in which there is a rapid spreading of the disease.

Herpes farinosus. This is characterised by its having furfuraceous exfoliations.

Herpes ferus. An erysipelas.

Herpes indicus. A fiery, itchy herpes, peculiar to India.

Herpes miliaris. So called when it begins an eruption like to millet-seed.

Herpes periscelis. The shingles, or *herpes zoster*.

Herpes pustulosus. So denominated when it begins in a pustulous form.

Herpes serpigo. The ringworm. See *Herpes circinatus*.

Herpes siccus. The dry, mealy tetter.

Herpes zoster. Shingles encircling the body. See *Erysipelas*, and *Herpes*.

HERPETIC. (*Herpeticus*; from *herpes*, a disease of the skin.) Relating to herpes.

He'rpeton. (From ἕρπω, to creep.) A creeping pustule or ulcer.

HERRING. See *Clupea harengus*.

Hesperideæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of plants which have rigid evergreen leaves, odorous and polyandrous flowers; as the myrtle, clove, &c.

HESPERIDEUS. (From *Hesperides*, whose orchards, according to the poets, produced golden apples.) Relating to the golden or precious fruit.

HEWSON, William, was born at Hexham, in 1739. He resided with Mr. John Hunter, and superintended his dissecting room. In 1762 he became associated with

Dr. Hunter in delivering anatomical lectures in Windmill Street. Here he pursued his anatomical investigations, and his experimental enquiries into the properties of the blood, of which he published an account in 1771. He also communicated to the Royal Society several papers concerning *The Lymphatic System* in birds and fishes, for which he received the Copleyan medal, and was soon after elected a fellow of that body. He began a course of lectures alone in 1772, having quitted Dr. Hunter two years before, and soon became very popular. In 1774 he published his work, *On the Lymphatic System.* But not long after, his life was terminated by a fever, occasioned by a wound received in dissecting a morbid body, in the thirty-fifth year of his age.

HEXAGONAL. *Hexagonus.* Six-sided.

HEXAGY'NIA. (*a, æ.* f. ; from ἑξ, six, and γονη, a woman, or wife.) The name of an order of plants in the sexual system, which, besides the classic character, have six females or pistils.

HEXA'NDRIA. (*a, æ.* f. ; from ἑξ, six, and ανηρ, a man, or husband.) The name of a class of plants in the sexual system, consisting of plants with hermaphrodite flowers that are furnished with six stamens of an equal length.

HEXAPETALOUS. *Hexapetalus.* Six-petalled.

Hexapha'rmacum. (From ἑξ, six, and φαρμακον, a medicine.) A medicine, in the composition of which are six ingredients.

HEXAPHYLLOUS. *Hexaphyllus.* Six-leaved.

HEXIS. (Ἑξις, from εχω, to have.) A habit. A permanent one, in opposition to diathesis, or a transient habit.

HIANS. Open: in opposition to closed.

HIBE'RNICUS. (From *Hibernia,* Ireland.) Irish: of or belonging to Ireland.

Hibernicus lapis. See *Lapis hibernicus.*

HIBI'SCUS. (*us, i.* m. ; from ιβις, a stork, who is said to chew it, and inject it as a clyster.) The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.*

Hibiscus abelmoschus. The systematic name of the plant, the seeds of which are called musk-seed. *Abelmoschus, Granum moschi, Moschus Arabum, Ægyptia moschata, Bamia moschata, Alcea, Alcea Indica, Alcea Ægyptiaca villosa, Abrette, Abelmosch,* and *Abelmusk.* The plant is indigenous in Egypt, and in many parts of both the Indies. The seeds have the flavour of musk. The best comes from Martinique. By the Arabians, they are esteemed cordial, and are mixed with their coffee, to which they impart their fragrance. In this country they are used by the perfumers.

HICCUP. See *Singultus.*

HIDRO'A. (From ιδρως, sweat.) A pustular disease, produced by sweating in hot weather.

HIDRO'CRISIS. (*is, is.* f. ; from ιδρως, sweat, and κρινω, to judge.) A judgment formed from the sweat of the patient.

HIDRO'NOSOS. (*us, i.* m ; from ιδρως, sweat, and νοσος, a disease.) The sweating sickness. See *Sudor anglicanus.*

HIDROPY'RETUS. (From ιδρως, sweat, and πυρετος, a fever.) A sweating heat or fever.

HIDRO'TICUS. (From ιδρως, sweat.) Hydrotic: that which causes perspiration.

HIDROTOPOIE'TICUS. (From ιδρως, sweat, and ποιεω, to make.) Having the power of producing perspiration.

Hidrus. Flowers of copper.

HI'ERA. (*a, æ.* f. ; from ιερος, holy.) 1. Holy.

2. (From ιεραξ, a hawk.) Also applied to some plants which hawks are said to be fond of.

Hiera picra. (From ιερος, holy, and πικρος, bitter.) Holy bitter. Aloetic powder, made into an electuary with honey. It is now kept in the form of dry powder, prepared by mixing Socotorine aloes, one pound, with three ounces of white canella.

Hierabo'tane. (From ιερος, holy, and βοτανη, a herb: so called from its supposed virtues.) See *Verbena trifoliata.*

Hieraca'ntha. (From ιεραξ, a hawk, and ανθος, a flower: so named because it seizes passengers as a hawk does its prey.) A sort of thistle.

HIERA'CIUM. (*um, ii.* n. ; from ιεραξ, a hawk: so called because hawks feed upon it, or because it was said that hawks applied the juice of it to cleanse their eyes.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.* Hawk-weed.

Hieracium alpinum. See *Hypochæris.*

Hieracium minus. See *Hypochæris.*

Hieracium montanum. See *Chondrilla.*

Hieracium pilosella. The systematic name of the mouse-ear; called also, *Auricula muris, Pilosella, Myosotis,* and *Hieraculum.* This common plant contains a bitter lactescent juice, which has a slight degree of astringency. The roots are more powerful than the leaves. They are very seldom used in this country.

Hieracium pulcrum. See *Chondrilla.*

Hiera'culum. See *Hieracium.*

HIERA'NOSOS. (*us, i.* m. ; from ιερος, holy, and νοσος, a disease, *morbus sacer.*) 1. The epilepsy was so called, because it was supposed to be that disorder which our Saviour cured in those who were said to be possessed of devils.

2. Chorea has been so called, from the epithet *sanctus* as applied to it; or a belief that it was induced by the immediate agency of a superior order of beings.

3. Convulsions were formerly so called.

Hiera'ticus. (From ιερος, holy.) Hieratic: holy. Applied to a poultice for the stomach, so named from its supposed divine virtues.

Hieropy. (From ιερος, holy, and πυρ, fire.) Holy fire. See *Chorea.*

Highgate resin. See *Fossil copal.*

HIGHMORE, Nathaniel, was born at Fordingbridge, in Hampshire, in 1613. His name has been attached to a part, though not originally discovered by him, namely, the antrum maxillare, which had been before mentioned by Casserius. His principal work is, "*Corporis Humani Disquisitio Anatomica,*" printed at the Hague in 1651, with figures, chiefly from Vesalius. He also published two dissertations on *Hysteria* and *Hypochondriasis;* and a *History of Generation.*

Highmore, antrum of. (So called because our countryman Highmore first discovered it.) See *Antrum of Highmore.*

Higue'ro. The calabash tree. *Crescentia cujete* of Linnæus, the fruit of which is said to be febrifuge.

HILDA'NUS. See *Fabricius, William.*

HILUM. (*um, i.* n.) The eye of a seed, or scar or point by which the seed is attached to its seed-vessel or receptacle, and through which alone life and nourishment are conveyed for the perfecting of its internal parts. Consequently all those parts must be intimately connected with the inner surface of this scar, and they are all found to meet there, and to divide or divaricate from that point, more or less immediately. In describing the form or various external portions of any seed, the *hilum* is always to be considered as the base. When the seed is quite ripe, the communication through this channel is interrupted; it separates from the parent plant without injury, a scar being formed on each. Yet the hilum is so far capable of resuming its former nature, that the moisture of the earth is imbibed through it, previous to germination.—*Smith.*

Himanto'sis. (From ιμας, a thong of leather.) A relaxation of the uvula, when it hangs down like a thong.

Hi'mas. A relaxation of the uvula.

Hin. *Hindisch. Hing.* Assafœtida.

HIP. 1. The ripe fruit of the dog-rose. They are chiefly used as a sweetmeat, or in a preserved state. See *Confectio rosæ caninæ.*

2. The upper part of the thigh.

Hippace. (From ιππος, a horse or mare.) The rennet of a colt; also cheese made of mare's milk.

HIPPOCAMPUS. (*us, i.* m. Ιππο-καμπος, the name of a sea insect which has a head like that of the horse, and tail like the καμπη, or *eruca.*) 1. The sea horse.

2. Some parts are so called from their supposed resemblance. See *Cerebrum.*

HIPPOCA'STANUM. (*um, i.* n.; from ιππος, a horse, and κασανον, a chestnut: so called from its size.) See *Æsculus hippocastanum.*

HIPPOCRATES, usually called the father of physic, was born in the island of Cos, about 460 years before Christ. He is reckoned the 18th lineal descendant from Æsculapius, the profession of medicine having been hereditarily followed in that family, under whose direction the Coan school attained its high degree of eminence. Born with these advantages, and stimulated by the fame of his ancestors, he devoted himself zealously to the cultivation of the healing art. Not content with the empirical practice, which was derived from his predecessors, he studied under Herodicus, who had invented the gymnastic medicine, as well as some other philosophers. But he appears to have judged carefully for himself, and to have adopted only those principles which seemed founded in sound reason. He was thus enabled to throw light on the deductions of experience, and clear away the false theories with which medicine had been loaded by those who had no practical knowledge of diseases, and bring it into the true path of observation, under the guidance of reason. Hence the physicians of the rational or dogmatic sect always acknowledged him as their leader. The events of his life are involved in much obscurity and fable. But he appears to have travelled much, residing at different places for some time, and practising his profession there. He died at Larissa, in Thessaly, at a very advanced age, which is variously stated from 85 to 109 years. He left two sons, Thessalus and Draco, who followed the same profession, and a daughter, married to his favourite pupil Polybus, who arranged and published his works; and he formed many other disciples. He acquired a high reputation among his countrymen, which has descended to modern times; and his opinions have been respected as oracles, not only in the schools of medicine, but even in the courts of law. He has shared with Plato the title of divine: statues and temples have been erected to his memory, and his altars covered with incense, like those of Æsculapius himself. Indeed, the qualifications and duties required in a physician, were never more fully exemplified than in his conduct, and more eloquently described than by his pen. He is said to have admitted no one to his instructions without the solemnity of an oath, in which the chief obligations are, the most religious attention to the advantages of the sick, the strictest chastity, and inviolable secrecy concerning matters which ought not to be divulged. Besides these characteristics, he displayed great simplicity, candour, and benevolence, with unwearied zeal in investigating the progress and nature of disease, and in administering to their cure. The books attributed to him amount to 72, of which, however, many are considered spurious, and others have been much corrupted. The most esteemed, and generally admitted genuine, are, the essay *On Air, Water, and Situation,* the first and third books of *Epidemics,* that on *Prognostics,* the *Aphorisms,* the treatise *On the Diet in Acute Diseases,* and that *On Wounds of the Head.* He wrote in the Ionic dialect, in a pure but remarkably concise style. He was necessarily deficient in the knowledge of anatomy, as the dissection of human bodies was not then allowed; whence his Physiology also is, in many re-

spects, erroneous: but he, in a great measure, compensated this by unceasing observation of diseases, whereby he attained so much skill in pathology and therapeutics, that he has been regarded as the founder of medical science; and his opinions still influence the healing art in a considerable degree. He diligently investigated the several causes of diseases, but especially their symptoms, which enabled him readily to distinguish them from each other: and very few of those noticed by him are now unknown, mostly retaining even the same names. But he is more remarkably distinguished by his Prognostics, which have been comparatively little improved since, founded upon various appearances in the state of the patient, but especially upon the excretions. His attention seems to have been directed chiefly to these in consequence of a particular theory. He supposed that there are four humours in the body,—blood, phlegm, yellow and black bile,—having different degrees of heat or coldness, moisture or dryness, and that to certain changes in the quantity or quality of these all diseases might be referred; and farther, that in acute disorders a concoction of the morbid humours took place, followed by a critical discharge, which he believed to happen especially on certain days. But he seems to have paid little, if any, attention to the state of the pulse. He advanced another opinion, which has since very generally prevailed, that there is a principle, or power in the system, which he called NATURE, tending to the preservation of health, and the removal of disease. He therefore advised practitioners carefully to observe and promote the efforts of nature, at the same time correcting morbid states by their opposites, and endeavouring to bring back the fluids into their proper channels.

HIPPOCRATIC. (*Hippocraticus:* so termed from Hippocrates.) Relating to Hippocrates. See *Facies Hippocratica.*

HIPPOLA'PATHUM. (From ἵππος, a horse, and λαπαθον, the lapathum: so named from its size.) See *Rumex patientia.*

HIPPOMA'RATHRUM. (From ἵππος, a horse, and μαραθρον, fennel: so named from its size.) See *Peucedanum silaus.*

HIPPOSELI'NUM. (From ἵππος, a horse, and σελινον, purslane: so named because it resembles a large kind of purslane.) See *Smyrnium olusatrum.*

HIPPU'RIS. (*is, is.* f.; from ἵππος, a horse, and ουρα, a tail.) 1. Some herbs are thus named because they resemble a horse's tail.

2. The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Monogynia.* Mare's tail.

HIPPURIS VULGARIS. The systematic name of the horse's or mare's tail. Called also, *Equisetum,* and *Cauda equina.* It possesses astringent qualities, and is frequently used by the common people as tea in diarrhœas and hæmorrhages. The same virtues are also attributed to the *Equisetum arvense, fluviatile, limosum,* and other species, which are directed indiscriminately by the term *Equisetum.*

HIPPUS. (*us, i.* m; from ἵππος, a horse: because the eyes of those who labour under this affection are continually twinkling and trembling, as is usual with those who ride on horseback.) A repeated dilatation and alternate constriction of the pupil, arising from spasm, or convulsion of the iris.

HIR. (From χειρ, the hand.) The palm of the hand.

HIRA. (From *hir,* the palm of the hand; because it is usually found empty.) The jejunum, or any intestine.

HIRCUS. (*us, i.* m.; *quasi hirtus,* from his shaggy hair.) The goat. See *Capra hircus.*

HIRCUS BEZOARTICUS. The goat which affords the oriental bezoar.

HI'RQUUS. (From ερκος, a hedge: because it is hedged in by the eyelash.) The angle of the eye.

HIRSUTIES. Hairyness: a species of disease in which hair grows in extraneous parts, or superfluously in parts where it naturally grows.

HIRSUTUS. Hairy: applied very generally, in *Natural History,* to that which is hairy or shaggy; to leaves, petals, seeds, &c. of plants; as the petals of the *Menyanthes trifoliata* and *Asclepias crispa,* the seeds of the *Scandix trichosperma.*

HI'RTUS. (A contraction of *hirsutus.*) Rough haired: applied to stems of plants; as that of the *Cirastium alpinum.*

HIRU'DO. (*o, inis.* f.; *quasi haurudo;* from *haurio,* to draw out: so named from its greediness to suck blood.) See *Leech.*

HIRUDO MEDICINALIS. See *Leech.*

HIRUNDINA'RIA. (*a, æ.* f.; from *hirundo,* the swallow: so called from the resemblance of its pods to a swallow.) Swallow-wort. See *Lysimachia nummularia,* and *Asclepias vincetoxicum.*

HIRU'NDO. (*o, onis.* f.; *ab hærendo;* from its sticking its nest to the eaves of houses.) 1. The swallow.

2. The cavity in the bend of the arm.

HISPI'DULA HERBA. (From *hispidus,* rough: so named from the rough, woolly surface of its stalks.) See *Gnaphalium.*

HISPIDUS. Hispid: bristly. Applied to stems, seeds, &c. of plants. The *Borago officinalis* is a good example of the *caulus hispidus:* the seeds of the *Daucus carota,* and *Galium boreale.*

HOARY. See *Glaucus,* and *Incanus.*

HODGES, NATHANIEL, was born at Kensington, in 1659. He settled in London, and continued there during the plague, when most other physicians deserted their post. He was twice taken ill, but by timely remedies recovered. He afterwards published *An Authentic Account of the Plague,* which appears to have destroyed 68,596 persons in the year 1665.

HOFFMANN, FREDERIC, was born in Saxony, 1660. In 1682, he published an

excellent Tract, *De Cinnabari Antimonii*, which gained him great applause, and numerous pupils: in 1688, he published a Treatise *De Insufficientiâ Acidi et Viscidi*. An university being founded at Halle, by Frederic III., afterwards first king of Prussia, Hoffmann was appointed, in 1693, primary Professor of Medicine, and composed the Statutes of that institution, and recommended Stahl as his colleague. He was most active in his professional duties; and, by the eloquence and learning displayed in his lectures and publications, he extended his own reputation, and that of the new university. He examined many of the mineral waters in Germany, particularly those of Seidlitz, which he first introduced to public notice in 1717. The year after he commenced the publication of his *Medicina Rationalis Systematica*, which was received with great applause by the faculty in various parts of Europe, and is said to have occupied him nearly twenty years. He also published two volumes of *Consultations*, and three books of select *Chemical Observations*. He continued to perform his duties at Halle till 1742, in which year he died. Hoffmann was a very voluminous writer. His works have been collected in six folio volumes, printed at Geneva. They contain a great mass of valuable practical matter, partly original, but detailed in a prolix manner, and intermixed with much hypothesis. He has the merit, however, of first turning the attention of practitioners to the morbid affections of the nervous system, instead of framing mere mechanical or chemical theories: but he did not carry the doctrine to its fullest extent, and retained some of the errors of the humoral pathology. He pursued the study of chemistry and pharmacy with considerable ardour; but his practice was cautious, particularly in advanced age, trusting much to vegetable simples.

HOG. See *Sus scrofa*.

Hog's fennel. See *Peucedanum*.

Hog's lard. *Axungia porcina*. The fat of pork. That which bears this name is obtained from the viscera or entrails of the hog, by means of heat. It is separated from all the solids, and mostly put into the bladder of the animal. Hog's lard is the basis of pomatums and many ointments. It is a bland and pure oil: fish is mostly fried in it, and the lightest pastry made with it.

Ho'lcimos. (From ελκω, to draw.) It sometimes means a tumour of the liver.

HO'LCUS. (*us, i.* m.) 1. The name of a genus of plants in the Linnæan system. Class, *Polygamia*; Order, *Monœcia*.

2. The Indian millet-seed, which is said to be nutritive.

Holcus sorgum. Guinea corn.

HOLERACEUS. See *Oleraceous*.

HOLLOW. See *Cavus*.

Hollow leaf. See *Concavus*.

HOLLY. See *Ilex aquifolium*.

Holly, knee. See *Ruscus*.

Holly, sea. See *Eryngium*.

HOLLYHOCK. See *Alcea*.

Holmi'scus. (Dim. of ολμος, a mortar.) 1. A small mortar.

2. The cavity of the large teeth, because they pound the food as in a mortar.

HOLMITE. A new mineral composed of lime, carbonic acid, alumina, silica, oxide of iron, and water.

Holophly'ctis. (From ολος, whole, and φλυκτις, a pustule.) A little pimple which appears all over the body.

Holo'stes. See *Holosteus*.

Holo'steum. See *Holosteus*.

HOLO'STEUS. (*us, i.* m.; from ολος, whole, and οςεον, a bone.) Glue-bone. See *Osteocolla*.

Holoto'nicus. (From ολος, whole, and τεινω, to stretch.) A stretching of the whole body: formerly applied to diseases accompanied with universal convulsion, or rigor.

HOLY. See *Benedictus*.

Holy thistle. See *Centaurea*.

HOLYBUT. See *Pleuronectes hypoglossus*.

HOLYWELL. There is a mineral water at this place arranged under the class of simple cold waters, remarkable for its purity. It possesses similar virtues to that of Malvern. See *Malvern water*.

Ho'ma. An anasarcous swelling.

HOMBERG, William, a Batavian physician and chemist, born in 1652; a man of great learning and general science, who furnished several curious and interesting memoirs to the Academy of Sciences.

Homberg's phosphorus. Ignited muriate of lime. See *Muriatic acid*.

Homberg's salt. See *Boracic acid*.

HOMOGENEOUS. (*Homogeneus*; from ομος, like, and γενος, a kind.) Uniform; of a like kind or species; of the same quality. Used in contradistinction to *heterogeneous*, when the parts of a body are of different qualities.

HOMOPLA'TA. (*a, æ.*f.; from ωμος, the shoulder, and πλατα, the blade.) See *Scapula*.

HONEY. See *Mel*.

Honey-cup. See *Nectarium*.

Honey-stone. Mellite. Pyramidal honey-stone of Jameson. This is of a honey colour, distinctly crystallised, and occurs on bituminous wood and earth coal, and is usually accompanied with sulphur at Artern, in Thuringia.

Honey-suckle. See *Lonicera*.

Honeycomb-like. See *Favosus*.

HOODED. See *Cucullatus*.

Hoof-shaped. See *Ungulatus*.

HOOK. See *Hamus*, and *Hamulus*.

HOOPING-COUGH. See *Pertussis*.

HOP. See *Humulus lupulus*.

Hoplochri'sma. (From οπλον, a weapon, and χρισμα, a salve.) A salve which was ridiculously said to cure wounds by consent; that is, by anointing the instrument with which the wound was made.

HORDE'OLUM. (*um, i.* n.; diminutive of *hordeum*, barley.) A little tumour on the eyelids, resembling a barley-corn: vernacu-

larly called a stye. Scarpa remarks, the stye is strictly only a little boil, which projects from the edge of the eyelids, mostly near the great angle of the eye. This little tumour, like the furunculus, is of a dark red colour, much inflamed, and a great deal more painful than might be expected, considering its small size. The latter circumstance is partly owing to the vehemence of the inflammation producing the stye, and partly to the exquisite sensibility and tension of the skin which covers the edge of the eyelids. On this account, the hordeolum very often excites fever and restlessness in delicate, irritable constitutions; it suppurates slowly and imperfectly; and, when suppurated, has no tendency to burst.

The stye, like other furunculous inflammations, forms an exception to the general rule, that the best mode in which inflammatory swellings can end, is resolution; for whenever a furunculous inflammation extends so deeply as to destroy any of the cellular substance, the little tumour can never be resolved, or only imperfectly so. This event, indeed, would rather be hurtful, since there would still remain behind a greater or smaller portion of dead cellular membrane; which, sooner or later, might bring on a renewal of the stye, in the same place as before, or else become converted into a hard indolent body, deforming the edge of the eyelid.

HO'RDEUM. (*um*, i. n.; *ab horrore aristæ*; from the unpleasantness of its beard to the touch.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Digynia*. Barley.

2. The pharmacopœial name of the common barley. See *Hordeum vulgare*.

Hordeum causticum. See *Cevadilla*.

Hordeum distichon. This plant affords the barley in common use. See *Hordeum vulgare*.

Hordeum perlatum. See *Hordeum vulgare*.

Hordeum vulgare. The systematic name of the common barley. The seed called barley is obtained from several species of *hordeum*, but principally from the *vulgare*, or common or Scotch barley, and the *distichon*, or *hordeum gallicum vel mundatum*, or French barley, of Linnæus. It is extremely nutritious and mucilaginous, and in common use as a drink, when boiled, in all inflammatory diseases and affections of the chest, especially where there is cough or irritation about the fauces. A decoction of barley with gum, is considered a useful diluent and demulcent in dysury and strangury; the gum mixing with the urine, sheaths the urinary canal from the acrimony of the urine. Amongst the ancients, decoctions of barley, κριθη, were the principal medicine, as well as aliment, in acute diseases. Barley is freed from its shells in mills, and in this state called Scotch and French barley. In Holland, they rub barley into small round grains, somewhat like pearls, which is therefore called *pearl barley*, or *hordeum perlatum*.

HOREHOUND. See *Marrubium*.

HORIZONTAL. *Horizontalis*. Applied to leaves, roots, &c. which spread in the greatest possible degree; as the leaves of *Gentiana campestris*, and roots of the *Laserpitium prutenicum*.

HO'RMINUM. (*um*, *i*. n.; from ορμαω, to incite: named from its supposed qualities of provoking venery.) See *Salvia sclarea*.

HORN. *Cornu*. 1. An animal substance chiefly membraneous, composed of coagulated albumen, with a little gelatine, and about half a per cent. of phosphate of lime. The horns of the buck and hart are of a different nature, being intermediate between bone and horn. See *Cornu*.

2. A horn or spur. See *Calcar*.

Horn silver. A chloride of silver.

Horn-shaped. See *Cornutus*.

HORNBLENDE. A subspecies of straight-edged augite. There are three varieties of it: the *common*, the *slate*, and the *basaltic*.

HORNSTONE. Professor Jameson's ninth subspecies of rhomboidal quartz.

HORRIPILA'TION. (*Horripilatio*, *onis*. f.; from *horror*, and *pilus*, a hair.) A shuddering or a sense of creeping in different parts of the body.

HORSE. *Equus*. See *Equus*. 1. Some parts of this animal give names to parts of plants; as *horse-tail*, &c.

2. It is applied by way of inferiority or coarseness; as caballine, or *horse aloes*, &c.

Horse-chestnut. See *Æsculus hippocastanum*.

Horse-radish. See *Cochlearia armoracia*.

Horse-tail. See *Hippuris vulgaris*.

HORSTIUS, Gregory, was born at Torgau, in 1578. His works were collected by his sons in three folio volumes.

HO'RTUS. (*us*, *i*. m.; from *orior*, to rise, as being the place where vegetables grow up.) 1. A garden.

2. The genitals of a woman, as being the repository of the human semen.

Hortus siccus. A collection of dried plants, kept in paper or books.

HOUND. A hunting dog, of which there are many kinds. Parts of some plants are named from their resemblance to parts of this animal; as *hounds-tongue*, &c.

Hounds-tongue. See *Cynoglossum*.

HOUSE-LEEK. (So called because it grows on the roofs of houses.) See *Sempervivum tectorum*.

HUBER, John James, was born at Basle, in 1707. The chief objects of his research were the *spinal marrow*, and the nerves originating from it: he also enquired into the supposed influence of the imagination of the mother on the fœtus, and into the cause of miscarriages.

HUMECTANT. (*Humectans*; from *humecto*, to make moist.) A medicine which is capable of softening by making the solids of the body moist.

HUMERAL. *Humeralis*. Belonging to the humerus or arm.

Humeral artery. *Arteria humeralis*. Brachial artery. The axillary artery, having

passed the tendon of the great pectoral muscle, changes its name to the brachial or humeral artery, which name it retains in its course down the arm to the bend, where it divides into the radial and ulnar arteries. In this course it gives off several muscular branches, three of which only deserve attention: 1. The *arteria profunda superior*, which goes round the back of the arm to the exterior muscle, and is often named the upper muscular artery. 2. Another like it, called *arteria profunda inferior*, or the lower muscular artery. 3. *Ramus anastomoticus major*, which anastomoses round the elbow with the branches of the ulnar artery.

Humeralis musculus. See *Deltoides*.

HU'MERUS. (*us, i.* m.; from ωμος, the shoulder.) 1. The arm, as composed of hard and soft parts, from the shoulder to the fore-arm.

2. The shoulder.

3. The bone of the arm, *os humeri*, or *os brachii*. A long cylindrical bone, situated between the scapula and fore-arm. Its upper extremity is formed somewhat laterally and internally, into a large, round, and smooth head, which is admitted into the glenoid cavity of the scapula. Around the basis of this head is observed a circular fossa, deepest anteriorly and externally, which forms what is called the neck of the bone, and from the edge of which arises the capsular ligament, which is further strengthened by a strong membraneous expansion, extending to the upper edge of the glenoid cavity, and to the coracoid process of the scapula; and likewise, by the tendinous expansions of the muscles, inserted into the head of the humerus. The capsular ligament is sometimes torn in luxation, and becomes an obstacle to the easy reduction of the bone. The articulating surface of the head is covered by a cartilage which is thick in its middle part, and thin towards its edges; by which means it is more convex in the recent subject than in the skeleton. This upper extremity, besides the round smooth head, affords two other smaller protuberances. One of these, which is the largest of the two, is of an irregular oblong shape, and is placed at the back of the head of the bone, from which it is separated by a kind of groove, that makes a part of the neck. This tuberosity is divided, at its upper part, into three surfaces: the first of these, which is the smallest and uppermost, serves for the insertion of the supraspinatus muscle; the second, or middlemost, for the insertion of the infraspinatus; and the third, which is the lowest and hindmost, for the insertion of the teres minor. The other smaller tuberosity is situated anteriorly, between the larger one and the head of the humerus, and serves for the insertion of the subscapularis muscle. Between these two tuberosities, there is a deep groove for lodging the tendinous head of the biceps brachii; the capsular ligament of the joint affording here a prolongation, thinner than the capsule itself, which covers and accompanies this muscle to its fleshy portion, where it gradually disappears in the adjacent cellular membrane. Immediately below its neck, the os humeri begins to assume a cylindrical shape, so that here the body of the bone may be said to commence. At its upper part is observed a continuation of the groove for the biceps, which extends downwards, about the fourth part of the length of the bone, in an oblique direction. The edges of this groove are continuations of the greater and lesser tuberosities, and serve for the attachment of the pectoralis, latissimus dorsi, and teres major muscles. The groove itself is lined with a glistening substance like cartilage, but which seems to be nothing more than the remains of tendinous fibres. A little lower down, towards the external and anterior side of the middle of the bone, it is seen rising into a rough ridge for the insertion of the deltoid muscle. On each side of this ridge the bone is smooth and flat, for the lodgment of the brachialis internus muscle; and behind the middle part of the outermost side of the ridge is a channel, for the transmission of vessels into the substance of the bone. A little lower down, and near the inner side of the ridge, there is sometimes seen such another channel, which is intended for the same purpose. The os humeri, at its lower extremity, becomes gradually broader and flatter, so as to have this end nearly of a triangular shape. The bone, thus expanded, affords two surfaces, of which the anterior one is the broadest, and somewhat convex; and the posterior one narrower and smoother. The bone terminates in four large processes, the two outermost of which are called *condyles*, though not designed for the articulation of the bone. These condyles, which are placed at some distance from each other, on each side of the bone, are rough and irregular protuberances, formed for the insertion of muscles and ligaments, and differ from each other in size and shape. The external condyle, when the arm is in the most natural position, is found to be placed somewhat forwarder than the other. The internal condyle is longer, and more protuberant, than the external. From each of these processes, a ridge is continued upwards, at the side of the bone. In the interval between the two condyles are placed the two articulating processes, contiguous to each other, and covered with cartilage. One of these, which is the smallest, is formed into a small, obtuse, smooth head, on which the radius plays. This little head is placed near the external condyle, as a part of which it has been sometimes described. The other, and larger process, is composed of two lateral protuberances and a middle cavity, all of which are smooth and covered with cartilage. From the manner in which the ulna moves upon this process, it has the name of *trochlea*, or pulley. The sides of this pulley are unequal: that which is towards the little head, is the highest of the two; the other, which is contiguous to the external condyle, is more slanting, being situated obliquely from within outwards, so

that when the fore-arm is fully extended, it does not form a straight line with the os humeri; and, for the same reason, when we bend the elbow, the hand comes not to the shoulder, as it might be expected to do, but to the forepart of the breast. There is a cavity at the root of these processes, on each of the two surfaces of the bone. The cavity on the anterior surface is divided by a ridge into two, the external of which receives the end of the radius, and the internal one lodges the coronoid process of the ulna in the flexions of the fore-arm. The cavity on the posterior surface, at the basis of the pulley, is much larger, and lodges the olecranon when the arm is extended. The internal structure of the os humeri is similar to that of other long bones. In new-born infants, both the ends of the bone are cartilaginous, and the large head, with the two tubercles above, and the condyles, with the two articulating processes below, become epiphyses before they are entirely united to the rest of the bone.

HU'MILIS. (From *humi*, on the ground: so named, because it turns the eye downwards, and is expressive of humility.) See *Rectus inferior oculi.*

HUMITE. A mineral of a reddish brown colour found near Naples, and named by Count Bournon in honour of Sir Abraham Hume, a distinguished cultivator of mineralogy.

HU'MOR. (*or, oris.* m.; *ab humo*, from the ground: because moisture springs from the earth.) Humour, a general name for any fluid of the body except the blood.

HUMOR VITREUS. The vitreous humour of the eye, which takes its name from the resemblance to melted glass, is less dense than the crystalline but more than the aqueous humour: it is very considerable in the human eye, and seems to be formed by the small arteries that are distributed in cells of the hyaloid membrane; it is heavier than common water, slightly albuminous and saline.

HUMOUR. See *Humor.*

Humour, aqueous. See *Aqueous humour.*

Humour, vitreous. See *Humor vitreus.*

Humours of the eye. See *Eye.*

HUMULIN. The narcotic principle of the fruit of the hop. See *Humulus.*

HU'MULUS. (*us, i.* m.; from *humus*, the ground: so named because, without factitious support, it creeps along the ground.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Pentandria.* The hop.

HUMULUS LUPULUS. The systematic name of the hop plant: called also, *Lupulus*, and *Colvolvulus perennis.* The hop is the floral leaf or bractea of this plant: it is dried and used in various kinds of strong beer. Hops have a bitter taste, less ungrateful than most of the other strong bitters, accompanied with some degree of warmth and aromatic flavour, and are highly intoxicating. The hop-flower also exhales a considerable quantity of its narcotic power in drying; hence those who sleep in the hop-houses are with difficulty roused from their slumber. A pillow stuffed with these flowers is said to have laid our late monarch to sleep when other remedies had failed. The young sprouts, called hop-tops, if plucked when only a foot above the ground, and boiled, are eaten, like asparagus, and are a wholesome delicacy. The active or narcotic principle of the hop is called *humulin.*

HUNGER. *Fames.* The want of solid aliments is characterised by a peculiar sensation in the region of the stomach, called hunger, and by a general feebleness, more or less marked. This feeling is generally renewed after the stomach has been for some time empty: it is variable in its intensity and its nature in different individuals, and even in the same individual. In some, its violence is excessive; in others, it is scarcely felt: some never feel it, and eat only because the hour of repast is come. Many persons perceive a drawing, a pressure more or less painful in the epigastric region, accompanied by yawnings, and a particular noise, produced by the gases contained in the stomach, which becomes contracted. When this want is not satisfied it increases, and may become a severe pain: the same takes place with the sensation of weakness and general fatigue, which is felt, and which may increase, so as to render the motions difficult, or even impossible.

Authors distinguish in hunger, local and general phænomena. This distinction is good in itself, and may be useful for study: but have not mere gratuitous suppositions been described as local or general phænomena of hunger, the existence of which was rendered probable by this theory? This point of physiology is one of those in which the want of direct experiment is the most strongly felt. The pressure and contraction of the stomach are considered amongst the local phænomena of hunger. "The sides of that viscus," it is said, "become thicker: it changes its form and situation, and draws the duodenum a little towards it; its cavity contains saliva mixed with air, mucosities, bile, which has regurgitated in consequence of the dragging of the duodenum; the quantity of these humours increases in the stomach in proportion as hunger is of longer continuation. The cystic bile does not flow into the duodenum; it collects in the gall-bladder, and it becomes abundant and black according to the continuance of abstinence. A change takes place in the order of the circulation of the digestive organs: the stomach receives less blood, perhaps on account of the flexion of these vessels, which is then greater; perhaps by the compression of the nerves, in consequence of this confinement, the influence of which upon the circulation will then be diminished. On the other hand, the liver, the spleen, the epiploon, receive more, and perform the office of *diverticula:* the liver and the spleen, because they are less supported when the stomach is empty, and then present a more easy access to the blood; and the epiploon, because the vessels

are then less *flexuous*," &c. The most of these data are mere conjectures, and nearly devoid of proof. After twenty-four, forty-eight, and even sixty hours of complete abstinence, Dr. Magendie says, he never saw the contraction and pressure of the stomach of which some authors speak: this organ has always presented to him very considerable dimensions, particularly in its splenic extremity: it was only after the fourth and fifth day that it appeared to return upon itself, to diminish much in size, and slightly in position: even these effects are not strongly marked, unless fasting has been very strictly observed.

Bichat thinks that the pressure sustained by the empty stomach is equal to that which it supports when distended by aliments, since, says he, the sides of the abdomen are compressed in proportion as the volume of the stomach diminishes. The contrary of this may be easily proved by putting one or two fingers into the abdominal cavity, after having made an incision in its sides: it will then be easily seen that the pressure sustained by the viscera is, in a certain degree, in direct proportion to the distension of the stomach: if the stomach is full, the finger will be stronger pressed, and the viscera will press outward to escape through the opening; if it is empty, the pressure will be very trifling, and the viscera will have little tendency to pass out from the abdominal cavity. It must be understood, that in this experiment the pressure exerted by the abdominal muscles, when they are relaxed, ought not to be confounded with that which they exert when contracted with force. Also, when the stomach is empty, all the reservoirs contained in the abdomen are more easily distended by the matters which remain some time in them. Perhaps this is the principal reason why bile then accumulates in the gall-bladder. With regard to the presence of bile in the stomach, that some persons regard as the cause of hunger: unless in certain sickly cases, bile does not enter it, though it continues to flow into the small intestine.

The quantity of mucus that the cavity of the stomach presents is so much greater in proportion to the prolongation of fasting.

Relatively to the quantity of blood which goes to the stomach when empty, in proportion to the volume of its vessels, and the mode of circulation which then exists, the general opinion is, that it receives less of this fluid than when it is full of aliments; but, far from being in this respect in opposition with the other abdominal organs, this disposition appears to be common to all the organs contained in the abdomen.

To the general phænomena of hunger is ascribed a weakness and diminution of the action of all the organs: the circulation and the respiration become slow, the heat of the body lowers, the secretions diminish, the whole of the functions are exerted with more difficulty. The absorption alone is said to become more active, but nothing is strictly demonstrated in this respect.

Hunger, appetite itself, which is only its first degree, ought to be distinguished from that feeling which induces us to prefer one sort of food to another, from that which causes us, during a repast, to choose one dish rather than another, &c.

These feelings are very different from real hunger, which expresses the true wants of the economy; they, in a great measure, depend on civilization, on habits, and certain ideas relative to the properties of aliments. Some of them are in unison with the season and climate, and then they are equally legitimate as hunger itself; such is that which inclines us to a vegetable regimen in hot countries, or during the heats of summer.

Certain circumstances render hunger more intense, and cause it to return at nearer intervals: such as a cold and dry air, winter, spring, cold baths, dry frictions upon the skin, exercise on horseback, walking, bodily fatigue, and generally all the causes that put the action of the organs in play, and accelerate the nutritive process with which hunger is essentially connected. Some substances, being introduced into the stomach, excite a feeling like hunger, but which ought not to be confounded with it.

There are causes which diminish the intensity of hunger, and which prolong the periods at which it habitually manifests itself: amongst this number are the inhabiting of hot countries and humid places, rest of the body and mind, depressing passions, and, indeed, all the circumstances that interrupt the action of the organs, and diminish the activity of nutrition. There are also substances which, being brought into the digestive canals, prevent hunger, or cause it to cease; as opium, hot drinks, &c.

With respect to the cause of hunger, it has been, by turns, attributed to the providence of the vital principle, to the frictions of the sides of the stomach against each other, to the dragging of the liver upon the diaphragm, to the action of bile upon the stomach, to the acrimony and acidity of the gastric juice, to fatigue of the contracted fibres of the stomach, to compression of the nerves of this viscus, &c. &c.

Hunger arises, like all other internal sensations, from the action of the nervous system; it has no other seat than this system itself, and no other causes than the general laws of organisation. What very well proves the truth of this assertion, is, that it sometimes continues though the stomach is filled with food; that it cannot be produced, though the stomach has been some time empty; lastly, that it is so subject to habit as to cease spontaneously after the habitual hour of repast is over. This is true not only of the feeling which takes place in the region of the stomach, but also of the general weakness that accompanies it, and which, consequently, cannot be considered as real, at least in the first instant in which it is manifested.

HUNTER, William, was born in 1718,

at Kilbride, in Scotland; went to Edinburgh in November 1740; and in the following summer came to London, with a recommendation to Dr. James Douglas, who engaged him to assist in his dissections, and superintend the education of his son. In 1743, he communicated to the Royal Society a paper on the structure and diseases of articulating cartilages, which was much admired. He now formed the design of teaching anatomy; and, after encountering some difficulties, commenced by giving a course on the operations of surgery to a society of navy surgeons, in lieu of Mr. Samuel Sharpe. He gave so much satisfaction, that he was requested to extend the plan to anatomy, which he began accordingly in 1746. In 1748, he accompanied his pupil, young Douglas, on a tour, and having seen the admirable injections of Albinus at Leyden, he was inspired with a strong emulation to excel in that branch. On his return, he devoted himself to midwifery, to which his person and manners well adapted him. In 1750, he obtained a doctor's degree from Glasgow, and was afterwards often consulted as a physician, in cases which required peculiar anatomical skill. Six years after, he was admitted a licentiate of the College in London, and also a member of the society by which the *Medical Observations and Enquiries* were published. He enriched that work with many valuable communications; particularly an account of the disease since called *Aneurismal Varix;* a case of *Emphysema*, with practical remarks, wherein he showed the fat to be deposited in distinct vesicles; and some *Observations on the Retroversion of the Uterus;* and, on the death of Dr. Fothergill, he was chosen president of that society. In 1762, he published his *Medical Commentaries*, in which he laid claim, with much asperity, to several anatomical discoveries, especially relative to the absorbent system, in opposition to the second Monro of Edinburgh. In 1775, he published a splendid work, which had occupied him for 24 years previously, *The Anatomy of the Gravid Uterus*, illustrated by plates, admirable for their accuracy, as well as elegance; among other improvements, the membrana decidua reflexa, discovered by himself, was here first delineated. He drew up a detailed description of the figures, which was published after his death by his nephew, Dr. Baillie. Another posthumous publication, deservedly much admired, was the *Two Introductory Lectures* to his anatomical course. As his wealth increased, he formed the noble design of establishing an anatomical school; and proposed to government, on the grant of a piece of ground, to build a proper edifice, and endow a perpetual professorship: but this not being acceded to, he set about an establishment in Great Windmill Street, where he collected a most valuable museum of anatomical preparations, subjects of natural history, scarce books, coins, &c. to which an easy access was always given. He continued to lecture and practise till near the period of his death in 1783. He bequeathed the use of his museum for 30 years to Dr. Baillie; after which it was to belong to the University of Glasgow, where it now is.

HUNTER, John, was born ten years after his brother William. His early education was much neglected, and his temper injured, through his mother's indulgence. At a proper age he was put under a relation, a carpenter and cabinet-maker, who failed in his business. Hearing at this period of his brother's success, he applied to become his assistant, and accordingly came to London in the autumn of 1748. He made such proficiency in dissection, that he was capable of undertaking the demonstrations in the following season. During the summer he attended the surgical practice at different hospitals; and, in 1756, he was appointed house-surgeon at St. George's. He had been admitted by his brother to a partnership in the lectures the year before. After labouring about ten years with unexampled ardour in the study of human anatomy, he turned his attention to that of other animals, with a view to elucidate physiology. His health was so much impaired by these pursuits, that in 1760 he went abroad as surgeon on the staff, and thus acquired a knowledge of gunshot wounds. On his return, after three years, he settled in London as a surgeon, and gave instructions in dissection and the performance of operations; and he continued, with great zeal, his researches into comparative anatomy and natural history. Several papers were communicated by him to the Royal Society, of which he was elected a member in 1767. About this time, by his brother's interest, he was appointed one of the surgeons at St. George's Hospital; and his professional reputation was rapidly increasing. In 1771, he published the first part of his *Work on the Teeth*, displaying great accuracy of research: and two years after he began a course of lectures on the principles of surgery. He fell short of his brother in methodical arrangement, and facility of expressing his ideas, and indeed adopted a peculiar language, perhaps in part from the deficiency of his education; but he certainly brought forward many ingenious speculations in physiology and pathology, and suggested some important practical improvements, particularly the operation for popliteal aneurism. In 1776, he was appointed surgeon-extraordinary to the King; and soon after received marks of distinction from several foreign societies. His emoluments increasing, he took a large house in Leicester Square, and built a spacious museum, which he continued to store with subjects in comparative anatomy, at a very great expense. The post of Deputy Surgeon-General to the army was conferred upon him in 1786; and in the same year his great work on *the Venereal Disease* appeared, which will ever remain a monument to his extraordinary sagacity and talent for observation. He also published at this period, *Observations on the*

Animal Œconomy, chiefly composed of papers already printed in the Philosophical Transactions. In 1790, he was appointed Inspector-General of Hospitals, and Surgeon-General to the army; when he resigned his lectures to Mr. Home, whose sister he had married. He had been for two years before labouring under symptoms of organic disease about the heart, which were aggravated by any sudden exertion, or agitation of his mind; these increased progressively, and, in October 1793, while at the hospital, being vexed by some untoward circumstance, he suddenly expired. He left a valuable *Treatise on the Blood, Inflammation, and Gun-shot Wounds*, which was published soon after, with a life prefixed, by his brother-in law. His museum was directed to be offered to the purchase of government: it was bought for 15,000*l.*, and presented to the College of Surgeons, on condition of their opening it to public inspection, and giving a set of lectures annually explanatory of its contents. The preparations are arranged so as to exhibit all the gradations of nature, from the simplest state of animated existence up to man, according to the different functions. It comprehends also a large series of entire animals, skeletons of almost every genus, and other subjects of natural history.

HURTSICKLE. (So called because it is troublesome to cut down, and sometimes notches the sickle.) See *Centaurea cyanus*.

HUSK. See *Gluma*.

Husson's Eau médicinale. See *Colchicum*.

HUXHAM, John, was born about the end of the 17th century, and practised as a physician, with considerable reputation, at Plymouth. His writings display great learning and talent for observation. He kept a register of the weather and prevailing diseases for nearly thirty years, which was published in Latin in three volumes. He was early elected into the Royal Society, and communicated several papers on pathology and morbid anatomy. But his fame rests chiefly upon his *Essay on Fevers*, which went through several editions; a dissertation being afterwards added on the malignant sore throat.

HYACINTH. 1. A subspecies of pyramidal zircon. It comes from Ceylon, and is much esteemed as a gem.

2. See *Hyacinthus*.

HYACI'NTHUS. (*us, i.* m.; said by the poets to be named from the friend of Apollo, who was turned into this flower.) The name of a genus of plants. Class, *Hexandria*; Order, *Monogynia*.

Hyacinthus muscari. *Muscari.* The systematic name of the musk-grape flower, which, according to Ray, possesses emetic and diuretic qualities.

Hyacinthus non scriptus. See *Scilla nutans*.

HYALITE. A transparent siliceous stone, which is often cut into ring-stones, found near Frankfort on the Maine.

HYALOID. (*Hyaloides*; from ὑαλος, glass, and ειδος, likeness.) Transparent, like glass: a term very generally applied in *Anatomy* and *Botany*; as the hyaloid membrane of the eye.

HYBERNACULUM. (*um, i.* n.) This is defined by Linnæus to be a part of the plant which protects the embryo herb from external injuries. It is an organic body which sprouts from the surface of different parts of a plant, enclosing the rudiments of the new shoot, and which is capable of evolving a new individual perfectly similar to the parent. This is a modification of the definition of Gærtner.

Hyboma. A gibbosity of the spine.

HYBRID. (*Hybrida, æ.* m.; from υβρις, an injury: because its nature is tainted.) A production of two different species of animals or plants. In the former it is called a mule. Neither the hybrid animal, nor the seeds of hybrid plants, propagate their species.

HYDA'RTHRUS. (*us, i.* m.; from υδωρ, water, and αρθρον, a joint.) This disease, called also *hydarthron*, and *hydarthros*, by the Greeks, and *spina ventosa* by the Arabian physicians, is by us termed, from its colour, a white swelling. In this country it is a peculiarly common and exceedingly terrible disease. The varieties of white swelling are very numerous, and might usefully receive particular appellations. Systematic writers have generally been content with a distinction into two kinds, viz. *rheumatic* and *scrophulous*. The last species of the disease they also distinguish into such tumours as primarily affect the bones, and the ligaments and soft parts; and into other cases, in which the ligaments and soft parts become diseased before there is any morbid affection of the bones.

These divisions, Mr. Samuel Cooper, in his Treatise on the Diseases of the Joints, proves to be not sufficiently comprehensive; and the propriety of using the term *rheumatic* he thinks to be very questionable.

The knee, ankle, wrist, and elbow are the joints most subject to white swellings. As the name of the disease implies, the skin is not at all altered in colour. In some instances the swelling yields, in a certain degree, to pressure; but it never pits, and is almost always sufficiently firm to make an uninformed examiner believe that the bones contribute to the tumour. The pain is sometimes vehement from the very first; in other instances, there is hardly the least pain in the beginning of the disease. In the majority of scrophulous white swellings, let the pain be trivial or violent, it is particularly situated in one part of the joint, viz. either *the centre of the articulation*, or the *head of the tibia*, supposing the knee affected. Sometimes the pain continues without interruption; sometimes there are intermissions; and in other instances the pain recurs at regular times, so as to have been called, by some writers, periodical. Almost all authors describe the patient as suffering more uneasiness in the diseased part

when he is warm, and particularly when he is in this condition in bed.

At the commencement of the disease, in the majority of instances, the swelling is very inconsiderable, or there is even no visible enlargement whatever. In the little depressions, naturally situated on each side of the patella, a fullness first shows itself, and gradually spreads all over the affected joint.

The patient, unable to bear the weight of his body on the disordered joint, in consequence of the great increase of pain thus created, gets into the habit of only touching the ground with his toes: and the knee being generally kept a little bent in this manner, soon loses the capacity of becoming extended again. When white swellings have lasted a while, the knee is almost always found in a permanent state of flexion. In scrophulous cases of this kind, pain constantly precedes any appearance of swelling; but the interval between the two symptoms differs very much in different subjects.

The morbid joint, in the course of time, acquires a vast magnitude. Still the integuments retain their natural colour, and remain unaffected. The enlargement of the articulation, however, always seems greater than it really is, in consequence of the emaciation of the limb both above and below the disease.

An appearance of blue distended veins, and a shining smoothness, are the only alterations to be noticed in the skin covering the enlarged joint. The shining smoothness seems attributable to the distension which obliterates the natural furrows and wrinkles of the cutis. When the joint is thus swollen, the integuments cannot be pinched up into a fold, as they could in the state of health, and even in the beginning of the disease.

As the distemper of the articulation advances, collections of matter form about the part, and at length burst. The ulcerated openings sometimes heal up; but such abscesses are generally followed by other collections, which pursue the same course. In some cases, these abscesses form a few months after the first affection of the joint; on other occasions, several years elapse, and no suppuration of this kind makes its appearance.

Such terrible local mischief must necessarily produce constitutional disturbance. The patient's health becomes gradually impaired; he loses both his appetite and natural rest and sleep; his pulse is small and frequent; and obstinate debilitating diarrhœa and profuse nocturnal sweats ensue. Such complaints are sooner or later followed by dissolution, unless the constitution be relieved in time, either by the amendment or removal of the diseased part. In different patients, however, the course of the disease, and its effects upon the system, vary very much in relation to the rapidity with which they occur.

Rheumatic white swellings are very distinct diseases from the *scrophulous distemper* of large joints. In the first, the pain is said never to occur without being attended with swelling. Scrophulous white swellings, on the other hand, are always preceded by a pain, which is particularly confined to one point of the articulation. In rheumatic cases, the pain is more general, and diffused over the whole joint.

With respect to the particular causes of all such white swellings as come within the class of rheumatic ones, little is known. External irritation, either by exposure to damp or cold, or by the application of violence, is often concerned in bringing on the disease; but very frequently no cause of this kind can be assigned for the complaint. As for scrophulous white swellings, there can be no doubt that they are under the influence of a particular kind of constitution, termed a *scrophulous* or *strumous* habit. In this sort of temperament, every cause capable of exciting inflammation, or any morbid and irritable state of a large joint, may bring such disorder as may end in the severe disease of which we are now speaking.

In a man of a sound constitution, an irritation of the kind alluded to might only induce common healthy inflammation of the affected joint.

In scrophulous habits, it also seems probable that the irritation of a joint is much more easily produced than in the other constitutions; and no one can doubt that, when once excited in scrophulous habits, it is much more dangerous and difficult of removal than in other patients.

HYDATID. (*Hydatis, idis.* f.; from ὑδωρ, water.) 1. The name of a genus of animalcules, which are characterised by being formed of a membrane containing a water-like fluid. See *Vermes.*

2. A tumour or vesicle, consisting of a membrane distended with a water-like fluid.

HYDERUS. (From ὑδερος, *ley-drops;* from ὑδωρ, water.) An increased flow of urine.

HYDNUM. (*um, i.* n.) A genus of the Order *Fungi;* Class, *Cryptogamia.* Some of the species of this genus of mushrooms are eaten on the Continent; all the dark-coloured, with spots on their underscarf, are to be suspected as poisonous. The species occasionally used are the following:—

1. *Hydnum crinaceum.* The hedgehog mushroom.

2. *Hydnum coralloides.*

3. *Hydnum caput Medusæ, Fungo istrice,* and two other undetermined analogous species; but not the *Caput Medusæ* of Paulet, which is poisonous.

4. *Hydnum repandum.* The *chevrette.*

5. *Hydnum auriscalpium.* *Brouquichons,* which is said to be excellent.

HY'DRAGOGUE. (*Hydragogus;* from ὑδωρ, water, and αγω, to drive out.) A medicine is so termed, which possesses the property of increasing the secretions or excretions of the body, so as to cause the removal of water from any of its cavities; such as cathartics, &c.

HYDRARGYRATUS. Of or belonging to mercury.

HYDRARGYRI ACETAS. Acetate of mercury: called also *Mercurius acetatus*, and *Pilulæ Keyseri*. By this preparation of mercury, the celebrated Keyser acquired an immense fortune in curing the venereal disease. The dose is from three to five grains. Notwithstanding the encomium given to it by some, it does not appear to be so efficacious as some other preparations of mercury.

HYDRARGYRI NITRICO-OXYDUM. *Nitrico-oxydum hydrargyri. Hydrargyrus nitratus ruber. Mercurius corrosivus ruber. Mercurius præcipitatus corrosivus.* Nitric oxide of mercury. Red precipitate. Take of purified mercury, by weight, three pounds; of nitric acid, by weight, a pound and a half; of distilled water two pints. Mix in a glass vessel, and boil the mixture in a sand-bath, until the mercury be dissolved, the water also evaporated, and a white mass remain. Rub this into powder, and put it into another shallow vessel; then apply a moderate heat, and raise the fire gradually, until red vapour shall cease to rise. This preparation is very extensively employed by surgeons as a stimulant and escharotic, but its extraordinary activity does not allow of its being given internally. Finely levigated, and mixed with common cerates, it is an excellent application to indolent ulcers, especially those which remain after burns and scalds, and those in which the granulations are indolent and flabby. It is also an excellent caustic application to chancres.

HYDRARGYRI OXYDUM CINEREUM. *Oxydum hydrargyri nigrum.* The grey or black oxide of mercury. It has received several names: *Æthiops per se; Pulvis mercurialis cinereus; Mercurius cinereus; Turpethum nigrum; Mercurius præcipitatus niger.* Take of submuriate of mercury, an ounce; lime-water, a gallon. Boil the submuriate of mercury in the lime-water, constantly stirring, until a grey oxide of mercury is separated. Wash this with distilled water, and then dry it. The dose from gr. ii. to x. There are four other preparations of this oxide in high estimation:—

One made by rubbing mercury with mucilage of gum arabic. Plenk, of Vienna, has written a treatise on the superior efficacy of this medicine. It is very troublesome to make; and does not appear to possess more virtues than some other mercurial preparations. Another made by triturating equal parts of sugar and mercury together. The third, composed of honey or liquorice and purified mercury. The fourth is the blue mercurial ointment. All these preparations possess anthelmintic, antisyphilitic, alterative, sialagogue, and deobstruent virtues, and are exhibited in the cure of worms, syphilis, amenorrhœa, diseases of the skin, chronic diseases, obstructions of the viscera, &c.

HYDRARGYRI OXYDUM NIGRUM. See *Hydrargyri oxydum cinereum.*

HYDRARGYRI OXYDUM RUBRUM. *Oxydum hydrargyri rubrum. Hydrargyrus calcinatus.* Red oxide of mercury. Take of purified mercury by weight a pound. Pour the mercury into a glass matrass, with a very narrow mouth and broad bottom. Apply a heat of 600° to this vessel, without stopping it, until the mercury has changed into red scales: then reduce these to a very fine powder. The whole process may probably require an exposure of six weeks. This preparation of mercury is given with great advantage in the cure of syphilis. Its action, however, is such, when given alone, on the bowels, as to require the addition of opium, which totally prevents it. It is also given in conjunction with opium and camphire, as a diaphoretic, in chronic pains and diseases of long continuance. It is given as an alterative and diaphoretic from gr. ss. to ii. every night, joined with camphire and opium, each gr. one fourth or one half. It is violently emetic and cathartic in the dose of gr. iv. to gr. v.

HYDRARGYRI OXYMURIAS. *Oxymurias hydrargyri. Hydrargyrus muriatus.* Oxymuriate of mercury. Take of purified mercury, by weight two pounds; sulphuric acid, by weight thirty ounces; dried muriate of soda, four pounds. Boil the mercury with the sulphuric acid in a glass vessel until the sulphate of mercury shall be left dry. Rub this, when it is cold, with the muriate of soda in an earthenware mortar; then sublime it in a glass cucurbit, increasing the heat gradually. An extremely acrid and violently poisonous preparation.

Given internally, in small doses properly diluted, and never in the form of pill, it possesses antisyphilitic and alterative virtues. Externally, applied in form of lotion, it facilitates the healing of venereal sores, and cures the itch. In gargles for venereal ulcers in the throat, the oxymuriate of mercury gr. iii. or iv., barley decoction ℔j., honey of roses ℥ji., proves very serviceable; also in cases of tetters, from gr. v. to gr. x. in water ℔j.; and for films and ulcerations of the cornea, gr. i. to water ℥iv.

Mr. Pearson remarks, that "when the sublimate is given to cure the primary symptoms of syphilis, it will sometimes succeed; more especially, when it produces a considerable degree of soreness of the gums, and the common specific effects of mercury in the animal system. But it will often fail of removing even a recent chancre; and where that symptom has vanished during the administration of corrosive sublimate, I have known," says he, "a three months' course of that medicine fail of securing the patient from a constitutional affection. The result of my observation is, that simple mercury, calomel, or calcined mercury are preparations more to be confided in for the cure of primary symptoms than corrosive sublimate. The latter will often check the progress of secondary symptoms very conveniently, and I think it is peculiarly efficacious in relieving venereal pains, in healing ulcers of the throat, and in promoting the desquamation of eruptions. Yet even in these cases

it never confers permanent benefit; for new symptoms will appear during the use of it; and on many occasions it will fail of affording the least advantage to the patient from first to last. I do sometimes, indeed, employ this preparation in venereal cases; but it is either at the beginning of a mercurial course, to bring the constitution under the influence of mercury at an early period, or during a course of inunction, with the intention of increasing the action of simple mercury. I sometimes also prescribe it after the conclusion of a course of friction, to support the mercurial influence in the habit, in order to guard against the danger of a relapse. But on no occasion whatever is it safe to confide in this preparation singly and uncombined for the cure of any truly venereal symptoms."

A solution of it is ordered in the pharmacopœia, termed *Liquor hydrargyri oxymuriatis.* Solution of oxymuriate of mercury. Take of oxymuriate of mercury, eight grains; distilled water, fifteen fluid ounces; rectified spirit, a fluid ounce. Dissolve the oxymuriate of mercury in the water, and add the spirit.

This solution is directed in order to facilitate the administration of divisions of the grain of this active medicine. Half an ounce of it contains one fourth of a grain of the salt. The dose is from one drachm to half an ounce.

Hydrargyri submurias. *Submurias hydrargyri.* Submuriate of mercury. *Calomelas.* Calomel. Take of oxymuriate of mercury, a pound; purified mercury, by weight nine ounces. Rub them together until the metallic globules disappear, then sublime; take out the sublimed mass, and reduce it to powder, and sublime it in the same manner twice more successively. Lastly, bring it into the state of very fine powder by the same process which has been directed for the preparation of chalk. Submuriate, or mild muriate of mercury, is one of the most useful preparations of mercury. As an anti-venereal, it is given in the dose of a grain night and morning, its usual determination to the intestines being prevented, if necessary, by opium. It is the preparation which is perhaps most usually given in the other diseases in which mercury is employed, as in affections of the liver, or neighbouring organs, in cutaneous diseases, chronic rheumatism, tetanus, hydrophobia, hydrocephalus, and febrile affections, especially those of warm climates. It is employed as a cathartic alone, in doses from v. to xii. grains, or to promote the operation of other purgatives. Its anthelmintic power is justly celebrated; and it is perhaps superior to the other mercurials in assisting the operation of diuretics in dropsy. From its specific gravity it ought always to be given in the form of a bolus or pill.

Hydrargyri sulphas. See *Hydrargyrum vitriolatum.*

Hydrargyri sulphuretum nigrum. *Hydrargyrus cum sulphure.* Æthiop's mineral. Take of purified mercury, sublimed sulphur, each a pound, by weight. Rub them together, till the metallic globules disappear. Some suppose that the mercury is oxidised in this process, but that is not confirmed by the best experiments. The mercury, by this admixture of the sulphur, is deprived of its salivating power, and may be administered with safety to all ages and constitutions, as an anthelmintic and alterative.

Hydrargyri sulphuretum rubrum. Red sulphuret of mercury. *Hydrargyrus sulphuratus ruber. Minium purum. Minium Græcorum. Magnes epilepsiæ. Alzemafor. Ammion. Azamar.* Vitruvius calls it *anthrax.* A red mineral substance composed of mercury combined with sulphur. It is either native or factitious.

1. The *native* is an ore of quicksilver moderately compact, and of an elegant striated red colour. It is found in the duchy of Deux-ponts, in the Palatinate, in Spain, South America, &c. It is called native vermilion, and cinnabar in flowers.

2. The *factitious* is thus prepared:—"Take of purified mercury, by weight, forty ounces; sublimed sulphur, eight ounces. Having melted the sulphur over the fire, mix in the mercury, and as soon as the mass begins to swell, remove the vessel from the fire, and cover it with considerable force to prevent inflammation; then rub the mass into powder, and sublime." This preparation is esteemed a mild mercurial alterative, and given to children in small doses. Hoffmann greatly recommends it as a sedative and antispasmodic. Others deny that cinnabar, taken internally, has any medicinal quality; and their opinion is grounded on the insolubility of it in any menstruum. In surgery its chief and almost only use is in the administration of quicksilver by fumigation. Thus employed it has proved extremely serviceable in venereal cases. Ulcers and excrescences about the pudendum and anus in women, are particularly benefited by it; and in these cases it is most conveniently applied by placing a red-hot heater at the bottom of a night stool-pan, and after sprinkling on it a few grains of the red sulphuret of quicksilver, placing the patient on the stool. To fumigate ulcers in the throat, it is necessary to receive the fumes on the part affected, through the tube of a funnel. By enclosing the patient naked in a box, it has, on some occasions, been contrived to fumigate the whole body at once, and in this way the specific powers of the quicksilver have been very rapidly excited.

This mode of curing the lues venerea is spoken of as confirmed, in a treatise by Sabonette, and by trials made in Bartholomew's hospital.

Mr. Pearson, from his experiments on mercurial fumigation, concludes, that where checking the progress of the disease suddenly is an object of great moment, and where the body is covered with ulcers or large and numerous eruptions, and in general to ulcers, fungi, and excrescences, the vapour of mercury is an application of great efficacy and utility; but that it is apt to induce a ptyalism rapidly, and great consequent debility, and

that for the purpose of securing the constitution against a relapse, as great a quantity of mercury must be introduced into the system, by inunction, as if no fumigation had been employed.

HYDRARGYRIA. (*a, æ.* f.; so called because produced by hydrargyrus.) A name, in some writings, of the erythematous redness which mercury sometimes produces. See *Eczema.*

HYDRA'RGYRUM. (*um, i.* n. Ὑδραργυρος; from υδωρ, water, and αργυρος, silver: so named, from its having a resemblance to fluid silver.) *Hydrargyrus.* The name in the London Pharmacopœia, and other works, for mercury. See *Mercury.*

Hydrargyrum acetatum. See *Hydrargyri acetas.*

Hydrargyrum cum creta. Mercury with chalk. *Mercurius alkalizatus.* Take of purified mercury, by weight, three ounces; prepared chalk, five ounces. Rub them together, until the metallic globules disappear. This preparation is milder than any other mercurial except the sulphuret, and does not so easily act upon the bowels; it is therefore used largely by many practitioners, and possesses alterative properties in cutaneous and venereal complaints, in obstructions of the viscera, or of the prostate gland, given in the dose of ℈ss. to ʒss., two or three times a day.

Hydrargyrum phosphoratum. This remedy has been observed to heal inveterate venereal ulcers in a very short time, nay, in the course of a very few days, particularly those about the pudenda. In venereal inflammations of the eyes, chancres, rheumatisms, and chronic eruptions, it has proved of eminent service. Upon the whole, if used with necessary precaution, and in the hands of a judicious practitioner, it is a medicine mild and gentle in its operation. The cases in which it deserves the preference over other mercurial preparations, are these: in an inveterate stage of syphilis, particularly in persons of torpid insensible fibres; in cases of exostosis, as well as obstructions in the lymphatic system; in chronic complaints of the skin. The following is the formula. ℞. Hydrargyri phosphorati, gr. iv. Corticis cinnamomi in pulverem triti, gr. xiv. Sacchari purif. ʒss. Misce. The whole to be divided into eight equal parts, one of which is to be taken every morning and evening, unless salivation takes place, when it ought to be discontinued. Some patients, however, will bear from one to two grains of the phosphate of quicksilver, without inconvenience.

Hydrargyrum præcipitatum album. White precipitated mercury. *Calx hydrargyri alba.* Take of oxymuriate of mercury, half a pound; muriate of ammonia, four ounces; solution of subcarbonate of potash, half a pint; distilled water, four pints. First dissolve the muriate of ammonia, then the oxymuriate of mercury, in the distilled water, and add thereto the solution of subcarbonate of potash. Wash the precipitated powder until it becomes tasteless; then dry it. It is only used externally, in the form of ointment, as an application in some cutaneous affections.

Hydrargyrum præcipitatum cinereum. This preparation is an oxide of mercury, and nearly the same with the *hydrargyri oxydum cinereum* of the London pharmacopœia. It is used as an alterative in cases of pains arising from an admixture of rheumatism with syphilis. It may be substituted for the hydrargyrus sulphuratus ruber, in fumigating ozæna, and venereal ulcerated sore throat, on account of its not yielding any vapour offensive to the patient.

Hydrargyrum purificatum. Purified mercury. *Argentum vivum purificatum.* Take of mercury, by weight, six pounds; iron filings, a pound. Rub them together, and distil the mercury from an iron retort, by the application of heat to it. Purified quicksilver is sometimes administered in its metallic state, in doses of an ounce or more, in constipation of the bowels.

Hydrargyrum vitriolatum. *Turpethum minerale. Mercurius emeticus flavus. Sulphas hydrargyri.* Formerly this medicine was in more general use than in the present day. It is a very powerful and active alterative when given in small doses. Two grains act on the stomach so as to produce violent vomitings. It is recommended as an errhine in cases of amaurosis. In combination with antimony it acts powerfully on the skin.

HYDRATE. Hydroxure. Hydro-oxide. A compound of oxygene, in a definite proportion, with water.

HYDRELÆ'UM. (*um, i.* n.; from υδωρ, water, and ελαιον, oil.) A mixture of oil and water.

HYDRENTEROCE'LE. (*e, es.* f.; from υδωρ, water, εντερον, an intestine, and κηλη, a tumour.) A hydrocele, or dropsy of the scrotum, attended with a rupture.

HYDRIODATE. *Hydriodas.* A salt consisting of the hydriodic acid, combined in a definite proportion with an oxide.

HYDRIODIC. (*Hydriodicus:* so called from its constituents being vapour and iodine.) The name of a peculiar acid.

Hydriodic acid. *Acidum hydriodicum.* If four parts of iodine be mixed with one of phosphorus, in a small glass retort, applying a gentle heat, and adding a few drops of water from time to time, a gas comes over, which must be received in the mercurial bath. This is hydriodic acid in a gaseous form.

An aqueous hydriodic acid can easily be obtained very economically, by passing sulphuretted hydrogene gas through a mixture of water and iodine in a Woolf's bottle. On heating the liquid obtained, the excess of sulphur flies off, and leaves liquid hydriodic acid. Hydriodic acid may also be formed, by passing hydrogene over iodine at an elevated temperature.

The compounds of hydriodic acid with the salifiable bases are called hydriodates, and may be easily formed, either by direct combination, or by acting on the basis in water, with iodine.

None of these acids have ever been applied to any medical purpose, except the hydriodates of potash and zinc, which are used as external applications to scrophulous tumours.

Hydriodate of potash. See *Potassæ hydriodas.*

Hydriodate of soda. See *Sodæ hydriodas.*

HYDRO'A. (*a, æ.* f.; from ὑδωρ, water.) A watery pustule.

HYDROBROMIC. (*Hydrobromicus:* so called from its being a compound of hydrogene and bromine.) The name of an acid, and its compounds.

Hydrobromic acid. *Acidum hydrobromicum.* A new acid, which has not yet been employed in the cure of diseases.

HYDRO-CHLORIC. (*Hydro-chloricus:* so named from its being a compound of chlorine and hydrogene.) The name of an acid and its compounds.

Hydro-chloric acid. See *Muriatic acid.*

HYDRO-FLUORIC. (*Hydro-fluoricus:* so called from its constituents.) The name of an acid and its compounds.

Hydro-fluoric acid. *Acidum hydrofluoricum.* This is procured by distilling, in lead or silver, a mixture of one part of the purest fluor spar, in fine powder, with two of sulphuric acid. It has not been applied to any medicinal use.

HYDRO-SULPHURIC. (*Hydrosulphuricus:* so termed from its constituents.) The name of an acid and its compounds.

Hydro-sulphuric acid. *Acidum hydrosulphuricum.* The aqueous solution of sulphuretted hydrogene is so called by Gay Lussac.

HYDRO-SULPHUROUS. (*Hydrosulphurosus:* so named from its constituents.) The name of an acid.

Hydro-sulphurous acid. *Acidum hydrosulphurosum.* When three volumes of sulphuretted hydrogene gas and two of sulphurous acid gas, both dry, are mixed together over mercury, they are condensed into a solid orange yellow body, which Dr. Thompson calls hydro-sulphurous acid.

HYDROCARBONATE. See *Carburetted hydrogene gas.*

HYDROCA'RDIA. (*a, æ.* f.; from ὑδωρ, water, and καρδια, the heart.) *Hydrocordis. Hydrops pericardii.* Dropsy of the heart. Dropsy of the pericardium. A collection of fluid in the pericardium, which may be either coagulable lymph, serum, or a puriform fluid. It produces symptoms similar to those of hydrothorax, with violent palpitation of the heart, and mostly an intermittent pulse. It is incurable.

HYDROCELE. (*e. es,* f.; from ὑδωρ, water, and κηλη, a tumour.) The term *hydrocele,* used in a literal sense, means any tumour produced by water; but surgeons have always confined it to those which possess either the membranes of the scrotum, or the coats of the testicle and its vessels. The first of these, viz. that which has its seat in the membranes of the scrotum, anasarca integumentorum, is common to the whole bag, and to all the cellular substance which loosely envelopes both the testes. It is, strictly speaking, only a symptom of a disease, in which the whole habit is most frequently more or less concerned, and very seldom affects the part only. The latter, or that which occupies the coats immediately investing the testicle and its vessels, hydrocele tunicæ vaginalis, is absolutely local, very seldom affects the common membrane of the scrotum, generally attacks one side only; and is frequently found in persons who are perfectly free from all other complaints.

The anasarca integumentorum retains the impression of the finger. The vaginal hydrocele has an undulating feel.

The hydrocele of the tunica vaginalis testis is a morbid accumulation of the water separated on the internal surface of the tunica vaginalis, to moisten or lubricate the testicle.

From its first appearance, it seldom disappears or diminishes, but generally continues to increase, sometimes rapidly, at others more slowly. In some it grows to a painful degree of distension in a few months: in others, it continues many years with little disturbance. As it enlarges, it becomes more tense, and is sometimes transparent; so that if a candle is held on the opposite side, a degree of light is perceived through the whole tumour; but the only certain distinction is the fluctuation, which is not found when the disease is a hernia of the omentum or intestines, or an inflammatory or a scirrhous tumour of the testicle.

Hydrocele cystata. Encysted hydrocele of the spermatic cord resembles the common hydrocele; but the tumour does not extend to the testicle, which may be felt below or behind it, while, in the hydrocele of the vaginal coat, when large, the testicle cannot be discovered. In this disease, also, the penis is not buried in the tumour. Sometimes the fluid is contained in two distinct cells; and this is discovered by little contractions in it. It is distinguished from the anasarcous hydrocele by a sensible fluctuation, and the want of the inelastic pitting; from hernia, by its beginning below, from its not receding in an horizontal position, and not enlarging by coughing and sneezing.

Hydrocele funiculi spermatici, or hydrocele of the spermatic cord. Anasarcous hydrocele of the spermatic cord sometimes accompanies ascites, and at other times it is found to be confined to the cellular substance in or about the spermatic cord. The causes of this disease may be obstructions in the lymphatics, leading from the part, in consequence of scirrhous affections of the abdominal viscera, or the pressure of a truss applied for the cure of hernia.

When the affection is connected with anasarca in other parts, it is then so evident as to require no particular description. When it is local, it is attended with a colourless tumour in the course of the spermatic cord, soft and inelastic to the touch, and unaccompanied with fluctuation. In an erect position

of the body, it is of an oblong figure; but when the body is recumbent, it is flatter, and somewhat round. Generally it is no longer than the part of the cord which lies in the groin; though sometimes it extends as far as the testicle, and even stretches the scrotum to an uncommon size. By pressure, a great part of the swelling can always be made to recede into the abdomen. It instantly, however, returns to its former situation, on the pressure being withdrawn.

Hydrocele peritonæi. The common dropsy of the belly, or ascites.

Hydrocele spinalis. A watery swelling on the vertebræ.

HYDROCE'PHALUS. (*us, i.* m.; from υδωρ, water, and κεφαλη, the head.) *Hydrocephalum. Hydrencephalus.* Dropsy of the brain. Dropsy of the head. It is distinguished by authors into *external* and *internal;* into *hydrocephalus membranarum* and *ventriculorum;* into acute and chronic. Dr. Cullen places the acute form, which has dilated pupils, and symptoms of pressure on the brain, amongst his comatose diseases, as a species of apoplexy, and calls it *Apoplexia hydrocephalica;* and the chronic form amongst the intumescentiæ.

Pain in the head, particularly across the brow, stupor, dilatation of the pupils, nausea, vomiting, preternatural slowness of the pulse, and convulsions, are the pathognomic symptoms of this disease, which have been laid down by the generality of writers.

The effusion of serous fluid, which gives name to this disease, is one of the many symptoms which accompany it. It has been stated, in treating of dropsy, and of the more remarkable divisions of dropsical maladies, that it was necessary to consider the primary and intrinsic causes, as well as the result of preternatural action, and this precaution is above all proper in speaking of hydrocephalus; for here much doubt has always existed as to its nosological arrangement. Pathologists, who have had in view chronic hydrocephalus, with dilatation of the sutures of the cranium, and who have traced this condition to a cachectic or scrophulous diathesis, have classed hydrocephalus with dropsy; but it is more common, with systematic writers on medicine, to regard the effusion as an occasional and secondary matter, and to consider the true disease as altogether an inflammation of the brain and membranes. The last-mentioned explanation of the disease is supported by the most approved teachers, and claims the first attention.

Acute hydrocephalus, in its early stages, is characterised by the symptoms of inflammation of the brain. The head is hot, the face flushed, the eyes dull, and without expression. The arteries of the temples and neck pulsate strongly. The child, for this is a strictly infantile malady, is restless and fretful, evidently suffering pain, while both the countenance and the gestures refer to the head as its seat. There is pyrexia more or less intense, the pulse is accelerated, the skin hot and dry, and the tongue covered with a white fur. The appetite is lost, and sometimes there is vomiting. The bowels are generally costive.

Although there are occasional instances of hydrocephalus occurring at the age of twelve and fourteen, it is, as has been already remarked, chiefly prevalent among children, and in these from the second to the sixth year. This circumstance, with others, makes the *diagnosis* difficult and important. Dr. Abercrombie remarks, that minute attention to the correspondence of the symptoms is of more consequence than any particular symptom. Thus, the peculiar oppression which accompanies a high degree of fever is not an unfavourable symptom; but the same degree of oppression occurring without fever, or with a very slight fever, would denote a head affection of much danger: a degree of headache and delirium, accompanying a high fever, would only be symptomatic; but, accompanying slight fever, would indicate a dangerous affection of the brain.

Dr. Gregory, in speaking of the diagnosis of hydrocephalus, mentions, as the disease with which it is most commonly confounded, common or typhus fever; and says, the "only manner of guarding against this source of fallacy, is, by bearing in mind that idiopathic fever is not common in young subjects, and that hydrocephalus is. Unless the evidence, therefore, be very unequivocal (as where the disease can be *distinctly* traced to contagion), the symptoms should always be attributed to hydrocephalus, and not to typhus."

"The second source of difficulty in the diagnosis arises from the *early* symptoms of hydrocephalus being in every respect the same with those which accompany abdominal irritation; but chiefly from the important pathological principle that several abdominal diseases, particularly those of children, are liable in their progress to affect the brain and nervous system, and to produce symptoms resembling those of the *latter* stages of hydrocephalus. The exact nature of these abdominal affections has been a frequent subject of dispute. By some it is supposed, that derangements in the *hepatic* system have a strong tendency to produce hydrocephalic symptoms; but I do not believe that the liver is more, if even so much, concerned in this, than the stomach and intestinal tract. A mere functional disturbance of these organs gives rise to remitting fever, headache, and vomiting. The presence of worms creates a degree of irritation that in the most striking manner counterfeits hydrocephalus. But, of all the states of abdominal disease which are liable to be mistaken for it, by far the most important is inflammation and ulceration of the mucous coat of the small intestines, particularly the ileum. In its latter stages, I have seen this disease attended in children with coma, dilated pupil, and screaming, constituting a secondary affection of the brain and nervous system."

"With reference to the diagnosis of hydro-

cephalus, it may further be observed, that in children the latter stages of what appears to be pneumonia are sometimes attended with coma and screams: the early symptoms, that is to say, having been difficult breathing, a hard pulse, and cough. These cases are extremely deceiving. On dissection, the thoracic viscera often appear healthy, while the ventricles of the brain are perhaps loaded with serum."

Dr. Marshall Hall, in a pamphlet entitled "On a Morbid Affection of Infancy," has quoted, in addition to his own doctrine, the opinions of Dr. Abercrombie, Dr. Good, and others, on the subject of the diagnosis of hydrocephalus, and the importance of considering and treating differently a disorder which resembles it in many respects.

Dr. Abercrombie observes: "In the last stage of diseases of exhaustion, patients frequently fall into a state resembling coma a considerable time before death, and while the pulse can still be felt distinctly. I have many times seen children lie for a day or two in this kind of stupor, and recover under the use of wine and nourishment. It is often scarcely to be distinguished from the coma which accompanies diseases of the brain. It attacks them after some continuance of exhausting diseases, such as tedious or neglected diarrhœa; and the patients lie in a state of insensibility, the pupils dilated, the eyes open and insensible to light, the face pale, and the pulse feeble. It may continue for a day or two and terminate favourably, or it may prove fatal. This affection seems to correspond with the apoplexia ex inanitione of the older writers. It differs from syncope, in coming on gradually, and in continuing a considerable time, perhaps a day or two; and it is not, like syncope, induced by sudden and temporary causes, but by causes of gradual exhaustion going on for a considerable time. It differs from mere exhaustion, in the complete abolition of sense and motion, while the pulse can be felt distinctly, and is, in some cases, of tolerable strength. I have seen in adults the same affection, though it is perhaps more uncommon than in children." Again: "The state of infants which I have referred to is a state of pure coma, scarcely distinguishable at first sight from the perfect stupor of the last stage of hydrocephalus, the child lying with the eyes open, or half open, the pupils dilated, the face pale. It is difficult to describe distinctly the appearance, but it is one which conveys the impression of coma rather than of sinking; and I remember, the first time I met with this affection, the circumstance which arrested my attention, and led me to suppose the disease was not hydrocephalus, and the state somewhat different from coma, was finding, on further enquiry, that it came on after diarrhœa, and not with any symptoms indicating an affection of the head. The child recovered under the use of wine and nourishment."

Dr. Good writes: "I am anxious to call the attention of medical men to a disorder of children, which I find invariably attributed to, and treated as, congestion or inflammation of the brain, but which I am convinced often depends on, or is connected with, the opposite state of circulation. It is chiefly indicated by heaviness of head and drowsiness: the age of the little patients whom I have seen in this state has been from a few months to two or three years; they have been rather small of their age, and of delicate health, or they have been exposed to debilitating causes. The physician finds the child lying on its nurse's lap, unable or unwilling to raise its head, half asleep, one moment opening its eyes, and the next closing them again with a remarkable expression of languor. The tongue is slightly white, the skin is not hot, at times the nurse remarks that it is colder than natural; in some cases there is at times a slight and transient flush; the bowels I have always seen already disturbed by purgatives, so that I can scarcely say what they are when left to themselves: thus, the state which I am describing is marked by heaviness of the head and drowsiness, without any signs of pain; great languor, and a total absence of all active febrile symptoms. The cases which I have seen have been invariably attributed to congestion of the brain; and the remedies employed have been leeches and cold lotion to the head, and purgatives, especially calomel. Under this treatment they have gradually become worse: the languor has increased, the deficiency of heat has become greater and more permanent, the pulse quicker and weaker, and at the end of a few days or a week, or sometimes longer, the little patients have died with symptoms apparently of exhaustion. In two cases, however, I have seen, during the last few hours, symptoms of oppressed brain, as coma and stertorous breathing, and dilated and motionless pupil."

But, to return to the subject of genuine hydrocephalus, and describe its progress and termination.

Dr. Clutterbuck says, "Inflammation of the membranes of the brain, like others, is often slight in degree, and terminates quickly in health. If it be long-continued, though slight, it often ends in serous accumulation, which is known or suspected by the marks of oppressed brain that take place. The pulse then loses its frequency, and often becomes preternaturally slow; the pupils are dilated; there is torpor of the bowels, and, indeed, throughout the whole system. The inflammation now frequently declines, or subsides altogether, the heat of head and of skin disappearing, and the tongue becoming clean. More frequently, however, the continuance of the febrile symptoms shows the continuance of the inflammation, but in very different degrees. If the child is very young, so that the bones are not firmly united, the head gradually enlarges in its dimensions, and becomes misshapen in its figure, and that so obviously and variously as not to require being described. The extent to which the enlargement goes is

very various. Sooner or later, it generally stops by the bones uniting, the head remaining afterwards through life preternaturally large. In this case a quantity of fluid remains, without seeming (in many instances at least) to interfere with the proper exercise of the *sensorial functions*, or even with the general health, except that the body is commonly stunted in its growth. Such subjects are always liable to repeated returns of inflammation in the brain or its membranes, and which, sooner or later, in many cases prove fatal. The *ventricles* are always, I believe, the principal seat of the serous accumulation, and they become enlarged and distended in consequence. In most cases, though not all, there is fluid found between the *dura mater* and the *arachnoid* membrane, and, in this case, it makes its way to the basis of the brain, and down the spinal canal. The enlargement of the ventricles appears to take place from a kind of evolution of the brain, without any material injury to the structure, if we may judge from the perfect way in which the functions are sometimes carried on in these cases. The cerebral substance, in extreme cases of this sort, becomes so attenuated by the expansion, as hardly to equal a line in thickness; which has led to the mistake of supposing that, in such cases, the brain had wholly disappeared.

Such is the progress, in the milder forms, of membraneous inflammation of the brain. On many occasions, the disease assumes a more active character, and soon spreads to the substance of the brain, as is known by the great disturbance of functions that ensues. Then it is that the restlessness becomes extreme, irritability both of mind and body is excessive, the expression of the countenance is altered, and especially that of the eyes, which are often directed irregularly, with the pupils unequally dilated. The eyelids remain half open, if the child sleeps; there is often delirium, as far as this can be observed in infants; the muscles of the hands and feet are in a state of contraction, and, frequently, general convulsions take place. The fur on the tongue becomes thicker, and of a darker colour; somnolency or stupor follows, and death ensues. The disease often proves fatal in two or three days, and, in very young infants, sometimes at the very commencement of the inflammation, and then commonly with convulsions. Sometimes the disease is protracted to two or three weeks before it proves fatal, depending chiefly upon the age of the patient. If the disease is thus protracted, it wears at first merely the appearance of ordinary fever, which indeed it is. As the disease advances, the brain begins to be *oppressed*, partly from some degree of serous accumulation, partly from the arterial excitement and consequent distension, so that there is a mixture of the symptoms of *inflamed* with those of *oppressed* brain. In many instances, towards the end, a *paralytic state* of one side of the body is observed, while the limbs on the opposite side, perhaps, are convulsed.

It is not, therefore," he says, "the mere presence of a certain quantity of fluid in the brain that gives rise to the symptoms of hydrocephalus; and, on the other hand, we have seen a disease go through all the usual symptoms of hydrocephalus, and terminate fatally, without any effusion. The fair conclusion from these facts appears to be, that the prominent symptoms in these cases are not the result of the effusion, but of that disease of the brain of which the effusion is one of the *terminations*. From a variety of facts adduced, there seems little reason to doubt that this disease is of an inflammatory nature; and therefore it follows, that our practice ought to be directed principally to subduing the inflammation at its earliest period, and preventing it from passing into *ramollissement*, which we have seen to be a fatal termination of the disease, even though of small extent and without effusion. This termination, I think, we have every reason to consider as the result most to be dreaded in this class of the inflammatory diseases of the brain; for, in regard to the mere effusion, were the parts otherwise in a healthy state, there does not seem to be any very satisfactory reasons for considering it as a hopeless affection. In other words, I mean to submit, that we have no good reasons for doubting the possibility of serous fluid being *absorbed from the ventricles of the brain*. We are warranted in this supposition, both by the analogy of other serous cavities, and by what we actually see take place in the brain itself. In the other serous cavities, we have every reason to believe that there is constantly going on an absorption of the old fluid, and a deposition of new fluid in its place; and we see them, in a state of disease, relieve themselves by an increased absorption from an excess of fluid that has been deposited. Upon the whole, we have sufficient ground for the following conclusions: —

1. That, in the ordinary cases of hydrocephalus, the coma and other symptoms attending it are not to be considered as the direct effect of the effusion, but of that morbid condition of the brain of which the effusion is the consequence.

2. That we have no certain mark which we can rely upon as indicating the presence of effusion in the brain. Slowness of pulse, followed by frequency, squinting, double vision, dilated pupil, paralytic symptoms, and perfect coma, we have seen exist *without any effusion*.

3. That all these symptoms may exist in connection with a state of the brain which is active, or simply inflammatory. While the disease is the subject of active treatment, adopted with decision at an early period, we have a prospect of arresting its progress in a considerable proportion of cases. The ground of prognosis in particular cases depends, perhaps, in a great measure, upon the activity of the symptoms. The more they approach to the character of active inflammation, our prospect of cutting them short will be greater; and the more they partake of the low scrofu-

lous inflammation, it will be the less. In all of them, the period for active practice is short, the irremediable mischief being probably done at an early period of the disease. These principles bear immediately upon the question, Has hydrocephalus been cured? There is no doubt that many cases have recovered, which exhibited all the usual symptoms of it. Such cases have, by some, been confidently brought forward as examples of hydrocephalus cured; while others have only considered them as remarkable from their singular resemblance to that disease. If the principles now referred to be admitted, we shall see reason to believe that we have no certain rule by which we can decide upon the presence of effusion in the brain; but that all the symptoms usually attending it exist in connection with an inflammatory condition of the brain, which, if allowed to go on, would probably lead to effusion; but which, if treated with *decision in its early stage*, may, in a certain proportion of cases, be treated with success. Whether the fluid can be absorbed, or the disease cured after effusion has taken place, must remain a matter of conjecture: but, from the facts which have been adduced, we have every reason to believe, that, in the ordinary cases of this disease, the *removal of the fluid, if it did take place, would in no respect improve the situation of the patient*, because there would still remain that deep-seated disease of the central parts of the brain which accompanies the effusion in so large a proportion of cases, and which, we have seen, may be fatal without any effusion, yet with all the usual symptoms of hydrocephalus. Hydrocephalus is, then, originally an inflammatory affection, chiefly seated in the substance of the central parts of the brain: that it generally terminates by *ramollissement* of these parts, combined with serous effusion in the ventricles; and that it may be fatal by the *ramollissement* alone, even of small extent, but with all the symptoms which are commonly considered as characteristic of hydrocephalus."

With regard to the prognosis of hydrocephalus, authors have differed. Dr. Abercrombie considers that the ground on which we may expect a cure, depends, in a great measure, upon the activity of the symptoms. The more they approach the character of active inflammation, the greater the prospect of cutting them short; and the more they partake of the character of low scrofulous inflammation, the less it will be. The disease must be admitted, in accordance with general testimony, to be always alarming, and not less so, from the obscurity which so commonly accompanies it. In every instance, too, the period for active practice is short.

An accumulation of water in the ventricles of the brain, is one of the most common appearances to be observed on dissection. In different cases, this is accumulated in greater or less quantities. It sometimes amounts to a few ounces. When the quantity of water is considerable, the fornix is raised at its anterior extremity, in consequence of its accumulation, and an immediate opening of communication is thereby formed between the lateral ventricles. The water is of a purer colour and more limpid than what is found in the dropsy of the thorax, or abdomen. It appears, however, to be generally of the same nature with the water that is accumulated in these cavities. In some instances, the water in hydrocephalus contains a very small proportion of coagulable matter, and in others it is entirely free from it.

When the water is accumulated to a very large quantity in the ventricles, the substance of the brain appears to be a sort of pulpy bag, containing a fluid.

The remedial means indicated in cases of acute hydrocephalus, are of the kind usually employed in membraneous inflammation. Blood should be freely drawn by the lancet or by leeches. The treatment must be prompt and active, to give a tolerable chance of success: and the blood should be abstracted either from the temporal artery or jugular vein, proportioning the quantity and repetition to the state of the system. Cold applications to the head are useful. The head must be shaved, and the evaporating lotion applied constantly by rags all over the head; the best is, two ounces of the spirit of sulphuric æther, four ounces of distilled vinegar, and twelve of water, made cold by ice: the evaporation is promoted, and the coldness consequently kept steady, by passing cold air over the head. Purgatives, frequently repeated at the commencement of the attack, are necessary. The pulvis scammonii cum calomelane is an excellent medicine of this class; and the elaterium, which acts by vomiting and purging, has been given with success in cachectic habits, and with a loose cohesion of the flesh, or what is called a leucophlegmatic state of the constitution. Digitalis has been a good deal used, but with very opposite testimony as to its utility. Mercury, in its various forms, and administered in different ways, has enjoyed a high character, but is not without its opponents. The submuriate has been occasionally of decided use, given in the dose of two grains every four hours to children from one to three years of age, and more in proportion to the periods of life. Mercurial ointment rubbed into the extremities has been resorted to with the same view, namely, that of producing a ptyalism under which the inflammatory action has been arrested, and effused fluid absorbed. Blisters, and counter-irritants, should never be applied previously to depletion, or while there is a high degree of excitement; for under such circumstances they tend to aggravate the disease. Dr. Mills has occasionally used the antimonial ointment as an application to the vertex with benefit, and especially in cases which have supervened to repelled scabies of the hairy scalp.

Chronic hydrocephalus is a very different disease, both in its character and progress, from the acute form which has been described.

It is frequently congenital; or, at least, there is a predisposition to it running through families, and developed sooner or later in the different individuals. It is connected with rachitis and scrofula; and is plainly a disease of cachexy and debility. It is this circumstance, doubtless, which has led to the confusion which is found to exist among authorities: the name hydrocephalus implying some connection with dropsical effusion, while the symptoms of active inflammation, which mark the acute disease, place that form among the pyrexial maladies.

Dropsy of the head, like that of every other organ, may proceed from a relaxed condition of the secernents of the brain, a torpitude of its absorbents, or from both.

With the deficiency of tone there is also not unfrequently some deficiency of structure or substance; and it is in consequence of this that the fluid, when morbidly secreted or collected in one part, spreads without resistance to another. A deficiency of structure or substance is sometimes found in the brain itself, and sometimes in the cranium. Generally speaking, there is some deficiency of bony earth; and the bones of the cranium have occasionally been so thin as to be pellucid, and transmit the light of a candle.

This chronic disease is always dangerous, and there is much difficulty in determining its extent, and the degree of cerebral disorganisation which may accompany it. Where, however, it is limited to a weak condition of the excernents of the brain, and medicines are speedily and steadily exhibited, there is a probability of its being removed; but where, on the contrary, no favourable impression can be made on the organ, the general frame partakes by degrees of the debility, the vital powers flag, the limbs become emaciated, and death ensues at an uncertain period; or the patient survives, a miserable spectacle to the world, and a burden to the family perhaps for years. Post mortem examinations of these enlargements of the head have not only found the skull very much enlarged in size, and altered in its shape,—and it appears exceeding large in proportion to the face,—but, on removing the scalp, the bones are found to be very thin, and there are frequently broad spots of membrane in the bone. These appearances are observed where the disease has been of some years' continuance. In some cases, where the quantity of water collected is not great, the substance of the brain has appeared to be indurated, and in others softened. Collections also of a viscid tenacious matter have been discovered in cysts, upon its external surface; tumours have also been found attached to its substance, and in many instances a conversion of a great part of the substance of the cerebrum or cerebellum into hæmatomatous, metanomatous, scrofulous, and other structures.

HYDROCO'TYLE. (*e, es.* f.; from *υδωρ*, water, and *κοτυλη*, the cotula.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

2. The name, in some pharmacopœias, for the common marsh or water cotula, or pennywort, which is said to possess acrid qualities.

HYDROCYANIC ACID. *Acidum hydrocyanicum:* so called from its colour. See *Prussic acid*.

HYDROCY'STIS. (*is, idis.* f.; from *υδωρ*, water, and *κυστις*, a vesicle.) An encysted dropsy.

HY'DROGENE. (*Hydrogenium, ii.* n.; from *υδωρ*, water, and *γινομαι*, to become, or *γενναω*, to produce: because, with oxygene, it produces water.) The base of inflammable air: a substance not perceptible to the sensations in a separate state; but its existence is not at all the less certain. Though it cannot be exhibited experimentally uncombined, it can be pursued while it passes out of one combination into another. It cannot, indeed, be arrested on its passage; but it is sure to be discovered, if the proper chemical means be used, when it presents itself in a new compound.

Hydrogene, as its name expresses, is one of the constituent elements of water, from which it can alone be procured. It is plentifully distributed in nature, and acts a very considerable part in the processes of the animal and vegetable economy. It is one of the ingredients in the varieties of bitumen, oils, fat, ardent spirit, æther, and, in fact, all the proximate, component parts of animal and vegetable bodies. It forms a constituent part of all animal and vegetable acids. It is one of the constituents of ammonia, and of various other compound gases.

It possesses so great an affinity for caloric, that it can only exist separately in the state of gas; it is, consequently, impossible to procure it in the concrete or liquid state, independent of combination.

Solid hydrogene, therefore, united to caloric and light, forms HYDROGENE GAS.

Properties of hydrogene gas.—This gas, formerly called inflammable air, was discovered by Cavendish, in the year 1768, or, rather, he first obtained it in a state of purity, and ascertained its more important properties, though it had been noticed long before. The famous philosophical candle attests the antiquity of this discovery.

Hydrogene gas, like oxygene gas, is a triple compound, consisting of the ponderable base of hydrogene, caloric, and light. It possesses all the mechanical properties of atmospheric air. It is the lightest substance whose weight we are able to estimate: when in its purest state, and free from moisture, it is about fourteen times lighter than atmospheric air. It is not fitted for respiration; animals, when obliged to breathe in it, die almost instantaneously. It is decomposed by living vegetables, and its basis becomes one of the constituents of oil, resin, &c. It is inflammable, and burns rapidly when kindled, *in contact with atmospheric air or oxygene gas*,

by means of the electric spark, or by an inflamed body; and burns, when pure, with a yellowish lambent flame; but all burning substances are immediately extinguished when immersed in it. It is, therefore, incapable of supporting combustion. It is not injurious to growing vegetables. It is unabsorbable by most substances: water absorbs it very sparingly. It is capable of dissolving carbon, sulphur, phosphorus, arsenic, and many other bodies. When its basis combines with that of oxygene gas, water is formed; with nitrogene it forms ammonia. It does not act on earthy substances.

Method of obtaining hydrogene gas.—A ready method of obtaining it consists in subjecting water to the action of a substance which is capable of decomposing this fluid.

1. For this purpose, let sulphuric acid, previously diluted with four or five times its weight of water, be poured on iron filings, or bits of zinc, in a small retort or gas-bottle, called a pneumatic flask, or proof: as soon as the diluted acid comes in contact with the metal, a violent effervescence takes place, and hydrogene gas escapes without external heat being applied. It may be collected in the usual manner over water, taking care to let a certain portion escape on account of the atmospheric air contained in the disengaging vessels.

The production of hydrogene gas in the above way is owing to the decomposition of water. The iron or zinc, when in contact with this fluid, in conjunction with sulphuric acid, has a greater affinity to oxygene than the hydrogene has; the oxygene, therefore, unites to it, and forms an oxide of that metal, which is instantly attacked and dissolved by the acid; the other constituent part of the water, the hydrogene, is set free, which, by uniting with caloric, assumes the form of hydrogene gas. The oxygene is, therefore, the bond of union between the metal and the acid.

The hissing noise, or effervescence, observable during the process, is owing to the rapid motion excited in the mixture by means of the great number of air-bubbles quickly disengaged and breaking at the surface of the fluid.

We see, also, in this case, that *two* substances exert an attraction, and are even capable of decomposing jointly a *third*, which neither of them is able to do singly; viz. if we present sulphuric acid alone, or iron or zinc alone, to water, they cannot detach the oxygene from the hydrogene of that fluid; but, if both are applied, a decomposition is instantly effected. This experiment, therefore, proves that the agency of chemical affinity between two or more bodies may lie dormant, until it is called into action by the interposition of another body, which frequently exerts no energy upon any of them in a separate state. Instances of this kind were formerly called *predisposing affinities.*

2. Iron, in a red heat, has also the property of decomposing water, by dislodging the oxygene from its combination with hydrogene, in the following manner:—

Let a gun-barrel, having its touch-hole screwed up, pass through a furnace, or large crucible perforated for that purpose, taking care to incline the barrel at the narrowest part; adjust to its upper extremity a retort charged with water, and let the other extremity terminate in a tube introduced under a receiver in the pneumatic trough. When the apparatus is thus disposed, and well luted, bring the gun-barrel to a red heat, and, when thoroughly red-hot, make the water in the retort boil; the vapour, when passing through the red-hot tube, will yield hydrogene gas abundantly. In this experiment, the oxygene of the water combines with the iron at a red-heat, so as to convert it into an oxide, and the caloric applied combines with the hydrogene of the water, and forms hydrogene gas. It is, therefore, the result of a double affinity, that of the oxygene of the water for the metal, and that of its hydrogene for caloric.

The more caloric is employed in the experiment of decomposing water by means of iron, &c. the sooner is the water decomposed.

Hydrogene gas, combined with carbon, is frequently found in great abundance in mines and coal-pits, where it is sometimes generated suddenly, and becomes mixed with the atmospheric air of these subterraneous cavities. If a lighted candle be brought in, this mixture often explodes, and produces the most dreadful effects. It is called, by miners, *fire damp.* It generally forms a cloud in the upper part of the mine, on account of its levity, but does not mix there with atmospheric air, unless some agitation takes place. The miners frequently set fire to it with a candle, lying at the same time flat on their faces to escape the violence of the shock. An easier and more safe method of clearing the mine, is by leading a long tube through the shaft of it, to the ash-pit of a furnace: by this means the gas will be conducted to feed the fire.

Sir Humphrey Davy has invented a valuable instrument, called a *safety lamp*, which will enable the miners to convey a light into such impure air without risk. This is founded on the important discovery, made by him, that flame is incapable of passing through minute apertures in a metallic substance, which yet are pervious to air: the reason of which appears to be, that the ignited gas, or vapour, is so much cooled by the metal in its passage, as to cease being luminous.

Hydrogene gas, in whatever manner produced, *always* originates from water, either in consequence of a preceding decomposition, by which it had been combined in the state of solid or fixed hydrogene, with one of the substances employed, or from a decomposition of water actually taking place during the experiment.

There are instances recorded of a vapour issuing from the stomachs of dead persons, which took fire on the approach of a candle.

We even find accounts, in several works, of the combustion of living human beings, which appeared to be spontaneous. Dr. Swediaur has related some instances of porters at Warsaw, who, having drank abundantly of spirit, fell down in the street, with the smoke issuing out of their mouths, and people came to their assistance, saying they would take fire; to prevent which, they made them drink a great quantity of milk, or used a more singular expedient, by causing them to swallow the urine of the bystanders, immediately on its evacuation. However difficult it may be to give credit to such narratives, it is equally difficult to reject them entirely, without refusing to admit the numerous testimonies of men who were, for the most part, worthy of credit. *Citizen Lair* has collected all the circumstances of this nature, which he found dispersed in different books, and has rejected those which did not appear to be supported by respectable testimony, to which he has added some others, related by persons still living. These narratives are nine in number; they were communicated to the Philomathic Society, at Paris, and inserted in the bulletin, Thermidor, An. 5, No. 29. The cause of this phænomenon has been attributed to a developement of hydrogene gas taking place in the stomachs of these individuals. *Lair* believes that the bodies of these people were not burned perfectly spontaneously, but it appeared to be owing to some very slight external cause, such as the fire of a candle, taper, or pipe.

Hydrogene, seleniuretted. This gas is colourless. It reddens litmus. Its density has not been determined by experiment. Its smell resembles, at first, that of sulphuretted hydrogene gas; but the sensation soon changes, and another succeeds, which is at once pungent, astringent, and painful. The eyes become almost instantly red and inflamed, and the sense of smelling entirely disappears. A bubble of the size of a little pea is sufficient to produce these effects. Of all the bodies derived from the inorganic kingdom, seleniuretted hydrogene is that which exercises the strongest action on the animal economy. Water dissolves this gas; but in what proportions is not known.

Hydrogene, sulphuretted. Sulphuretted hydrogene gas possesses the properties of an acid; for, when absorbed by water, its solution reddens vegetable blues; it combines also with alkalies, earths, and with several metallic oxides. Sulphuretted hydrogene, combined with any base, forms a *hydro-sulphuret*, which may be also called an *hepatule*, to distinguish it from an *hepar*, which is the union of sulphur singly with a base. Sulphuretted hydrogene gas possesses an extremely offensive odour, resembling that of putrid eggs. It kills animals, and extinguishes burning bodies. When in contact with oxygene gas, or atmospheric air, it is inflammable. Mingled with nitrous gas, it burns with a yellowish green flame. It is decomposed by ammonia, by oxymuriatic acid gas, and by sulphureous acid gas. It has a strong action on the greater number of metallic oxides. Its specific gravity is about 1·18 when pure. It is composed, according to Thompson, of sixteen parts of sulphur, and one of hydrogene. It has the property of dissolving a small quantity of phosphorus.

Sulphuretted hydrogene gas may be obtained in several ways, but commonly thus: —

Take dry sulphuret of potash, put it into a tubulated retort, lodged in a sand-bath, or supported over a lamp; direct the neck of the retort under a receiver placed in the pneumatic trough; then pour gradually upon the sulphuret diluted sulphuric or muriatic acid; a violent effervescence will take place, and sulphuretted hydrogene gas will be liberated. When no more gas is produced spontaneously, urge the mixture with heat, by degrees, till it boils, and gas will again be liberated abundantly.

The water made use of for receiving it, should be heated to about 80° or 90°; at this temperature it dissolves little of the gas: whereas, if cold water be made use of, a much greater quantity of it is absorbed.

Explanation. — Though sulphur makes no alteration on water, which proves that sulphur has less attraction for oxygene than hydrogene has, yet if sulphur be united to an alkali, this combination decomposes water whenever it comes in contact with it, though the alkali itself has no attraction either for oxygene or hydrogene.

The formation of this gas explains this truth. On adding the sulphuret of potash to the water, this fluid becomes decomposed, part of the sulphur robs it of its oxygene, and forms with it sulphuric acid; this generated acid unites to part of the alkali, and forms sulphate of potash. The liberated hydrogene dissolves another part of the sulphur, and forms with it sulphuretted hydrogene, the basis of this gas, which is retained by the separated portion of the alkali. The sulphuric or muriatic acid added, now extricates it from the alkali, and makes it fly off in the form of gas.

Hydrogene, carburetted. See *Carburetted hydrogene gas.*

Hydrogene, percarburetted. See *Carburetted hydrogene gas.*

Hydrogene, subcarburetted. See *Carburetted hydrogene gas.*

Hydrogene, phosphuretted. See *Phosphorus.*

Hydrogene, subphosphuretted. See *Phosphorus.*

Hydrogene gas, heavy, carbonated. See *Carbonated hydrogene gas.*

Hydrogene gas, light, carbonated. See *Carburetted hydrogene gas.*

HYDROGURET. See *Uret.*

Hydroguret of carbon. See *Carburetted hydrogene gas.*

HYDROLA'PATHUM. (*um, i.* n.; from ὕδωρ, water, and λαπαθον, the dock.) See *Rumex hydrolapathum.*

HY'DROMEL. (*Hydromeli*, indeclinable; from υδωρ, water, and μελι, honey.) Water impregnated with honey: called also, *Mulsam; Aqua mulsa; Melicratum; Braggat; Hydromel.* After it is fermented, it is called vinous hydromel, or mead.

HYDROMETER. (*Hydrometrum*, *i.* n.; from υδωρ, water or fluid, and μετρον, a measure.) The name of an instrument, by which the strength of fluids which contain water is determined.

HYDROME'TRA. (*a*, *æ*. f.; from υδωρ, water, and μητρα, the womb.) *Hydrops uteri.* Dropsy of the womb. It produces a swelling of the hypogastric region, slowly and gradually increasing, resembling the figure of the uterus, yielding to or fluctuating on pressure, without ischury or pregnancy. Sauvages enumerates seven species. It must be considered as a very rare disease, and one that can with difficulty be ascertained.

HYDRO'MPHALUM. (*um*, *i.* n.; from υδωρ, water, and ομφαλος, the navel.) A tumour of the navel containing water.

HYDRO'NOSOS. (From υδωρ, water, and νοσος, a disease.) A watery disease: applied to the sweating-sickness. See *Sudor anglicanus.*

HYDRO-OXIDE. See *Hydrate.*

HYDROPEDE'SIS. (From υδωρ, water, and πηδαω, to break out.) A breaking out into a violent sweat.

HYDROPHANE. *Oculus mundi.* A variety of opal, which has the property of becoming transparent on immersion in water.

HYDROPHO'BIA. (*a*, *æ*. f.; from υδωρ, water, and φοϐεω, to fear: because persons that are thus bitten dread the sight or the falling of water when first seized.) *Rabies canina. Cynanthropia. Cynolesia.* Canine madness. This disease arises in consequence of the bite of a rabid animal, as a dog or cat, and sometimes spontaneously. It is characterised by a loathing and great dread of drinking a liquid.

There are two species of hydrophobia:—

1. *Hydrophobia rabiosa*, when there is a desire of biting.

2. *Hydrophobia simplex*, when there is not a desire of biting.

Dr. James observes, that this peculiar affection properly belongs to the canine genus, viz. dogs, foxes, and wolves; in which animals only it seems to be innate and natural, scarcely ever appearing in any others, except when communicated from these. When a dog is affected with madness, he becomes dull, solitary, and endeavours to hide himself, seldom barking, but making a murmuring noise, and refusing all kinds of meat and drink. He flies at strangers; but, in this stage, he remembers and respects his master: his head and tail hang down; he walks as if overpowered by sleep; and a bite at this period, though dangerous, is not so apt to bring on the disease in the animal bitten as one inflicted at a later period. The dog at length begins to pant; he breathes quickly and heavily; his tongue hangs out; his mouth is continually open, and discharges a large quantity of froth. Sometimes he walks slowly, as if half asleep, and then runs suddenly but not always directly forward. At last he forgets his master; his eyes have a dull, watery, red appearance: he grows thin and weak, often falls down, gets up and attempts to fly at every thing, becoming very soon quite furious. The animal seldom lives in this latter state longer than thirty hours; and it is said that his bites towards the end of his existence are the most dangerous. The throat of a person suffering hydrophobia is always much affected; and, it is asserted, the nearer the bite to this part the more perilous.

Hydrophobia may be communicated to the human subject from the bites of cats, cows, and other animals not of the canine species, to which the affection has been previously communicated. However, it is from the bites of those domestic ones, the dog and cat, that most cases of hydrophobia originate. It does not appear that the bite of a person affected can communicate the disease to another; at least the records of medicine furnish no proof of this circumstance.

In the human species, the general symptoms attendant upon the bite of a mad dog, or other rabid animal, are, at some indefinite period, and occasionally long after the bitten part seems quite well; a slight pain begins to be felt in it, now and then attended with itching, but generally resembling a rheumatic pain. Then come on wandering pains, with an uneasiness and heaviness, disturbed sleep, and frightful dreams, accompanied with great restlessness, sudden startings, and spasms, sighing, anxiety, and a love for solitude. These symptoms continuing to increase daily, pains begin to shoot from the place which was wounded, all along up to the throat, with a straitness and sensation of choking, and a horror and dread at the sight of water, and other liquids, together with a loss of appetite and tremor. The person is, however, capable of swallowing any solid substance with tolerable ease; but the moment that any thing in a fluid form is brought in contact with his lips, it occasions him to start back with much dread and horror, although he labours perhaps under great thirst at the time.

A vomiting of bilious matter soon comes on, in the course of the disease, and an intense hot fever ensues, attended with continual watching, great thirst, dryness and roughness of the tongue, hoarseness of the voice, and the discharge of a viscid saliva from the mouth, which the patient is constantly spitting out; together with spasms of the genital and urinary organs, in consequence of which the evacuations are forcibly thrown out. His respiration is laborious and uneasy, but his judgment is unaffected; and, as long as he retains the power of speech, his answers are distinct.

In some few instances, a severe delirium arises, and closes the tragic scene; but it more frequently happens that the pulse becomes

tremulous and irregular, that convulsions arise, and that nature, being at length exhausted, sinks under the pressure of misery.

The appearances to be observed on dissection, in hydrophobia, are unusual aridity of the viscera and other parts; marks of inflammation in the fauces, gula, and larynx; inflammatory appearances in the stomach, and an accumulation or effusion of blood in the lungs. Some marks of inflammation are likewise to be observed in the brain, consisting in a serious effusion on its surface, or in a redness of the pia mater; which appearances have also presented themselves in the dog.

In some cases of dissection, not the least morbid appearance has been observed, either in the fauces, diaphragm, stomach, or intestines.

No cure has hitherto been found for this distressing disease when established. The plans which have been said to have been successful in a few cases, have very generally failed in all others.

If medical aid can be obtained at the time of the bite, or very soon after, the efficacious means of preventing the absorption of the poison, is by removing or destroying the bitten part. This has been done in various ways: the lacerated part has been *amputated*, or *dissected* out; in other instances, the *actual* and *potential cautery* have been applied. Iron heated nearly to whiteness was used by the ancients. Pure potash, formerly called lapis infernalis, was proposed as a less terrific process. Of these three modes of operating, the potential cautery is the least to be depended on. Of the other two, it is of little consequence which is selected: either will prove sufficiently efficacious alone, if employed early enough; that is, before absorption has taken place, and extensively enough to extirpate or destroy every portion of the bitten part. It has also been strongly recommended to apply a ligature above the bitten part, sufficiently tight to prevent the absorbents from imbibing the virus. But this does not appear likely to answer; for, if the poison be received into the absorbents, it will be carried into the circulation in a circuitous way, if arrested in the regular course.

When the constitutional disease has actually shown itself, the curative processes which have been resorted to are all reducible into the four following: —

1. That of stimulating and supporting the vital power, under the severe conflict to which it is exposed.

2. That of suddenly exhausting the system, under the conviction that the disease is inflammatory.

3. That of opposing the poison by certain antidotes.

4. That of considering the disease as highly nervous and spasmodic.

To carry the first intention into effect, volatile alkali, warm and pungent aromatics, with bark, have been resorted to. The confectio aromatica, confectio opii, most of the carbonates of ammonia, essential oils, and cajeput oil, with camphire, were amongst the leading cordials, and the different preparations of cinchona, with or without them.

The means resorted to with a view of suddenly debilitating and exhausting the system, upon the opinion of the disease being inflammatory, are bleeding and purgatives. The former has been said to have cured two cases, very lately, in the East Indies; in consequence of which, though formerly abandoned from its inutility, the bleeding has lately been revived, and carried to the extent of fainting, by large and rapid depletions; and the operation has been repeated almost as long as the powers of life would allow. Under this plan, some cases are loosely recorded as being successful in the last hundred years. There is great reason, therefore, to doubt the efficacy of this practice, which would have been very generally instituted, had it been efficacious. The purgative plan consists in the exhibition of those medicines which have a drastic effect, especially colocynth, camboge, aloes, and the submuriate of mercury: these have been administered in large doses, or such as kept up a continued purgation. Another powerful means of endeavouring to fulfil the same indication is submersion in cold water. Celsus appears to have been the first who resorted to it with a view of taking off the spasm of hydrophobia, and quenching the thirst that accompanies it: — "Miserrimum genus morbi; in quo simul æger et siti et aquæ metu cruciatur: quo oppressis in angusto spes est." In this almost hopeless state, the only remedy, he observes, is to throw the patient instantly, and without warning, into a fish-pond, alternately, if he has no knowledge of swimming, plunging him under the water, that he may drink; then raising his head, or forcing him under if he can swim, and keeping him below till he is filled with water, so that the thirst and water dread may be extinguished at the same time. But there is, he further observes, another danger, lest the body of the patient, exhausted and worn out by the submersion, as well as by the disease, be thrown into convulsions: to prevent which, as soon as he is taken out of the pond he is to be put into warm oil. In subsequent times, practitioners have proceeded in a bolder way, regardless of convulsions, and have persevered, at all hazards, in reducing the living power to its last ebb, believing, that the nearer they suffocated the patient, without actually killing him, the greater their chance of success. In the present day, this practice is carried into effect by bathing in the open sea, or in a cold sea-water bath, by the seaside.

With regard to the third intention, that of opposing the poison of canine rabies by certain antidotes, this has been the result of pathologists having thought it of a nature akin to the poison of other venomous animals, and particularly serpents; and, consequently, best to be opposed by the usual remedies and specifics to which these are found most

effectually to yield. The Ophiorrhiza mungos stands the first in this class of antidotes. It has long been supposed to be a specific for the bite of the rattle-snake; and, in India and Ceylon, it is used in the present day as an antidote against the bite of a mad dog. Acids and alkalies were supposed to operate in the same way. The muriatic acid, the sulphuric, and the acetic, were formerly selected. Of the alkalies, the carbonates of ammonia, and the eau de luce, have been largely used, both internally and externally. Mercury, from its being a specific in syphilis, and more especially from its specific action on the salivary organs, the supposed immediate outlet of the poison of rabies, has had a strong claim to general attention, and has been very extensively tried, in various forms, and acquired a high degree of reputation. The grand object with mercurials is to excite a speedy salivation, and maintain it so long as there is supposed to be any danger; and especially where the administration had been delayed till the paroxysm had shown itself. In some few cases this practice is said to have effected a cure; but, like all the others, it has failed in most. As diuretics were supposed to possess a strong alexipharmic power, they have not been without their votaries. Cantharides, and one or two species of scarabei, have been given internally, and applied also externally. The ash-coloured liverwort, or lichen caninus of Linnæus, was once a very popular remedy against canine madness. It was given in powder, with an equal quantity of black pepper, a drachm and a half of the two forming a dose for an adult, which was taken for four mornings fasting, in half a pint of warm cow's milk: the patient, however, was first to lose nine ounces of blood, and afterwards to be dipped in cold water for a month together, early in the morning.

The fourth intention regards the highly nervous and spasmodic condition of the system, to allay which antispasmodics and sedatives have been resorted to. Practitioners have universally considered this as the most likely way of subduing the disease; and hence the whole catalogue of antispasmodics and sedatives have been extensively employed: and, indeed, the benefit occasionally derived from volatile alkali, camphire, and cold bathing, must be referred to their antispasmodic virtues. The more direct medicines, however, of this class, are opium, æther, musk, belladonna, nux vomica, hyosciamus, belladonna, nitrate of silver, and ammoniated copper, oil of amber, and arsenic. Opium alone, and in combination with musk, have been chiefly depended on; but in neither way have the effects been found more beneficial than other means. When the patient can swallow, it is to be administered in full doses; and, if the constriction of the throat prevents the patient swallowing, two grains of opium, dissolved in an ounce of any bland fluid, may be thrown into the rectum, and kept there, every two or three hours. The French practitioners injected a gummy solution of opium into the veins. Two grains of the extract were in this manner thrown in, and the patient was in some degree tranquillised for an hour or two; the dose was doubled towards the evening of the same day. It was repeated at intervals, and at length increased to eight grains at a dose. The relief it afforded, however, was never more than temporary, and he expired on the fifth day from the incursion. Mosch has been said to be a specific antidote in hydrophobia, by Gmelin; but, though given in ample doses in this country, its exhibition has not been followed by any such result as to justify its being depended on. The combination of musk and opium has been very generally tried; and also æther, camphire, oil of amber, &c. at the same time; and such varied compounds, though they certainly bid fair, as the most powerful antispasmodics, failed as generally as other medicines. Musk and cinnabar was supposed to be peculiarly efficacious. The famous powder employed by the natives of Tonquin, and introduced into this country by Mr. Cobb, consisted of sixteen grains of musk, and forty-eight grains of cinnabar, mixed in a gill of arrack. This, taken at a dose, is said to have thrown the patient into a sound sleep and perspiration in the course of two or three hours; and where it did not, the dose was repeated till such effect was produced. Arsenical preparations, and prussic acid, have, under the direction of the most skilful practitioners, had a fair trial, and in every instance been unsuccessful. Besides the remedies already mentioned, there are two or three others. The Ormskirk medicine, so called from the place where its inventor lived, was supposed—for he could not be prevailed on to publish his secret—to consist of powder of chalk, half an ounce; Armenian bole, three drachms; alum, ten grains; powder of elecampane-root, one drachm; oil of anise, six drops. The single dose, thus compounded, is to be taken every morning, for six times, in a glass of water, with a small proportion of fresh milk. The Alysma plantago, or mad-wort plantain, has for some years been a popular remedy against canine madness, and is depended on in the present day in Russia, where they give the root, reduced to a powder, and spread over bread and butter. Two or three doses are said to be sufficient in the worst cases. In the second number of the Hamburgh Medical Repository, quite a new remedy is mentioned, viz. that of introducing rabid blood into the system. Dr. Ritchmeister, of Finland, has collected a number of striking cases, and various authorities, in proof of the blood of a rabid animal, when drunk, being a specific against the canine hydrophobia, even when the symptoms are the most strongly marked. The rabid wolf-dog, or other quadruped, is for this purpose killed, and its blood drawn off and collected as a drink. Chlorine is the last remedy we have to notice, which Brugnatelli, of Pavia, contends has specific powers over

this disease, though denied by an equally distinguished professor.

HYDROPHO'SPHOROUS. (*Hydrophosphorosus*: so called from its composition.) That which is composed of water and phosphorus.

Hydrophosphorous acid. See *Phosphorous acid.*

HYDROPHTHA'LMIA. (*a, æ.* f.; from υδωρ, water, and οφθαλμος, the eye.) *Hydrophthalmium.* There are two diseases, different in their nature and consequence, thus termed. The one is a mere anasarcous or œdematous swelling of the eyelid. The other, the true hydrophthalmia, is a swelling of the bulb of the eye, from too great a collection of vitreous or aqueous humours.

HYDROPHTHA'LMIUM. (*um, ii.* n.; from υδωρ, water, and οφθαλμος, the eye.) See *Hydrophthalmia.*

HYDROPHTORIC ACID. (*Hydrophthoricus*; from υδωρ, water, and φθορος, destructive.) Ampère's name for the base of the fluoric acid, called by Davy *fluorine.* See *Hydro-fluoric acid.*

HYDROPHYSOCE'LE. (*e, es.* f.; from υδωρ, water, φυση, flatulence, and κηλη, a tumour.) A swelling formed of water and air. It was applied to a hernia, in the sac of which was a fluid and air.

HYDRO'PIC. (*Hydropicus*; from υδρωψ, the dropsy.) A medicine which relieves or cures dropsy.

HYDRO'PIPER. (*er, eris.* n.; from υδωρ, water, and πεπερι, pepper: so called from its biting the tongue like pepper, and growing in marshy places.) See *Polygonum hydropiper.*

HYDROPNEUMOSA'RCA. (*a, æ.* f.; from υδωρ, water, πνευμα, wind, and σαρξ, flesh.) A tumour of air, water, and solid substances.

HYDROPOI'DES. (From υδρωψ, a dropsy, and ειδος, likeness.) Serous or watery: formerly applied to liquid and watery excrements.

HY'DROPS (*ops, opis.* m.; from υδωρ, water.) Dropsy. A preternatural collection of serous or watery fluid in the cellular substance, or different cavities of the body. It receives different appellations, according to the particular situation of the fluid. When it is diffused through the cellular membrane, either generally or partially, it is called *anasarca*. When it is deposited in the cavity of the cranium, it is called *hydrocephalus*; when in the chest, *hydrothorax*, or *hydrops pectoris*; when in the abdomen, *ascites*; in the uterus, *hydrometra*; and within the scrotum, *hydrocele.*

Dropsy is a consequence of so many and such various morbid conditions, that much difficulty has always existed in giving just and general views of its nature. The older and more popular theory regarded debility as its universal cause, and made divisions according merely to the different seats of the fluid collected; as anasarca, hydrocephalus, hydrothorax, &c. Later, the attention of chemists and physicians was drawn to the analysis of the urine discharged during the disease, and of the fluid itself, when it could be procured; and upon the differences thus traced was founded the diagnosis, and the practice of this school of *water doctors.* At the present day, the investigation of the morbid anatomy of disease led pathologists to explain dropsy, by declaring the existence, in all cases, of some obstacle to the circulation in the blood vessels or lymphatics, or of some inflammation of a secreting surface. But perhaps, as in other instances, the nature of this disease may be, in any given case, best illustrated by a consideration of its history in relation to all the various circumstances which may explain it, but without bestowing an exclusive reliance upon any isolated facts: since, although something is to be learned from each view which is taken, it cannot be asserted that there is any one condition, or symptom, or organic defect so peculiar and so constantly present as to be esteemed essential and necessary to its production. Thus, the diffused dropsy, succeeding to exanthematous complaints or to profuse hæmorrhage, and to mercurial salivation, and occurring so commonly as a sequel to chronic wasting diseases, may be very justly said to arise from a profuse exhalation on the part of the secernents or terminal vessels, which open their mouths too widely, and suffer the serum or other aqueous fluid to escape with too much freedom; or it may proceed from a torpid and inactive condition of the correspondent absorbents occasioning too small a removal of this fluid; or by each of these diseased conditions of both sets of vessels operating at the same time: to which double deviation from healthy action has been applied the name of hydropic diathesis. But the debility, which may be truly called characteristic here, cannot be supposed to exist in the sudden effusions from the membrane enveloping the testicle or the heart, from the tunics of the brain, or of the eye. Dr. Blackall has lately revived and insisted on the method of distinguishing the different varieties of dropsy, by attending to the chemical qualities of the urine and effused fluid; and this study of consequences promised a very convenient solution of the difficulties generally found in tracing the causes and character of a disease which shows itself under such different combinations of morbid conditions: but, upon a perusal of the cases where this plan has been pursued, there will not be found so great a constancy in the connection of their chemical qualities with the morbid phænomena co-existing, as to afford a sure basis for classification and practice. Again, the divisions founded upon anatomical observations, which are in many cases the only true ones, are rendered less satisfactory by the consideration that the same morbid conditions are often found to exist not conjoined with a dropsical state; and that, where this is present, we are called upon to allow of some general hydropic tendency or cachexy which has been

superadded to the structural derangement, as, otherwise, we cannot fully account for this consequence not occurring whenever the imputed causes show themselves. Thus, obstructions to the circulation, as aneurisms and ossified valves, exist sometimes for years without producing anasarca; inflammation of the peritonæum, though, in the first instance, causing an effusion of lymph, does not necessarily lay the foundation of ascites. And we must, in general, admit the influence of modifying circumstances, even in cases where the occasional cause, be this mechanical obstruction or inflammation, is clearly shown; for neither in kind nor degree is the dropsical effusion always in accordance with the existence of organic mischief.

It is not only in gaining a diagnostic knowledge of the true character of any dropsical effusion, that a reference to its origin and progress is likely to be of use, but our prognosis and curative efforts will be excited and modified mainly by their consideration: for, taking the hint from the suddenness and severity, the collateral circumstances, the intrinsic nature, so far as we can appreciate it, and the causes of the phænomena, one opinion of its probable result, and one professional agency will rest upon—the only reasonable and practical foundation—an acquaintance with the history of parallel cases, and a determination to remove or to alleviate the existing causes of the one which we treat. See *Anasarca, Ascites, Hydrocephalus*, &c.

HYDROPS AD MATULAM. See *Diabetes.*

HYDROPS ARTICULI. A swelling of a joint is so called, when produced by a serous or lymphatic effusion into the joint or surrounding cellular structure.

HYDROPS CYSTICUS. A dropsy enclosed in a bag, or cyst. See *Ascites.*

HYDROPS GENU. An accumulation of fluid within the capsular ligament of the knee.

HYDROPS MEDULLÆ SPINALIS. See *Hydrorachitis*, and *Spina bifida.*

HYDROPS OVARII. Dropsy of the ovarium. See *Ascites.*

HYDROPS PECTORIS. See *Hydrothorax.*

HYDROPS PERICARDII. See *Hydrocardia.*

HYDROPS PULMONUM. Water in the cellular interstices of the lungs.

HYDROPS SCROTI. See *Hydrocele.*

HYDROPS UTERI. See *Hydrometra.*

HYDROPY'RETUS. (From ὑδωρ, water, and πυρετος, fever.) A sweating fever.

HYDRORACHI'TIS. (*is, idis.* f.; from ὑδωρ, water, and ραχις, the spine.) *Hydrops medullæ spinalis. Hydrocele spinalis. Hydrorachytis spinosa.* A tumour upon the spine of new-born children, generally about the lower vertebræ of the loins and upper parts of the sacrum; at first, it is of a dark blue colour, but in proportion as it increases in size, approaches nearer and nearer to the colour of the skin, becoming perfectly diaphanous.

From the surface of this tumour a pellucid watery fluid sometimes exudes, and this circumstance has been noticed by different authors. It is always attended with a weakness, or, more properly speaking, a paralysis of the lower extremities. The opening of it rashly has proved quickly fatal to the child. Tulpius, therefore, strongly dissuades us from attempting this operation. Acrel mentions a case where a nurse rashly opened a tumour, which, as he described it, was a blood-bag on the back of the child at the time of its birth, in bigness equal to a hen's egg, in two hours after which the child died. From the dissection it appeared that the bladder lay in the middle of the os sacrum, and consisted of a coat, and some strong membrane, which proceeded from a long fissure of the bones. The extremity of the spinal marrow lay bare, and the spinal duct, in the os sacrum, was uncommonly wide, and distended by the pressure of the waters. Upon tracing it to the head, the brain was found nearly in its natural state, but the ventricles contained so much water that the infundibulum was quite distended with it, and the passage between the third and fourth ventricle was greatly enlarged. The same writer likewise takes notice of another case, where a child lived about eight years labouring under this complaint, during which time it seemed to enjoy tolerable health, though pale. Nothing seemed amiss in him, but such a degree of debility as rendered him incapable to stand on his legs. The tumour was in the middle of the os sacrum, of the bigness of a man's fist, with little discolouring; and upon pressing it became less. When opened it was found full of water, and the coats were the same as in the former, but the separation of the bones was very considerable. The spinal marrow, under the tumour, was as small as a packthread, and rigid; but there were no morbid appearances in the brain.

HYDRORO'SATUM. A drink made of water, honey, and the juice of roses.

HYDROSA'CCHARUM. (*um, i.* n.; from ὑδωρ, water, and σακχαρον, sugar.) A drink made of sugar and water.

HYDROSA'RCA. (*a, æ.* f.; from ὑδωρ, water, and σαρξ, the flesh.) See *Anasarca.*

HYDROSARCOCE'LE. (*e, es.* f.; from ὑδωρ, water, σαρξ, the flesh, and κηλη, a tumour.) Sarcocele, with an effusion of water into the cellular membrane.

HYDROSELENIC. (*Hydroselenicus*; so called from its constituent principles.) The name of an acid.

HYDROSELENIC ACID. *Acidum hydroselenicum.* The best process which we can employ for procuring this acid, consists in treating the seleniuret of iron with the liquid muriatic acid. The acid gas evolved must be collected over mercury. As in this case a little of another gas, condensible neither in water nor alkaline solutions, appears, the best substance for obtaining absolutely pure hydroselenic acid would be seleniuret of potash.

HYDROSELI'NUM. (*um, i.* n.; from ὑδωρ, water, and σελινον, purslane.) A species of purslane growing in marshy places.

HYDROSULPHURET. *Hydrosulphuretum.* A compound of sulphuretted hydrogene with a salifiable basis. See *Sulphur.*

Hydrosulphure'tum stibii luteum. See *Antimonii sulphuretum præcipitatum.*

Hydrosulphuretum stibii rubrum. *Kermes mineralis.* A hydrosulphuret of antimony formerly in high estimation as an expectorant, sudorific, and antispasmodic, in difficult respiration, rheumatism, diseases of the skin and glands.

HYDROTHIONIC. *Hydrothionicus.* Some German chemists have called sulphuretted hydrogene by this name.

HYDROTHO'RAX. (*ax, acis.* f.; from ὕδωρ, water, and θωραξ, the chest.) *Hydrops thoracis. Hydrops pectoris.* Dropsy of the chest. Difficulty of breathing, particularly when in an horizontal posture; sudden startings from sleep, with anxiety, and palpitations of the heart; cough, paleness of the visage, anasarcous swellings of the lower extremities, thirst, and a scarcity of urine, are the characteristic symptoms of hydrothorax; but the one which is more decisive than all the rest, is a fluctuation of water being perceived in the chest, either by the patient himself or his medical attendant, on certain motions of the body.

The causes which give rise to this disease, are pretty much the same with those which are productive of the other species of dropsy. See *Hydrops.* In some cases, it exists without any other kind of dropsical affection being present; but it prevails very often as a part of more universal dropsy.

It frequently takes place to a considerable degree before it becomes very perceptible; and its presence is not readily known, the symptoms, like those of hydrocephalus, not being always very distinct. In some instances, the water is collected in both sacs of the pleura; but, at other times, it is only in one. Sometimes it is lodged in the pericardium alone; but, for the most part, it only appears there when, at the same time, a collection is present in one or both cavities of the thorax. Sometimes the water is effused in the cellular texture of the lungs, without any being deposited in the cavity of the thorax. In a few cases, the water that is collected is enveloped in small cysts of a membraneous nature, known by the name of hydatides, which seem to float in the cavity; but more frequently they are connected with, and attached to, particular parts of the internal surface of the pleura.

Hydrothorax often comes on with a sense of uneasiness at the lower end of the sternum, accompanied by a difficulty of breathing which is much increased by any exertion, and which is always most considerable during night, when the body is in an horizontal posture. Along with these symptoms there is a cough, that is at first dry, but which, after a time, is attended with an expectoration of thin mucus. There is likewise a paleness of the complexion, and an anasarcous swelling of the feet and legs, together with a considerable degree of thirst, and a diminished flow of urine. Under these appearances, we have just grounds to suspect that there is a collection of water in the chest; but if the fluctuation can be perceived, there can then remain no doubt as to the reality of its presence.

During the progress of the disease, it is no uncommon thing for the patient to feel a numbness, or degree of palsy, in one or both arms, and to be more than ordinarily sensible to cold. With regard to the pulse, it is usually quick at first, but, towards the end, becomes irregular and intermitting.

Our prognostic in hydrothorax must, in general, be unfavourable, as it has seldom been cured, and, in many cases, will hardly admit even of alleviation, the difficulty of breathing continuing to increase, until the action of the lungs is at last entirely impeded by the quantity of water deposited in the chest. In some cases, the event is suddenly fatal; but, in others, it is preceded, for a few days previous to death, by a spitting of blood.

Dissections of this disease show that, in some cases, the water is either collected in one side of the thorax, or that there are hydatides formed in some particular part of it; but they more frequently discover water in both sides of the chest, accompanied by a collection in the cellular texture and principal cavities of the body. The fluid is usually of a yellowish colour; possesses properties similar to serum, and, with respect to its quantity, varies very much, being from a few ounces to several quarts. According to the quantity, so are the lungs compressed by it; and, where it is very considerable, they are usually found much reduced in size. When universal anasarca has preceded the collection in the chest, it is no uncommon occurrence to find some of the abdominal viscera in a scirrhous state.

The treatment of this disease must be conducted on the same general plan as that of anasarca. Emetics, however, are hazardous, and purgatives do not afford so much benefit; but the bowels must be kept regular, and other evacuating remedies may be employed in conjunction with tonics. Squill has been chiefly resorted to, as being expectorant as well as diuretic; but its power is usually not great, unless it be carried so far as to cause nausea, which cannot usually be borne to any extent. Digitalis is more to be relied upon; but it will be better to conjoin them, adding, perhaps, some form of mercury, and employing at the same time other diuretics, as the supertartrate or acetate of potash, juniper berries, &c. Where febrile symptoms attend, diaphoretics will probably be especially serviceable, as the pulvis ipecacuanhæ compositus, or antimonials, in small doses; which last may also promote expectoration. Blisters to the chest will be proper in many cases, particularly should there be any pain or other mark of inflammatory action. Myrrh seems to answer better than most other tonics, as more decidedly promoting expectoration;

or the nitric acid may be given, increasing the secretion of urine, as well as supporting the strength. The inhalation of oxygene gas is stated to have been in some instances singularly beneficial. Where the fluid is collected in either of the sacs of the pleura, the operation of paracentesis of the thorax may afford relief under urgent symptoms, and, perhaps, contribute to the recovery of the patient.

HYDROXANTHIC. The name applied to a new acid.

Hydroxanthic acid. *Acidum hydroxanthicum.* The acid may be obtained by pouring a mixture of four parts of sulphuric acid, and three of water, on the salt of potash, and, in a few seconds, adding abundance of water. The acid collects at the bottom of the water as a transparent slightly coloured oil. It must be quickly washed with water until free from sulphuric acid. This acid reddens litmus paper powerfully. Its taste is acid and astringent.—*Dr. Zeise of Copenhagen.*

HYDROXURE. See *Hydrate.*

HYDRURET. (*Hydruretum, i.* n.) A compound of hydrogene with a metal. See *Uret.*

HYGEIA. (*a, æ.* f. The goddess of health.) One of the four daughters of Æsculapius. She often accompanies her father in the monuments of him now remaining, and appears like a young woman, commonly with a serpent in one hand, and a patera in the other. Sometimes the serpent drinks out of the patera; sometimes he twines about the whole body of the goddess.

HYGIE'NE. (*e, es.* f.; from υγιαινω, to be well.) *Hygiesis.* Health. Modern physicians have applied this term to that part of *therapeia* which treats of the diet and non-naturals of the sick.

Hygie'sis. See *Hygiene.*

Hygrempla'strum. (From υγρος, moist, and εμπλαςρον, a plaster.) A liquid plaster.

Hygroblepha'ricus. (From υγρος, humid, and βλεφαρον, the eyelid.) Moist eyelid: applied to the emunctory ducts in the extreme edge, or inner part of the eyelid.

HYGROCIRSOCE'LE. (*e, es.* f.; from υγρος, moist, κιρσος, a varix, and κηλη, a tumour.) Circocele, with dropsy of the scrotum.

Hygrocolly'rium. (From υγρος, liquid, and κολλυριον, a collyrium.) A collyrium composed of liquids.

HYGRO'LOGY. (*Hygrologia, æ.* f.; from υγρος, a humour or fluid, and λογος, a discourse.) The doctrine of the fluids.

HYGRO'MA. (*a, atis.* n. Υγρωμα; from υγρος, a liquid.) A tumour, the contents of which are either serum, a fluid like lymph, chocolate grounds, or some morbid humour, but not pus.

HYGRO'METER. (*Hygrometrum, i.* n.; from υγρος, moist, and μετρον, a measure.) Hydrometer. An instrument to measure the degrees of moisture in the atmosphere. It also means an infirm part of the body, affected by moisture of the atmosphere.

Hygromy'rum. (From υγρος, moist, and μυρον, a liquid ointment.) A liquid ointment.

Hygropho'bia. See *Hydrophobia.*

HYGROSCOPE. An instrument to ascertain the quantity of humidity in substances.

Hygroscopic. (*Hygroscopicus;* from υγρος, moisture, and σκοπεω, to explore.) Having the property of absorbing moisture from the atmosphere. See *Atmosphere.*

Hy'grus. (From υγρος, humid.) Humid: applied formerly to liquid plasters.

HY'LE. (Ὑλη, matter.) *Hyle.* The materia medica, or matter of any kind that comes under the cognisance of a medical person.

HY'MEN. (*en, inis.* m.; from *Hymen,* the god of marriage, because this membrane is supposed to be entire before marriage, or copulation.) The hymen is a thin membrane, of a semilunar or circular form, placed at the entrance of the vagina, which it partly closes. It has a very different appearance in different women, but it is generally, if not always, found in virgins, and is very properly esteemed the test of virginity, being ruptured in the first act of coition. The remnants of the hymen are called the carunculæ myrtiformes. The hymen is also peculiar to the human species. There are two circumstances relating to the hymen which require medical assistance. It is sometimes of such a strong ligamentous texture, that it cannot be ruptured, and prevents the connexion between the sexes. It is also sometimes imperforated, wholly closing the entrance into the vagina, and preventing any discharge from the uterus; but both these cases are extremely rare. If the hymen be of an unnaturally firm texture, but perforated, though perhaps with a very small opening, the inconveniences thence arising will not be discovered before the time of marriage, when they may be removed by a crucial incision made through it, taking care not to injure the adjoining parts.

The imperforation of the hymen will produce its inconveniences when the person begins to menstruate: for the menstruous fluid being secreted from the uterus at each period, and not evacuated, the patient suffers much pain from the distension of the parts, many strange symptoms and appearances are occasioned, and suspicions injurious to her reputation are often entertained. In a case of this kind, for which Dr. Denman was consulted, the young woman, who was twenty-two years of age, having many uterine complaints, with the abdomen enlarged, was suspected to be pregnant, though she persevered in asserting the contrary, and had never menstruated. When she was prevailed upon to submit to an examination, the circumscribed tumour of the uterus was found to reach as high as the navel, and the external parts were stretched by a round soft substance at the entrance of the vagina, in such a manner as to resemble that appearance which they have when the head of a child is passing through them: but there was no entrance into the vagina. On the following morning an incision was carefully made through the hymen, which had a fleshy appearance, and was

thickened in proportion to its distension. Not less than four pounds of blood, of the colour and consistence of tar, were discharged; and the tumefaction of the abdomen was immediately removed. Several stellated incisions were afterwards made through the divided edges, which is a very necessary part of the operation; and care was taken to prevent a re-union of the hymen till the next period of menstruation, after which she suffered no inconvenience. The blood discharged was uot putrid or coagulated, and seemed to have undergone no other change after its secretion, but what was occasioned by the absorption of its more fluid parts. Some caution is required when the hymen is closed in those who are in advanced age, unless the membrane be distended by the confined menses; as Dr. Denman once saw an instance of inflammation of the peritonæum being immediately produced after the operation, of which the patient died, as in the true puerperal fever; and no other reason could be assigned for the disease.

HYMENÆA. (*a, æ.* f.; from *Hymen*, the god of marriage: because, as Linnæus informs us, its younger leaves cohere together in pairs, throughout the night.) The name of a genus of plants. Class, *Decandria*; Order, *Monogynia*.

Hymenæa courbaril. The systematic name of the locust-tree which affords the resin called *gum anime*, which is now fallen into disuse, and is only to be found in the collections of the curious.

HYMENIUM. (*um, ii.* n.; from υμην, a membrane.) The dilated exposed membrane of gymnocarpous mushrooms, in which the seed is placed. See *Gymnocarpi*.

HYMENODES. (From υμην, a membrane, and ειδος, likeness.) An old term for such urine as is found to be full of little films and pellicles. Hippocrates applies it also to the menstrual discharges when mixed with a tough viscid phlegm.

HYO. Names compounded of this word belong to muscles which originate from, or are inserted into, or connected with the os hyoides; as, *Hyo-glossus*, *Hyo-pharyngeus*, *Genio-hyo-glossus*, &c.

HYO-GLOSSUS. *Cerato-glossus*, of Douglas and Cowper. *Basio-cerato chondro-glossus*, of Albinus. A muscle situated at the sides between the os hyoides and the tongue. It arises from the basis, but chiefly from the corner of the os hyoides, running laterally and forwards to the tongue, which it pulls inwards and downwards.

HYOI'DES. (From the Greek letter υ, and ειδος, likeness.) Hyoid, or like the Greek letter upsilon.

Hyoides os. This bone, which is situated between the root of the tongue and the larynx, derives its name from its supposed resemblance to the Greek letter υ, and is, by some writers, described along with the parts contained in the mouth. Ruysch has seen the ligaments of the bone so completely ossified, that the os hyoides was joined to the temporal bones by anchylosis. In describing this bone, it may be distinguished into its body, horns, and appendices. The body is the middle and broadest part of the bone, so placed that it may be easily felt with the finger in the fore-part of the throat. Its fore-part, which is placed towards the tongue, is irregularly convex, and its inner surface, which is turned towards the larynx, is unequally concave. The *cornua*, or horns, which are flat, and a little bent, are considerably longer than the body of the bone, and may be said to form the sides of the *υ*. These horns are thickest near the body of the bone. At the extremity of each is observed a round tubercle, from which a ligament passes to the thyroid cartilage. The appendices, or lesser horns, *cornua minora*, as they are called by some writers, are two small processes, which in their size and shape are somewhat like a grain of wheat. They rise up from the articulations of the cornua, with the body of the bone, and are sometimes connected with the styloid process on each side, by means of a ligament. It is not unusual to find small portions of bone in these ligaments; and Ruysch, as we have already observed, has seen them completely ossified. In the fœtus, almost the whole of the bone is in a cartilaginous state, excepting a small point of a bone in the middle of its body, and in each of its horns. The appendices do not begin to appear till after birth, and usually remain cartilaginous many years. The os hyoides serves to support the tongue, and affords attachment to a variety of muscles, some of which perform the motions of the tongue, while others act on the larynx and fauces.

HYOPHARYNGE'US. (From υοειδες, the hyoid bone, and φαρυγξ, the pharynx.) A muscle so called from its origin in the os hyoides, and its insertion in the pharynx.

HYOPHTHA'LMUS. (*us, i.* m.; from υς, a swine, and οφθαλμος, an eye: so named from the supposed resemblance of its flower to a hog's eye.) Hog's-eye plant. Most probably the *Buphthalmum spinosum* of Linnæus.

HYOSCIANIA. (*a, æ.* f.; so called because obtained from hyoscyamus.) A vegetable alkali, extracted from henbane. See *Hyoscyamus niger*.

HYOSCY'AMUS. (*us, i.* m.; from υς, a swine, and κυαμος, a bean: so named because hogs eat it as a medicine, or it may be because the plant is hairy and bristly, like a swine.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

2. The pharmacopœial name of the henbane. See *Hyoscyamus niger*.

Hyoscyamus albus. This plant, a native of the south of Europe, possesses similar virtues to the hyoscyamus niger.

Hyoscyamus luteus. A species of tobacco, the *Nicotiana rustica* of Linnæus.

Hyoscyamus niger. The systematic name of common or black henbane; called also, *Faba suilla*, *Apollinaris altercum*, *Agone*, and *Alter-*

eangenon. Hyoscyamus—foliis amplexicaulibus sinuatis, floribus sessilibus, of Linnæus. The leaves of this plant, when recent, have a slightly fœtid smell, and a mucilaginous taste; when dried, they lose both taste and smell, and part also of their narcotic power. The root possesses the same qualities as the leaves, and even in a more eminent degree. Henbane resembles opium in its action, more than any other narcotic dose. In a moderate dose, it increases at first the strength of the pulse, and occasions some sense of heat, which are followed by diminished sensibility and motion; in some cases, by thirst, sickness, stupor, and dimness of vision. In a larger quantity it occasions profound sleep, hard pulse, and sometimes fierce delirium, ending in coma, or convulsions, with a remarkable dilatation of the pupil, distortion of the countenance, a weak tremulous pulse, and eruption of petechiæ. On dissection, gangrenous spots have been found on the internal surface of the stomach. Its baneful effects are best counteracted by a powerful emetic, and by drinking largely of the vegetable acids.

Henbane has been used in various spasmodic and painful diseases; as in epilepsy, hysteria, palpitation, headache, paralysis, mania, and scirrhus. It is given in the form of the inspissated juice of the fresh leaves, the dose of which is from one to two grains; which requires to be gradually increased. It is sometimes employed as a substitute for opium, where the latter, from idiosyncrasy, occasions any disagreeable symptom. The henbane also is free from the constipating quality of the opium.

Dr. Brande has extracted a new alkali from this plant, which he calls *hyoscianta*. It crystallises in long prisms, and, when neutralised by sulphuric or nitric acid, forms characteristic salts.

Hyothyroi'des. (From υοειδες, the hyoid bone, and θυροειδης, the thyroid cartilage.) A muscle named from its origin in the hyoid bone, and insertion in the thyroid cartilage.

Hypa'cticus. (From υπαγω, to subdue.) That which evacuates the fæces. Obsolete.

Hypalei'ptrum. (From υπαλειφω, to spread upon.) A spatula for spreading ointments with.

Hype'latus. (From υπελαω, to move.) Purging. Obsolete.

HYPER. (Υπερ, excess.) In excess: applied by chemists to some compounds which have one of their constituent principles in excess; thus, muriate of soda, with an excess of oxygene, was called a hyperoxymuriate; so carbonates of soda and of potash, with an excess or additional quantity of carbonic acid, were called hypercarbonates of potash and of soda.

HYPERÆTHE'SIS. (From υπερ, and αισθανομαι, to feel.) Error of appetite, whether by excess or deficiency.

HYPERCATHA'RSIS. (*is, is.* f.; from υπερ, *supra*, over or above, and καθαιρω, to purge.) *Hyperinesis. Hyperinos.* An excessive purging from medicines.

Hypercoryphó'sis. (From υπερ, above, and κορυφη, the vertex.) A prominence or protuberance. Hippocrates calls the lobes of the liver and lungs *Hypercoryphoses.*

HYPE'RCRISIS. (*is, is.* f. Υπερκρισις; from υπερ, over or above, and κρινω, to separate.) A critical excretion above measure; as when a fever terminates in a looseness, the humours may flow off faster than the strength can bear, and therefore it is to be checked.

HYPERE'MESIS. (*is, is.* f.; from υπερ, in excess, and εμεω, to vomit.) An excessive evacuation by vomiting.

HYPEREPHIDROSIS. (*is, is.* f.; from υπερ, excess, and ιδρως, sweat.) Immoderate sweating.

HYPE'RICUM. (*um, i.* n.; from υπερ, over, and εικων, an image or spectre: so named because it was thought to have power over and to drive away evil spirits.) 1. The name of a genus of plants in the Linnæan system. Class, *Polyadelphia;* Order, *Polyandria.* St. John's wort.

2. The pharmacopœial name of the common St. John's wort. See *Hypericum perfoliatum.*

Hypericum androsæmum. Tutsan or All-heal, Park-leaves, and St. Peter's wort. This plant is the *androsemum* of the shops, which was formerly used internally as a mild purgative, and externally the fresh leaves were applied to heal ulcers. It is now deservedly fallen into disuse.

Hypericum bacciferum. *Caa-opia. Arbuncula gummifera Braziliensis.* A juice exudes from the wounded bark of this plant, in the Brazils, which in a dry state resembles camboge, but is rather darker.

Hypericum coris. *Coris lutea. Coris legitima cretica.* Bastard St. John's wort. The seeds are diuretic, emmenagogue, and antispasmodic.

Hypericum perfoliatum. The systematic name of the St. John's wort; called also, *Fuga dæmonum,* and *Androsæmum. Hypericum perforatum —floribus trigynis, caule ancipiti, foliis obtusis pellucido-punctatis,* of Linnæus. This indigenous plant was greatly esteemed by the ancients, internally in a great variety of diseases, and externally as an anodyne and discutient, but is now very rarely used. The flowers were formerly in our pharmacopœia, on account of the great proportion of resinous oily matter, in which the medical efficacy of the plant is supposed to reside, but are now omitted.

Hypericum saxatile. *Hypericoides.* The seeds are said to be diuretic and antispasmodic: but have fallen into disuse.

Hyperine'sis. See *Hypercatharsis.*

Hyperi'nos. See *Hypercatharsis.*

Hyperi'nus. (From υπερ, in excess, and ινεω, to evacuate.) Purging excessively.

Hypero'a. (From υπερ, above, and ωον, the top of a house.) The palate.

Hyperopharyngæ'us. (From υπερ, above, and φαρυγξ, the pharynx.) A muscle named from its situation above the pharynx.

HYPEROSTO'SIS. (*is, is.* m.; from υπερ, upon, and οςεον, a bone.) See *Exostosis.*

Hypero'um. (From υπερ, above, and ωον, the roof, or palate.) A foramen in the upper part of the palate.

Hyperoxymuriate. A genus of salts now called a chlorate.

HYPERSARCO'MA. (*a, atis.* n.; from υπερ, in excess, and σαρξ, flesh.) *Hypersarcosis.* A fleshy excrescence.

Hypersarco'sis. See *Hypersarcoma.*

HYPERSTENE. Labradore spar. Found in Labradore, Greenland, and Isle of Skye.

Hyperydro'sis. (From υπερ, in excess, and υδωρ, water.) A great distension of any part, from water collected in it.

Hype'xodos. (From υπο, under, and εξοδος, passing out.) A flux of the belly.

HYPNO'BATES. (From υπνος, sleep, and βαινω, to go.) *Hypnobatasis.* One who walks in his sleep. See *Oneirodynia.*

HYPNOLO'GIA. (*a, æ.* f.; from υπνος, sleep, and λογος, a discourse.) A dissertation, or directions for the due regulation of sleeping and waking.

HYPNOPOIE'TIC. (*Hypnopoieticus;* from υπνος, sleep, and ποιεω, to cause.) That which procures sleep.

HYPNO'TIC. (*Hypnoticus;* from υπνος, sleep.) Whatever procures sleep.

HYPO-SULPHITE. A sulphuretted sulphite.

HYPOÆ'MA. (*a, atis.* n.; from υπο, under, and αιμα, blood: because the blood is under the cornea.) An effusion of red blood into the chambers of the eye.

Hypocaro'des. (From υπο, and καρος, a carus.) *Hypocarothis.* One who labours under a low degree of carus.

Hypocatha'rsis. (From υπο, under, and καθαιρω, to purge.) It is when a medicine does not work so much as expected, or but very little. Or a slight purging, when it is a disorder.

HYPOCAU'STRUM. (*um, i.* n.; from υπο, under, and καιω, to burn.) A stove, hothouse, or any such like contrivance, to preserve plants from cold air.

Hypocerchna'leon. (From υπο, under, and κερχνος, an asperity of the fauces.) A stridulous kind of asperity of the fauces.

Hypochæris. (*is, idis.* f.; from υπο, and χοιρος, a hog.) Swine-weed. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.*

Hypochæris maculata. Broad-leaved Hungarian hawkweed; called also, *Hieracium alpinum, Pannonica, Costa herba, Costa pulmonaria, Pilocella major, Dens leonis,* and *Pulmonaria lutea.* This plant grows on high chalky soils, flowers in June, and is much esteemed by foreign practitioners in those pulmonary complaints for which we administer the Iceland moss.

Hypochæris minima. *Hieracium minus.* This plant grows in pasture grounds, and flowers in June and July. It is not now used.

Hypocheo'menos. (From υπο, under, and χεω, to pour.) One who labours under a cataract.

Hypochloro'sis. (From υπο, and χλωρωσις, the green-sickness.) A slight degree of chlorosis.

HYPOCHO'NDRIAC. (*Hypochondriacus;* from υπο, under, and χονδρος, a cartilage.) 1. Belonging to the hypochondria.

2. A person affected with lowness of spirits. See *Hypochondriasis.*

Hypochondriac region. *Regio hypochondriaca.* The spaces in the abdomen that are under the cartilages of the spurious ribs on each side of the epigastrium.

HYPOCHONDRI'ASIS. (*is, is.* m.; from υποχονδριακος, one who is hipped.) Hypochondriacism: vapours, lowness of spirits; called also, *Morbus hypochondriacus, Affectio hypochondriaca,* and *Passio hypochondriaca.*

This disease bears so near a resemblance to several of the varieties of genuine melancholy, as to be often distinguishable from them with great difficulty; and the more so as it is no uncommon thing for hypochondriacism to terminate in melancholy, or for melancholy to be combined with hypochondriacism. Both may be the result of a predisposing constitution, or may be primarily induced by accidental causes where no such constitution exists; and the predisposition and the accidental causes of the one may become those of the other: for the temperament known by the common name of melancholic, and characterised by a lean and dry corporeal texture, small and rigid muscles, a sallow skin, brownish-yellow complexion, little relieved by redness of any kind, deep black and coarse hair, eyes sunk in hollow sockets, large prominent veins, especially in the hands and arms, with a tendency to solitude and private musing, is a common precursor of both. And in like manner a sedentary life of any kind, and especially severe study protracted to a late hour in the night, and rarely relieved by social intercourse, exercise, or nugatory amusements; a debauched and dissolute habit, or excesses in eating and drinking, may become causes of either of these maladies, from accessory circumstances that cannot be traced out even where the predisponent temperament does not seem to exist. But even in those whose health is much deranged, true melancholy seldom arises, except mental causes of grief and distress join themselves to the corporeal ones: and this constitutes one of the characters which distinguishes true melancholy from hypochondriacism. The former may be said to be always excited by mental causes, and consists in various phænomena of grief, despondency, and despair; whereas the latter most commonly arises from corporeal causes, and its mental phænomena consist of erroneous ideas entertained about the patient's own make or body.

The corporeal causes are usually a diseased emotion of one or more of the digestive organs. It is also not unfrequently a result of the sudden cessation of some periodical or other habitual discharge, as that of an issue,

or of a hæmorrhoidal flux, a chronic ulcer, or some external eruption.

The melancholy man seldom lives long, and his disorder often commences in the meridian of life. He frequently terminates his days by violence, or at the utmost never attains old age. The hypochondriac seldom becomes affected till after the meridian of life, and very generally continues to the stage of longevity.

The common corporeal symptoms are a troublesome flatulency in the stomach or bowels, acrid eructations, costiveness, a copious discharge of pale urine, spasmodic pains in the head and other parts of the body, giddiness, dimness of sight, palpitations, general sleeplessness, and an utter inability of fixing the attention upon any subject of importance, or engaging in any thing that demands vigour or courage. The mental feelings, and peculiar trains of ideas that haunt the imagination and overwhelm the judgment, exhibit an infinite diversity, and lay a foundation for the three following varieties: vapours; weariness of life; misanthropy, or spleen.

In the *first*, or low spirits, the patient is tormented with a visionary or exaggerated sense of pains, or some concealed disease; a whimsical dislike of particular persons, places, or things; or groundless apprehensions of personal danger or poverty.

Greding gives an account of a medical practitioner who applied to him for assistance, under an impression that his stomach was filled with frogs, which had been successively spawning ever since he had bathed, when a boy, in a pool in which he had perceived a few tadpoles. He had spent his life in trying to expel this imaginary evil, and had travelled to numerous places to consult the first physicians of the day upon his obstinate malady. It was in vain to attempt convincing him that the gurglings he heard were from extricated and erratic wind. He argued himself, says Greding, into a great passion in my presence, and asked me if I did not hear the frogs croak.

The whims that are sometimes seriously entertained under this variety of the disease, are so truly ludicrous that "to be grave exceeds all power of face." One thinks himself a giant, another a dwarf; one is as heavy as lead, another as light as a feather. Marcellus Donatus makes mention of a baker of Ferrara who thought himself a lump of butter, and durst not sit in the sun nor come near the fire for fear of being melted. They are all extremely timid, and their fears are exercised upon trifles, or are altogether groundless. Some suspect their nearest and dearest friends of designing to poison them: others dare not be alone in the dark, lest they should be attacked with ghosts or hobgoblins. They dare not go over a bridge, or near a pool, rock, or steep hill, lest they should be tempted to hang, drown, or precipitate themselves: and if they come to a place where a robbery or a murder has been committed, they instantly fear they are suspected. Trincavellius had a patient that for three years together could not be persuaded but that he had killed a man, and at length sunk into a confirmed melancholy, and made away with himself for fear of the gallows.

It is a melancholy reflection that the wisest and best of mankind are as open to this affliction as the weakest, and perhaps more so. Pascal himself was at one time so hallucinated with hypochondrism, as to believe that he was always on the verge of an abyss, into which he was in danger of falling; and, under the influence of this terror, he would never sit down till a chair was placed on that side of him on which he thought he saw it, and thus proved the floor to be substantial.

Under the *second variety* we meet with a totally distinct set of morbid feelings and ideas; for the patient is here oppressed with a general listlessness and disgust; an irksomeness and weariness of life, often without any specific reason whatever. Those who, having been actively engaged in the heigh-day and meridian of life, have retired upon their fortunes with a view of enjoying them in quiet, but who unhappily find themselves fitted for any thing rather than for quiet, are the subjects of this form of hypochondriacism, especially if they have no taste for reading, reflection, or domestic tranquillity, and are too proud to return to the bustle of the world and the excitement of nicely-balanced speculations. There is here a want of the habitual stimulus to a secretion of sensorial power; in consequence of which the individual sinks into a state of low spirits, and becomes unhappy. A like issue frequently follows upon a life devoted to all the pursuits of sensual gratification, in the course of which the individual has exhausted his stock of enjoyments, and worn out his powers of body and mind before he has reached little more than the midway of his existence. Every thing now palls upon his senses, and he has neither taste nor energy to engage in more rational pursuits.

Burton has well described the state of mind of many that are tormented with this most wretched malady; but still more so those affected with the *third variety*, which is strikingly accompanied with peevishness, general malevolence, and an abhorrence of mankind. They are soon tired with all things: they will now tarry, now be gone; now in bed they will rise, now up, then go to bed; now pleased, and then again displeased; now they like, by-and-by dislike all, weary of all; *sequitur nunc vivendi, nunc moriendi cupido*, saith Aurelianus: discontented, disquieted; upon every light occasion or no occasion, object; often tempted to make away with themselves; they cannot die, they will not live: they complain, weep, lament, and think they lead a most miserable life: never was any man so bad. Every poor man they see is most fortunate in respect of them: every beggar that comes to the door is happier than they are: jealousy and suspicion are common symptoms in the misanthropic variety. They are testy, pettish, peevish, distrustful, apt to mistake, and ready to snarl

upon every occasion, and without any cause, with their dearest friends. If they speak in jest, the hypochondriac takes it in good earnest; if the smallest ceremony be accidentally omitted, he is wounded to the quick. Every tale, discourse, whisper, or gesture he applies to himself: or, if the conversation be openly addressed to him, he is ready to misconstrue every word; and cannot endure that any man should look steadfastly at him, laugh, point the finger, cough, or sneeze. Every question or movement works upon him, and is misinterpreted, and makes him alternately turn pale and red, and even sweat, with distrust, fear, or anger.

As in this species the body is more affected than in any other division of mental alienation, more may often be accomplished by medicine; though we must by no means be inattentive to moral discipline. The skin is very frequently cold and without a free secretion, and hence, general friction with rubefacients and the warmer diaphoretics have often been found serviceable. The digestive organs are almost always torpid, and several of them, especially the stomach and liver, secrete their respective fluids not only in too small a quantity, but of an unhealthy quality, so as to be too viscid, too dilute, or morbidly stimulant. Some kind of acrimony, indeed, is almost always found in the stomach, and particularly that of acidity. And hence aperients, carminatives, and particularly the tonic plan which is recommended for dyspepsia, are manifestly called for, and will often be found serviceable.

Congestions, from weakness of vascular action in one or more of the abdominal viscera, are a frequent result of the present complaint, and not unfrequently a primary cause: and hence we may see why the bleeding piles should be serviceable in so many instances as to obtain from Alberti the name of *medicina hypochondriacorum*, and why leeches repeatedly applied to the anus should often have a like beneficial effect. This is of the greatest importance where the disease has been preceded by a periodical flow of blood from the hæmorrhoidal veins; and should point out to us the necessity of renewing any other discharge or external irritation to which the system may have been accustomed.

Opium is a very doubtful medicine, though strongly recommended by some respectable writers, and readily had recourse to by hypochondriacs themselves, to relieve their distressful sensations. Cullen asserts peremptorily that he has always found a frequent use of opiates pernicious in hypochondriacs. It has often, in such cases, been exchanged for other sedatives, but rarely with any decided advantage.

Exercise of all kinds should be encouraged in every modification of the disease, but especially exercise on horseback, though it is seldom in the first and third variety we can succeed in getting a patient to try it. The diet should be governed by the principles laid down for treating indigestion.

In the *moral management*, assiduous kindness and consoling conversation produce a deeper effect than they seem to do. Loquacity is always hurtful; but a talent for cheerful discourse, intermixed with interesting and amusing anecdotes, frequently draws away the patient's attention from himself, and becomes a most useful palliative. In the variety in which he is perpetually haunted with a feeling of some dreadful disease which exists nowhere but in his own fancy, the hallucination, when we possess his confidence, should be removed by a candid statement of the fact, and, if necessary, friendly expostulation: but the moment we find the prepossession is too strong to be removed by argument, it is better to humour the conceit, and to pretend to prescribe for it. It is sometimes necessary, indeed,—for the hypochondriac is often possessed of great cunning,—to drop all pretensions whatever, and to put him in good earnest upon a course of medicines for a disease we know he is as free from as ourselves. Thus, a firm belief that he has an inveterate itch is a common delusion with a patient of this kind, and it will be often found impossible to persuade him that he is cured till his whole body has been repeatedly rubbed over with sulphur or hellebore ointment.

In the second variety, or tædium vitæ, where the time seems to hang intolerably heavy on the patient's hands, from his having, in a mistaken search after happiness, relinquished a life of constant excitement and activity for the fancied delights of rural retirement and quiet, the best and most radical cure would be a return to the situation that has been so unfortunately abandoned: but if this cannot be accomplished, the patient must be put into a train of pursuits of some other kind. If he be fond of the sports of the country, he should weary himself in the day-time with hunting or shooting, or even horse-racing, rather than be hypochondriacal from idleness; and spend his evenings in the bustle of dinner-parties or cards. And if he be capacified for higher and more useful occupations, let him plunge headlong into the public concerns of the parish and its neighbourhood, become a member of its select vestries, a trustee of the highways, or a magistrate of the district. The habit of excitement must for some time be maintained, though it be afterwards let down by degrees; and the intermediate steps are of no great importance, so far as they answer their purpose. We are not at present arguing the case upon a principle of ethics or of religion; but merely upon a principle of moral medicine. Yet persons of the above description have been broken in by degrees to a love of domestic quiet, for which they were by no means fitted when they first entered upon it, and who, with a love of domestic quiet, have settled also, as a soberer stage of life has advanced, and reflection has gained ground upon them, into a love of strict moral order, and the higher duties of a conscientious Christian, to which at one time they seemed as little disposed.

HYPOCHO'NDRIUM. (*um, ii.* n.; from υπο, under, and χονδρος, a cartilage.) That part of the body which lies under the cartilages of the spurious ribs.

HYPO'CHYMA. (*a, æ.* f.; from υπο, and χοω, to pour: because the ancients thought that the opacity proceeded from something running under the crystalline humour.) A cataract.

HYPOCHYSIS. (*is, is.* f.) The same as *Hypochyma.*

HYPOCI'STIS. (*is, is.* m.; from υπο, under, and κιςος, the cistus.) See *Asarum hypocistis*, and *Cytinus hypocistis.*

HYPOCLE'PTICUM. (From υπο, under, and κλεπτω, to steal.) A chemical vessel for separating liquors, particularly the essential oil of any vegetable from the water; and named because it steals, as it were, the water from the oil.

HYPOCOELON. (From υπο, under, and κοιλον, a cavity.) The cavity under the lower eyelid.

HYPOCOPHO'SIS. A degree of deafness.

HYPOCRA'NIUM. (From υπο, under, and κρανιον, the skull.) Under the cranium.

HYPOCRATERIFORM. (*Hyprocrateriformis;* from υπο, χρατηρ, a cup, goblet, or salver, and *forma*, likeness.) Salver-shaped: applied to leaves so shaped; as those of the *Primula.*

HYPODEI'RIS. In Rufus Ephesius, it is the extremity of the fore-part of the neck.

HYPODE'RMIS. (From υπο, under, and δερμα, the skin.) 1. The skin over the clitoris, which covers it like a prepuce.

2. The clitoris.

HYPO'DESIS. (From υπο, under, and δεω, to bind.) *Hypodesmus.* An underswathe, or bandage.

HYPO'GALA. (*a, æ.* f.; from υπο, under, and γαλα, milk: because it is a milk-like effusion, under the cornea.) A collection of white humour, like milk, in the chambers of the eye. There are two species of this disease: the one takes place, it is said, from a deposition of the milk, as is sometimes observed in women who suckle; the other from a depression of the milky cataract.

HYPOGA'STRIC. (*Hypogastricus;* from υπο, under, and γαςηρ, the stomach.) Belonging to the hypogastrium.

HYPOGASTRIC ARTERY. See *Iliac.*

HYPOGASTRIC REGION. *Regio hypogastrica.* See *Hypogastrium.*

HYPOGA'STRIUM. (*um, ii.* n.; from υπο, under, and γαςηρ, the stomach.) The part of the abdomen that reaches from above the pubes to within three fingers' breadth of the navel.

HYPOGASTROCE'LE. (*e, es.* f.; from υπογαςριον, the hypogastrium, and κηλη, a tumour.) A hernia in the hypogastrium.

HYPOGLO'SSIS. (From υπο, under, and γλωσσα, the tongue.) The under part of the tongue.

HYPOGLO'SSUS. (*us, i.* m.; from υπο, under, and γλωσσα, the tongue.) Under the tongue: applied to a nerve which goes to the under part of the tongue.

HYPOGLO'TTIS. (*is, idis.* f.; from υπο, under, and γλωτla, the tongue.) The under part of the tongue: applied, also, to a lozenge to be kept under the tongue until dissolved.

HYPOGLU'TIS. (From υπο, under, and γλουτος, the nates.) The fleshy part under the nates, towards the thigh.

HYPO'MIA. (From υπο, under, and ωμος, the shoulder.) The part subjacent to the shoulder.

HYPONITRIC. (*Hyponitricus:* so named from its constituent principles.) The name of an acid.

HYPONITRIC ACID. See *Nitric acid.*

HYPONITROUS. (*Hyponitrosus:* so called from its constituent principles.) The name of an acid.

HYPONITROUS ACID. An acid composed, according to the experiments of Gay Lussac, of 100 azote, and 150 oxygene. It is also called pernitrous acid.

HYPO'NOMOS. (From υπονομος, a phagedænic ulcer.) 1. A subterraneous place.

2. A deep phagedænic ulcer.

HYPOPE'DIUM. (From υπο, under, and πους, the foot.) A cataplasm for the sole of the foot.

HYPOPHASIS. (From υποφαινομαι, to appear a little.) *Hypophasia.* An appearance of the eye in diseases in which the eyelids are not quite closed, and the eye is consequently seen a little.

HYPOPHO'RA. (From υποφερομαι, to be carried or conveyed underneath.) A deep fistulous ulcer.

HYPOPHOSPHORIC. *Hypophosphoricus.* The name of an acid.

HYPOPHOSPHOROUS. *Hypophosphorosus.* An acid is so called from its constituent principles.

HYPOPHOSPHOROUS ACID. Pour water on the phosphuret of barytes, and wait till all the phosphuretted hydrogene be disengaged. Add cautiously to the filtered liquid dilute sulphuric acid, till the barytes be all precipitated in the state of sulphate. The supernatant liquid is hypophosphorous acid, which should be passed through a filter. It has not yet been used medicinally.

HYPOPHTHA'LMION. (*um, i.* n.; from υπο, under, and οφθαλμος, the eye.) The part under the eye which is subject to swell in a cachexy or dropsy.

HYPO'PHYSIS. (From υπο, under, and φυω, to produce.) A disease of the eyelids, when the hairs grow so much as to irritate and offend the pupil. See *Trichiasis.*

HYPO'PYUM. (*um, ii.* n.; from υπο, under, and πυον, pus: because the pus is under the cornea.) *Hypopion. Pyosis. Abscessus oculi.* An accumulation of a glutinous yellow fluid, like pus, which takes place in the anterior chamber of the aqueous humour, and frequently, also, in the posterior one, in consequence of severe, acute ophthalmy, particularly the internal species. This viscid matter of the hypopyum is com-

monly called pus; but Scarpa contends, that it is only coagulating lymph. The symptoms portending an extravasation of coagulable lymph in the eye, or an hypopyum, are the same as those which occur in the highest stage of violent acute ophthalmy, viz. prodigious tumefaction of the eyelids; the same swelling and redness as in chemosis; burning heat and pain in the eye; pains in the eyebrow and nape of the neck; fever, restlessness, aversion to the faintest light, and a contracted state of the pupil.

HYPORI'NION. (*um, i.* n.; from *υπο*, under, and *ριν*, the nose.) The part of the upper lip below the nostrils.

HYPOSA'RCA. (From *υπο*, under, and *σαρξ*, flesh.) *Hyposarcidios.* A collection of fluid or air in the cellular membrane.

Hypospadiæ'os. (From *υπο*, under, and *σπαω*, to draw.) The urethra terminating under the glans.

Hypospathi'smus. (From *υπο*, under, and *σπαθη*, a spatula.) A surgical operation for removing defluxions in the eyes: thus named from the instrument with which it was performed.

Hyposphа'gma. (From *υπο*, under, and *σφαζω*, to kill.) *Aposphagma.* An extravasation of blood in the tunics of the eye, from external injury.

Hypusple'nia. (From *υπο*, under, and *σπλην*, the spleen.) Under the spleen: applied to tumours, &c.

Hyposta'phyle. (From *υπο*, and *ςαφυλη*, the uvula.) Relaxation of the uvula.

Hypo'stasis. (From *υφιςημι*, to subside.) A sediment, as that which is occasionally let down from urine.

HYPOSULPHUREOUS. (*Hyposulphurosus:* so named from its constituents.) The name of an acid.

Hyposulphureous acid. A new acid, detected by Herschel, but very little is known concerning it.

HYPOSULPHURIC. (*Hyposulphuricus:* so named from its constituent principles.) The name of an acid.

Hyposulphuric acid. An acid combination of sulphur and oxygene, intermediate between sulphureous and sulphuric acids.

HYPO'THENAR. (*ar, eros.* n.; from *υπο*, under, and *θεναρ*, the palm of the hand.) 1. A muscle which runs on the inside of the hand.

2. That part of the hand which is opposite to the palm.

HYPO'THESIS. (*is, is.* or *eos.* f.; from *υπο*, and *τιθημι*, to put.) An opinion, or a system of general rules, founded partly on fact, but principally on conjecture. A theory explains every fact, and every circumstance connected with it: an hypothesis explains only a certain number, leaving some unaccounted for, and others in opposition to it.

HYPO'THETON. (*um, i.* n.; from *υπο*, under, and *τιθημι*, to put.) A suppository, or medicine introduced into the rectum, to procure stools.

Hypo'xylon. (From *υπο*, and *ξυλον*, wood.) A species of *clavaria*, which grows under old wood.

Hypozo'ma. (From *υπο*, and *ζωννυμι*, to bind round.) The diaphragm.

Hypsiglo'ssus. (From *υψιλοειδες*, the hyoid bone, and *γλωσσα*, the tongue.) A muscle named from its origin in the os hyoides, and its insertion in the tongue.

HY'PSILOID. (*Hypsiloides.* From *υψιλον*, the Greek letter, and *ειδος*, resemblance.) 1. The *Os hyoides.*

2. The hyoglossus muscle.

Hyptia'smos. (From *υπτιαζω*, to lie with the face upwards.) A supine decubiture.

HYPU'LUS. (From *υπο*, under, and *ουλη*, a cicatrix.) An ulcer under a cicatrix.

HYSSOP. See *Hyssopus.*

Hyssop, hedge. See *Gratiola.*

Hyssopi'tes. (From *υσσωπος*, hyssop.) Wine impregnated with hyssop.

HYSSO'PUS. (*us, i.* m. *Υσσωπος*; from *Azob*, Hebrew.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.* Hyssop.

2. The pharmacopœial name of the common hyssop. See *Hyssopus officinalis.*

Hyssopus capitatus. Wild thyme.

Hyssopus officinalis. The systematic name of the common hyssop. *Hyssopus—spicis secundis, foliis lanceolatis,* of Linnæus. This exotic plant is esteemed as an aromatic and stimulant, but is chiefly employed as a pectoral, and has long been thought useful in humoral asthmas, coughs, and catarrhal affections; for this purpose, an infusion of the leaves, sweetened with honey, or sugar, is recommended to be drank as tea.

HY'STERA. (*a, æ.* f.; from *υςερος*, behind: so called because it is placed behind the other parts.) The womb. See *Uterus.*

HYSTERA'LGIA. (*a, æ.* f.; from *υςερα*, the womb, and *αλγος*, pain.) Pain in the womb.

HYSTE'RIA. (*a, æ.* f.; from *υςερα*, the womb, from which the disease was supposed to arise.) *Passio hysterica.* Hysterics.

This complaint appears under such various shapes, imitates so many other diseases, and is attended with such a variety of symptoms, which denote the animal and vital functions to be considerably disordered, that it is difficult to give a just character or definition of it; and it is only by taking an assemblage of all its appearances, that we can convey a proper idea of it to others. The disease attacks in paroxysms, or fits. These are sometimes preceded by dejection of spirits, anxiety of mind, effusion of tears, difficulty of breathing, sickness at the stomach, and palpitations at the heart; but it more usually happens that a pain is felt on the left side, about the flexure of the colon, with a sense of distension, advancing upwards, till it gets into the stomach, and removing from thence into the throat, it occasions, by its pressure, a sensation as if a ball was lodged there, which

by authors has been called *globus hystericus.* The disease having arrived at this height, the patient appears to be threatened with suffocation, becomes faint, and is affected with stupor and insensibility; whilst, at the same time, the trunk of the body is turned to and fro, the limbs are variously agitated; wild and irregular actions take place in alternate fits of laughter, crying, and screaming; incoherent expressions are uttered, a temporary delirium prevails, and a frothy saliva is discharged from the mouth. The spasms at length abating, a quantity of wind is evacuated upwards, with frequent sighing and sobbing, and the woman recovers the exercise of sense and motion, without any recollection of what has taken place during the fit; feeling, however, a severe pain in her head, and a soreness over her whole body. In some cases, there is little or no convulsive motion, and the person lies seemingly in a state of profound sleep, without either sense or motion. Hiccough is a symptom which likewise attends, in some instances, on hysteria; and now and then it happens that a fit of hysteria consists of this alone. In some cases of this nature it has been known to continue for two or three days, during which it frequently seems as if it would suffocate the patient, and proceeds, gradually weakening her, till it either goes off, or else occasions death by suffocation: but this last is extremely rare. Besides hiccough, other slight spasmodic affections sometimes wholly form a fit of hysteria, which, perhaps, continue for a day or two, and then either go off of themselves, or are removed by the aid of medicine. In some cases, the patient is attacked with violent pain in the back, which extends from the spine to the sternum, and at length becomes fixed upon the region of the stomach, being evidently of a spasmodic nature, and often prevailing in so high a degree as to cause clammy sweats, a pale, cadaverous look, coldness of the extremities, and a pulse hardly perceptible. The Cullenian species are,—

1. *Hysteria chlorotica,* from a retention of the menses.
2. *Hysteria à leucorrhœa,* from a fluor albus.
3. *Hysteria à menorrhagia,* from an immoderate flow of the menses.
4. *Hysteria libidinosa,* from sensual desires.

Hysteric affections occur more frequently in the single state of life than in the married; and usually between the age of puberty and that of thirty-five years; and they make their attack oftener about the period of menstruation than at any other.

They are readily excited, in those who are subject to them, by passions of the mind, and by every considerable emotion, especially when brought on by surprise: hence, sudden joy, grief, fear, &c. are very apt to occasion them. They have also been known to arise from imitation and sympathy.

Women of a delicate habit, and whose nervous system is extremely sensible, are those who are most subject to hysteric affections; and the habit which predisposes to their attacks, is acquired by inactivity and a sedentary life, grief, anxiety of mind, a suppression or obstruction of the menstrual flux, excessive evacuations, and a constant use of a low diet, or of crude unwholesome food.

Hysteria differs from hypochondriasis in the following particulars, and, by paying attention to them, may always readily be distinguished from it:—Hysteria attacks the sanguine and plethoric; comes on soon after the age of puberty; makes its onset suddenly and violently, so as to deprive the patient of all sense and voluntary motion; is accompanied with a sensation of a ball rising upwards in the throat, so as to threaten suffocation; is attended usually with much spasmodic affection; is more apt to terminate in epilepsy than in any other disease; and, on dissection, its morbid appearances are confined principally to the uterus and ovaria.

The reverse happens in hypochondriasis. It attacks the melancholic; seldom occurs till after the age of thirty-five; comes on gradually; is a tedious disease, and difficult to cure; exerts its pernicious effects on the membraneous canal of the intestines, as well by spasms as wind; is more apt to terminate in melancholy, or a low fever, than in any other disease; and, on dissection, exhibits its morbid effects principally on the liver, spleen, and pancreas, which are often found in a diseased state.

Another very material difference might be pointed out betwixt these two diseases, which is, that hysteria is much relieved by advancing in age, whereas hypochondriasis usually becomes aggravated.

The two diseases have often been confounded together; but, from considering the foregoing circumstances, it appears that a proper line of distinction should be drawn between them.

The hysteric passion likewise differs from a syncope, as in this there is an entire cessation of the pulse, a contracted face, and a ghastly countenance: whereas, in the uterine disorder, there is often something of a colour, and the face is more expanded; there is, likewise, a pulse, though languid; and this state may continue some days, which never happens in a syncope.

It also differs from apoplexy, in which the abolition of sense and voluntary motion is attended with a sort of snoring, great difficulty of breathing, and a quick pulse; which do not take place in hysteria.

It differs from epilepsy, in that this is supposed to arise in consequence of a distension of the vessels of the brain: whereas, in hysteria, the spasmodic and convulsive motions arise from a turgescence of blood in the uterus, or in other parts of the genital system.

However dreadful and alarming an hysteric fit may appear, still it is seldom accompanied with danger, and the disease never terminates fatally, unless it changes into epi-

lepsy, or that the patient is in a very weak, reduced state.

The indications in this disease are, 1. To lessen the violence of the fits. 2. To prevent their return by obviating the several causes. Where the attack is slight, it may be as well to leave it, in a great measure, to have its course. But, where the paroxysm is severe, and the disease of no long standing, occurring in a young plethoric female, as is most frequent, and especially from suppression of the menses, a liberal abstraction of blood should be made, and will often afford speedy relief. If this step do not appear advisable, and the disorder be rather connected with the state of the primæ viæ, an emetic may check its progress, if the patient can be got to swallow during a remission of the convulsions. At other times, the application of cold water to the skin, more or less extensively; strong and disagreeable odours, as hartshorn, burnt feathers, &c.; rubbing the temples with æther; antispasmodics, particularly opium, by the mouth or in glyster; the pediluvium, &c. may be resorted to, according to the state of the patient. During the intervals, we must endeavour to remove any observable predisposition: in the plethoric, by a spare diet, exercise, and occasional purgatives; in those who are weakly, and rather deficient in blood, by proper nourishment, with chalybeates, and other tonic medicines. The state of the uterine function must be particularly attended to, as well as that of the primæ viæ: those cathartics are to be preferred which are not apt to occasion flatulence, nor particularly irritate the rectum, unless where the menses are interrupted, when the aloetic preparations may claim a preference; and the perspirations should be maintained by warm clothing, particularly to the feet, with the prudent use of the cold bath. The mind ought also to be occupied by agreeable and useful pursuits, and regular hours will tend materially to the restoration of the general health.

Hysteria'lges. (From *υϛερα*, the womb, and *αλγος*, pain.) Any thing that excites pain in the uterus.

HYSTERI'TIS. (*is, idis.* f.; from *υϛερα*, the womb.) *Metritis.* Inflammation of the womb. This disease is characterised by fever, heat, tension, tumour, and pain in the region of the womb; pain in the os uteri when touched, and vomiting.

In natural labours, as well as those of a laborious sort, many causes of injury to the uterus, and the peritonæum which covers it, will be applied. The long continued action of the uterus on the body of the child, and the great pressure made by its head on the soft parts, will further add to the chance of injury. Besides these, an improper application of instruments, or an officiousness of the midwife in hurrying the labour, may have contributed to the violence. To these causes may be added exposure to cold, by taking the woman too early out of bed after delivery, and thereby throwing the circulating fluids upon the internal parts, putting a stop to the secretion of milk, or occasioning a suppression of the lochia.

An inflammation of the womb is sometimes perfectly distinct, but is more frequently communicated to the peritonæum, Fallopian tubes, and ovaria; and having once begun, the natural functions of the organ become much disturbed, which greatly adds to the disease. It is oftener met with in women of a robust and plethoric habit than in those of lax fibres and a delicate constitution, particularly where they have indulged freely in food of a heating nature, and in the use of spirituous liquors. It never prevails as an epidemic, like puerperal fever, for which it has, probably, often been mistaken; and to this we may, with some reason, ascribe the difference in the mode of treatment which has taken place among physicians.

An inflammation of the uterus shows itself usually about the second or third day after delivery, with a painful sensation of the bottom of the belly, which gradually increases in violence, without any kind of intermission. On examining externally, the uterus appears much increased in size, is hard to the feel, and on making a pressure upon it, the patient experiences great soreness and pain. Soon afterwards there ensues an increase in heat over the whole of the body, with pains in the head and back, extending into the groins, rigors, considerable thirst, nausea, and vomiting. The tongue is white and dry, the secretion of milk is usually much interrupted, the lochia are greatly diminished, the urine is high coloured and scanty, the body is costive, and the pulse hard, full, and frequent.

These are the symptoms which usually present themselves when the inflammation does not run very high, and is perfectly distinct; but when it is so extensive as to affect the peritonæum, those of irritation succeed, and soon destroy the patient.

Uterine inflammation is always attended with much danger, particularly where the symptoms run high, and the proper means for removing them have not been timely adopted. In such cases, it may terminate in suppuration, scirrhus, or gangrene.

Frequent rigors, succeeded by flushings of the face, quickness and weakness of the pulse, great depression of strength, delirium, and the sudden cessation of pain and soreness in the region of the abdomen, denote a fatal termination. On the contrary, the ensuing of a gentle diarrhœa, the lochial discharge returning in due quantity and quality, the secretion of milk recommencing, and the uterus becoming gradually softer and less tender to the touch, with an abatement of heat and thirst, prognosticate a favourable issue.

When shiverings attack the patient, after several days' continuance of the symptoms, but little relief can be afforded by medicine, the event being generally fatal. In this case, the woman emaciates and loses her strength,

becomes hectic, and sinks under colliquative sweating, or purging.

Upon opening the bodies of women who have died of this disease, and where it existed in a simple state, little or no extravasated fluid is usually to be met with in the cavity of the abdomen. In some instances, the peritonæal surfaces have been discovered free from the disease; whilst, in others, that portion which covers the uterus and posterior part of the bladder has been found partially inflamed. The inflammation has been observed, in some cases, to extend to the ovaria and Fallopian tubes, which, when cut open, are often loaded with blood. The uterus itself usually appears of a firm substance, but is larger than in its natural state, and, when cut into, a quantity of pus is often found. Gangrene is seldom, if ever, to be met with.

HYSTEROCE'LE. (*e, es.* f.; from *υστερα*, the womb, and *κηλη*, a tumour.) See *Hernia uteri.*

Hy'steron. (From *υστερος*, afterwards: so named because it comes immediately after the fœtus.) The placenta.

HYSTEROPHY'SA. (*a, æ.* f.; from *υστερα*, the womb, and *φυσα*, flatus.) A swelling, or distension of the womb, from a collection of air in its cavity.

Hysterotomatocia. See *Cæsarian operation.*

HYSTERO'TOMY. (*Hysterotomia, æ.* f.; from *υστερα*, the womb, and *τεμνω*, to cut.) See *Cæsarian operation.*

HYSTEROPTO'SIS. (*is, is.* f.; from *υστερα*, the womb, and *πιπτω*, to fall.) A falling down of the womb. See *Prolapsus uteri.*

HYSTRICI'ASIS. (From *υστριξ*, a hedgehog, or porcupine.) A disease of the hairs, in which they stand erect, like porcupine quills. An account of this rare disease is to be seen in the *Philosophical Transactions*, No. 424.

Hy'stricis lapis. See *Bezoar hystricis.*

HYSTRI'TIS. See *Hysteritis.*

I.

IATRALEI'PTES. (From *ιατρος*, a physician, and *αλειφω*, to anoint.) A physician who cures diseases by anointing the patients.

IATROCHY'MICUS. (*us, i.* m.; from *ιατρος*, a physician, and *χυμια*, chemistry.) *Chymiater.* A chemical physician who cures diseases by means of chemical medicines.

Iatroli'ptice. (From *ιατρος*, a physician, and *αλειφω*, to anoint.) The method of curing diseases by unction.

IBE'RIS. (*is, idis.* f.; so named from Iberia, the place of its natural growth.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliculosa.*

2. The pharmacopœial name of the *Sciatica cresses.* See *Lepidium iberis.*

Ibira'ce. See *Guaiacum.*

I'BIS. (*is, is.* and *idis.* f. *Iβις.*) A bird much like our kingfisher, taken notice of by the Egyptians, because, when it was sick, it used to inject, with its long bill, the water of the Nile into its fundament, whence Langius, lib. ii. ep. ii., says they learned the use of clysters.

IBI'SCUS. (*us, i.* m.; from *ιβις*, the stork, who was said to chew it, and inject it as a clyster.) Marshmallow.

Ibi'xuma. (From *ιβισκος*, the mallow, and *ιξος*, glue: so named from its having a glutinous leaf like the mallow.) The soap-tree, probably the *Sapindus saponaria* of Linnæus.

ICE. *Glacies.* Water made solid by the application of cold. It is frequently applied by surgeons to resolve external inflammatory diseases, to stop hæmorrhages, and constringe relaxed parts.

Iceland spar. A calcareous spar.

I'CHOR. (*or, oris.* m. *Iχωρ.*) A thin, aqueous, and acrid discharge.

I'CHTYA. (*a, æ.* f. *Iχθυα*, a fish-hook; from *ιχθυς*, a fish.) 1. The skin of the *Squatina*, or monk-fish.

2. The name of an instrument like a fish-hook, for extracting the fœtus.

ICHTHYA'SIS. See *Ichthyosis.*

ICHTHYOCO'LLA. (*a, æ.* f.; from *ιχθυς*, a fish, and *κολλα*, glue.) *Colla piscium.* Isinglass. Fish-glue. This substance is almost wholly gelatine; 100 grains of good dry isinglass containing rather more than 98 of matter soluble in water.

Isinglass is made from the sound of the *acipenser sturio*, or sturgeon; from the *acipenser huso*, and from other fishes, found in the Danube, and the rivers of Muscovy. Willoughby and others inform us, that it is made of the sound of the Beluga, and other fish, which he has frequently seen sold in the public markets of Vienna. Jackson remarks, that the sounds of cod, properly prepared, afford this substance; and that the lakes of America abound with fish, from which the very finest sort may be obtained.

Isinglass receives its different shapes in the following manner: the parts of which it is composed, particularly the sounds, are taken from the fish while sweet and fresh, slit open,

washed from their slimy *sordes*, divested of a very thin membrane which envelopes the sound, and then exposed to stiffen a little in the air. In this state, they are formed into rolls about the thickness of a finger, and in length according to the intended size of the staple; a thin membrane is generally selected for the centre of the roll, round which the rest are folded alternately, and about half an inch of each extremity of the roll is turned inwards.

Isinglass is best made in the summer, as frost gives it a disagreeable colour, deprives it of weight, and impairs its gelatinous principles.

Isinglass, boiled in milk, forms a mild nutritious jelly, and is thus sometimes employed medicinally. This, when flavoured by the art of the cook, is the blanc-mange of our tables. A solution of isinglass in water, with a very small proportion of some balsam, spread on black silk, is the court-plaster of the shops.

ICHTHYOPHAGIST. (*Ichthyopagus*, *i.* m.; from ἰχθυς, a fish, and φαγω, to eat.) Fish-eater. One who lives on fish without any other flesh.

ICHTHYOPHTHAL'MITE. Fish-eye stone. See *Apophyllite*.

ICHTHYO'SIS. (*is*, *is*. f.; from ιχθυα, the scale of a fish: from the resemblance of the scales to those of a fish.) The fish-skin disease. It is characterised by a thickened, hard, rough, and, in some cases, almost horny texture of the integuments of the body, with some tendency to scaliness, but without the deciduous exfoliations, the distinct and partial patches, or the constitutional disorder, which belong to Lepra and Psoriasis.

1. *Ichthyosis simplex.* In its commencement this disease exhibits merely a thickened, harsh, and discoloured state of the cuticle, which appears, at a little distance, as if it were soiled with mud. When further advanced, the thickness, hardness, and roughness become much greater, and of a warty character, and the colour is nearly black. The roughness, which is so great as to give a similar sensation to the finger passed over it, as a file, or the roughest shagreen, is occasioned by innumerable rugged points, into which the surface is divided. These hard papillæ, or prominences, differ somewhat in their form and arrangement in different parts of the body, as well as in different stages of the complaint. Some of them appear to be of uniform thickness from their roots upwards; while others have a short narrow neck, and broad irregular tops. The former occur where the skin, when healthy, is soft and thin; the latter, where it is coarser; as about the olecranon and patella, and thence along the outside of the arms and thighs. On some parts of the extremities, however, especially about the ankles, and sometimes on the trunk of the body, these scaly excrescences are flat and large, and occasionally imbricated, like the scales of carp. In other cases, they have appeared separate, being intersected by whitish furrows.

This unsightly disease appears in large continuous patches, which sometimes cover the greater part of the body, except the flexures of the joints, the inner and upper part of the thighs, and the furrow along the spine. The face is seldom severely affected; but the mammæ, in females, are sometimes encased in this rugged cuticle. There is also an extremely dry and unperspirable condition of the whole skin, and a thickened brittle state of the cuticle in the palms of the hands and soles of the feet. The disease often commences in childhood, and even in early infancy.

This affection has been found to be very little under the control of medicine: stimulating ointments and plasters have been industriously applied, with no material effect; and the disorder has been known to continue for several years, with occasional variations. Dr. Willan trusted to the following palliation by external management: "When a portion of the hard scaly coating is removed," he says, "it is not soon produced again. The easiest mode of removing the scales is to pick them off carefully with the nails from any part of the body, while it is immersed in hot water. The layer of cuticle, which remains after this operation, is harsh and dry; and the skin did not, in the cases I have noted, recover its usual texture and softness: but the formation of the scales was prevented by a frequent use of the warm bath, with moderate friction."

The skin is occasionally cleared of this harsh eruption by bathing in the sulphureous waters, and rubbing it with a flannel or rough cloth, after it had been softened by the bath; but the cuticle underneath does not recover its usual condition, but remains bright and shining, and the eruption recurs. The only good effect, from internal medicine, has been from the use of pitch, which has occasioned the rough cuticle to crack and fall off, without the aid of external means, and left a sound skin underneath. This medicine, made into pills with flour, or any farinaceous powder, may be taken to a great extent, not only without injury, but with advantage to the general health; and affords one of the most effectual means of controlling the languid circulation, and the inert and arid condition of the skin. Upon the same principle, the arsenical solution would probably be beneficial in ichthyosis.

2. *Ichthyosis cornea.* Several cases of a rigid and horny state of the integuments, sometimes partial, but sometimes extending nearly over the whole body, have been recorded by authors; and occasionally such a condition of the cuticle has been accompanied with the actual production of excrescences of a horny texture. These, however, are rare occurrences.

The ordinary formation of horny excrescences in the human body, of which many examples have been described, from the time of the Arabians downwards, is, however, un-

connected with any general rigidity of the cuticle. These excrescences have been improperly called horns; for they are purely of cuticular growth, having no connection with the bones or other parts beneath, and consisting of a laminated callous substance, contorted and irregular in form, and not unlike isinglass in appearance and texture. They originate from two or three different diseased conditions of the cuticle; as from warts, encysted tumours, steatomata, &c. Morgagni has mentioned the growth of a horn on the sinciput of an old man, the basis of which was a wart; and other authors have noticed the same fact. In the most numerous instances, however, they have arisen from the cavity of encysted tumours, of very slow growth, which were lodged under the cuticle of the scalp, or over the spine, after the discharge of their contained fluid. In one case, a horn of this sort was the result of inflammation and discharge from a small steatomatous tumour of many years continuance. Nearly the whole of these examples have occurred in women of advanced age.

If these excrescences are sawed or broken off, they invariably resprout. Excision, with the complete destruction of the cyst, or morbid secreting surface, is the only effectual remedy, when they have appeared, and a preventive during the growth of the primary tumour.

ICOSA'NDRIA. (*a, æ.* f.; from εικοσι, twenty, and ανηρ, a man, or husband.) The name of a class of plants in the sexual system of Linnæus, consisting of those which have hermaphrodite flowers furnished with twenty or more stamina that are inserted into the inner side of the calyx, or petals, or both. By this last circumstance is this class distinguished from *Polyandria.*

ICTERI'TIA. (*a, æ.* f.; from *icterus*, the jaundice.) 1. An eruption of yellowish spots. 2. A yellow discolouration of the skin.

I'CTERUS. (*us, i.* m.; named from its likeness to the plumage of the golden thrush, of which Pliny relates, that if a jaundiced person looks on one, the bird dies, and the patient recovers.) The jaundice. This disease has received a variety of names, as *Morbus arcuatus*, or *arquatus, Aurigo, Morbus regius, Morbus leseoli,* &c. It is characterised by yellowness of the skin and eyes, first observable in the tunica albuginea; the fæces are white, and the urine of a deep colour, from an admixture of bile.

Jaundice mostly comes on with languor, inactivity, loathing of food, disturbed sleep at night, acidities of the stomach and bowels, frequent sense of nausea. As it advances in its progress, the skin and eyes become of a deep yellow: there is a bitter taste in the mouth, with frequent nausea and vomiting; the urine is very high coloured; the stools are of a grey or clayey appearance; and a dull obtuse pain is felt in the right hypochondrium, which is much increased by pressure.

The remote and exciting causes of jaundice are many. It takes place most usually in consequence of an interrupted excretion of bile, from an obstruction in the ductus communis choledochus, which occasions its absorption into the blood-vessels. The causes producing this, are thick or inspissated bile; biliary calculi in the gall-bladder and its ducts; spasmodic constriction of the ducts themselves; the pressure made by a pregnant uterus; or an enlargement of the abdominal viscera, from tumours, &c.

The proximate cause of jaundice, is the presence of bile in the blood, which transmits it to the vessels which carry only the serous part, and hence gives the yellow colour to the skin, the intensity of which varies according to the quantity in the circulating blood, and the degree of concentration. When the colour is very intense, and the disease is protracted, it occasionally causes a green or olive hue, and the disease is called *green jaundice;* when the quality is more concentrated still, and the disease of long duration, it gives a darker colour, and then it is termed the *black jaundice.* Most instances of green and black jaundice are connected with diseased structure of the liver.

From the remote or exciting causes, jaundice has been distinguished into the following species:—

1. *Icterus infantum.* Jaundice of infants, or yellow-green. It affects children at or soon after their birth, and usually continues for some days. It has generally been supposed to arise from the meconium, impacted in the intestines, preventing the flow of bile into them. The effects produced by it, are languor, indolence, a yellow tinge of the skin, and a tendency to sleep. It is mostly a mild disease, and soon gives way to small and repeated doses of castor oil. If this does not remove it, a grain of the submuriate of mercury may be given with the oil, or an emetic, which generally emulges the common cholidic duct of some tenacious bile that wanted to be expelled.

2. *Icterus gravidarum.* Jaundice of pregnant women. This takes place, now and then, about the seventh or eighth month of pregnancy, and is caused by pressure of the uterus on the bile ducts. It seldom proceeds to a total obstruction of the bile, which passes occasionally as the position of the female is changed. Gentle aperients, and lying on the left side, are the best means of meeting it. After delivery it vanishes.

3. *Icterus biliosus*, or *cholæus.* This species, which is very common, is produced by a thick inspissated bile, plugging up the mouth of the ductus communis choledochus. It comes on very insidiously; is not attended by any pain, and soon gives way to proper treatment.

A vomit at the commencement is often beneficial in removing the bile, which comes away sometimes by the mouth, but more frequently by the bowels; very tenacious, like birdlime, high coloured, and even black.

Though an emetic is occasionally thus serviceable, it is not always so; and even when so, further medical treatment is required, or the disease returns, for it depends mostly on a morbid secretion, more usually than on too rapid an absorption of the finer parts of the bile. Mercury, in small doses, is required with the regular administration of saline aperients: the pilula hydrargyri, in the dose of two, three, or five grains every night, and a brisk purgative every other morning. If the jaundice have not vanished, the common black dose of senna and salts; but if the bile be flowing in its natural course, though vitiated, small doses of Epsom salts, in the compound infusion of roses, or the Cheltenham waters, will be best calculated to meet the object. This species of jaundice is occasionally very protracted, and requires not only that the condition of the bile be corrected, but also that the energy of the liver be increased, which is, in mere chronic forms, in a state of debility. Plummer's pills should be occasionally given, with a course of mild bitters, as taraxacum, colomba, gentian, &c. with saline aperients.

4. *Icterus calculosus* or *chololithicus*. Gall-stone jaundice. This is caused by a gall-stone, formed in the gall bladder, getting out of the bladder into the cystic or common choledic duct, and there stopping the bile in its course into the bowels. It has the common symptoms of jaundice, but, in addition to these, there is violent pain at the pit of the stomach, darting between the shoulders. It is an extraordinary thing that, with this, the pulse is not affected; and this not affecting the pulse, is considered as the leading pathognomonic symptom. The pain, in some, is extremely acute, ceasing for a short time, and then returning again; in others there is only a slight uneasiness felt about the region of the liver; but its particular seat is the gall-duct, just where it enters the duodenum. The calculi are of various sizes and composition. See *Gall-stone*.

The treatment of this species consists in allaying the pain by opiates, in doses proportioned to the degree of pain. If it be very severe, from 50 to 100 drops of laudanum should be administered in camphire-jalap, and repeated according to circumstances. Fomentations to the painful parts are serviceable, and, above all, a warm bath. The bowels are to be kept open by castor oil, and irritability of stomach allayed by carbonic acid gas, from a saline draught, or hypercarbonated soda water. However tardy the passage of the gall-stone, such means are to be continued.

5. *Icterus spasmodicus*. Spasmodic jaundice. This is, of all, by far the most common species. It is generally caused by violent mental emotions, and particularly by sudden and great fear: but cold to the lower extremities, acrimonious and indigestible food, pips of oranges, and the round worm, will also cause it. It is ushered in by a sense of fullness of the stomach, nausea, and languor; a violent pain at the pit of the stomach soon succeeds, and sometimes sickness; occasionally an incessant vomiting, and an utter impossibility of retaining either food or medicine. The pain increases, and extends towards the right shoulder, or spreads round the loins. The epigastric region is mostly distended, and pressure gives pain. The bowels are costive, and moved with difficulty. The urine soon becomes of a deep blood-like colour. The surface of the body is soon of a yellow colour, and this is preceded by an obvious yellowness of the sclerotic membrane of the eye. A wet-nurse often has the disease without the milk being coloured: but if the obstruction be not removed in a fortnight or thereabout, the milk has a little yellowish hue.

It is no unusual thing for jaundice, supposed to be produced by spasmodic contraction of the gall-duct, to become a chronic disease; the pain, in these cases, ceases with the other distressing symptoms, and little inconvenience results.

Spasmodic jaundice is to be treated by opiates and relaxants. Opium is to be administered in doses proportioned to the extent of pain; and fomentations and warm bath are to be resorted to occasionally. A blister to the pit of the stomach is often successful in relaxing the spasm. Great good results, when the stomach will bear it, from the compound powder of ipecacuanha, in regular and small doses, and the use of warm pediluvium at bed-time.

6. *Icterus hepaticus*. Hepatic jaundice. This embraces all instances of jaundice that are produced by organic diseases of the liver, gall-bladder, pancreas, or any other viscus, and by tumours in the vicinity, as aneurism, enlarged glands, or adventitious structures, which, by pressure on or by encompassing the gall-ducts, or by destroying them, cause jaundice. Hepatic jaundice is mostly accompanied by a dull and sometimes a severe pain; and it is a chronic disease for the most part, and attended by itching and defœdations of the skin, anasarcous swellings of the legs, and frequently ascites.

Being always symptomatic of some organic disease, the remedies must be such as those diseases require.

The prognosis in jaundice.—In infants, immediately after birth, and during pregnancy, little or no danger is to be apprehended; if, however, the sleepiness prevent the infant taking the breast for two or three days, there will be no chance of its living. The spasmodic species seldom proves fatal under proper management; but if fever should supervene, and run high, danger is present, and proportioned to the violence of its symptoms. Delirium is always a bad symptom, and the harbinger of a fatal termination.

The regimen in jaundice.—The diet must be accommodated to the state of the stomach, as well as that of the system. When there is retching, sickness, and vomiting, no food will be proper; and if, from length of time, it is

called for, farinaceous slops in small quantities, as arrow-root, sago, tapioca, with very dilute brandy, unless its use is interdicted by an inflammatory state of the system. Raw eggs are much resorted to.

In the chronic forms, the strength is to be kept up by a generous diet and cheerful company, moderate exercise, and especially riding on horseback.

Particular medicines in the cure of jaundice. —There are few diseases that have to boast of a greater number of specifics, and no specifics so little worthy of the name.

The *curcuma, chelidonium majus, polytrichum commune*, highly as they were praised a century ago, are now forgotten.

The *millepedes*, which were swallowed a hundred or two daily, are, very properly, never thought of.

The seeds of common hemp, or *cannabis sativa*, boiled in milk, or made into an emulsion, are esteemed by German physicians, but never used in this country.

Dandelion, or the *leontodon taraxacum*, is much esteemed in this country by many, and thought little of by others. The best way of administering it, is to make a strong decoction of the whole plant; and where it cannot be had, the extract will do, if well prepared.

The *mineral alkalies* and *soap* are universally resorted to. The best way of giving them is to combine them with rhubarb, or colocynth, or aloes; thus: ℞. Saponis duri, sodæ carbonatis exsiccatæ, āā gr. vj.; extracti colocynthidis compositi, gr. ij.; mucilaginis acaciæ crassioris, q. s.: fiant pilulæ tres, ter in die capiendæ. Soda may be taken at the same time in the common beverage. Half an ounce of Castile soap, dissolved in a quarter of a pint of warm milk, and taken every morning, is as good a formula as any: but Castile soap may be formed into five-grain pills, and four or six taken three or four times a day. Many have supposed the alkalies and soap possessed the power of dissolving biliary calculi. This is much to be questioned, even if they came in contact with them. Their beneficial operation is by supplying the chyme with a substitute for the bile, especially when aloes or colocynth are given with them.

The *Bath waters*, used internally and externally. These were much resorted to until very lately. By their warmth they are likely to be beneficial in chronic cases, especially where relaxants are wanting.

The *Cheltenham waters*. These are excellent, and much resorted to in all chronic cases.

The *chlorine bath*, better known by the name of Dr. Scott's nitro-muriatic acid bath. It is very surprising how the use of these baths will emulge the gorged ducts, and attenuate the viscid bile.

Mercury. Of all the medicines given in the cure of jaundice, there is none so beneficial as the oxides and submuriate of mercury when spasmodic irritation is removed. They should be given in alterative doses, and great care should be taken not to produce salivation, which is unnecessary, by keeping the bowels open.

The *bitter stomachics*. Gentian, calumba, and quassia are much esteemed, and especially when given with saline aperients.

The *mineral acids*, especially the nitric. In long continued jaundices, the causes of which are obscure, if attended by much dyspepsy, and all chronic cases of jaundice are attended by more or less of indigestion, nitric acid should be tried. I have known it often very serviceable. An infusion of roses, calumba, quassia, and aurantium may be acidulated with it, and a dose given three times a day. The sulphuric acid is the next best, and the muriatic the last.

Icterus albus. The white jaundice. See *Chlorosis*.

Icterus niger. See *Icterus*.

Icterus viridis. See *Icterus*.

I'CTUS. (*us, ûs.* and *ti.* m.; from *ico*, to strike.) 1. A stroke or blow.

2. The pulsation of an artery.

3. The sting of a bee, or other insect.

IDÆ'US. (From ιδη, a mountain in Phrygia, their native place.) A former name of the peony and blackberry.

IDE. This terminal is affixed to oxygene, chlorine, and iodine, when they enter into combination with each other, or with simple combustibles or metals in proportions not forming an acid, thus *ox-ide* of chlorine, *ox-ide* of nitrogene, *chlor-ide* of sulphur, *iod-ide* of iron, &c. &c.

IDE'OLOGY. (*Ideologia, æ.* f.; from ιδεα, a thought, and λογος, a discourse.) The science, doctrine, or study of the understanding.

IDIOCRA'SIA. See *Idiosyncrasy*.

IDIOCY. See *Amentia*.

IDIOPA'THIC. (*Idiopathicus*; from ιδιος, peculiar, and παθος, an affection.) A disease which does not depend on any other disease, in which respect it is opposed to a symptomatic disease, which is dependent on another.

IDIOSY'NCRASY. (*Idiosyncrasia, æ.* f.; from ιδιος, peculiar, συν, with, and κρασις, a temperament.) A peculiarity of constitution, in which a person is affected by certain agents, which, if applied to a hundred other persons, would produce no effect: thus some people cannot see a finger bleed without fainting; and thus violent inflammation is induced on the skin of some persons by substances that are perfectly innocent to others.

IDIOT. (*Idiota, æ.* m.; from ἴδιος, private.) A person who is silly, or without understanding.

IDIOTISM. See *Amentia*.

Idiot'ropia. (From ιδιος, peculiar, and τρεπω, to turn.) The same as *Idiosyncrasia*.

IDOCRASE. See *Vesuvian*.

IGASURIC. (*Igasuricus*: so called after the Malay name by which the natives designate, in the Indics, the *Faba Sancti Ignatii*.) The name of an an acid.

Igasuric acid. *Acidum Igasuricum.* Pelletier and Caventou, in their elegant researches in the *faba Sancti Ignatii,* and *nux vomica,* having observed that these substances contained a new vegetable base, called strychnine, or *strichnia,* in combination with an acid, sought to separate the latter, in order to determine its nature. It appeared to them to be new, and they called it igasuric acid, from the Malay name for the *faba Sancti Ignatii.* This bean, according to these chemists, is composed of igasurate of strychnia, a little wax, a concrete oil, a yellow colouring matter, gum, starch, bassorine, and vegetable fibre.

IGNA'TIA. (*a, æ.* f.; so named by Linnæus, because the seeds are known in the materia medica by the name of Saint Ignatius's beans.) The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.*

Ignatia amara. The systematic name of the plant which affords St. Ignatius's bean, called *Faba indica, Faba Sancta Ignatii,* and *Faba febrifuga.* These beans are of a roundish figure, very irregular and uneven, about the size of a middling nutmeg, semitransparent, and of a hard, horny texture. They have a very bitter taste, and no considerable smell. They are said to be used in the Philippine islands in all diseases, acting as a vomit and purgative. Infusions are given in the cure of intermittents, &c. It is from this bean that the igasurate of strichnia is obtained. See *Igasuric acid.*

Ignatii faba. See *Ignatia amara.*

IGNATIUS'S BEAN. See *Ignatia.*

I'GNIS. (*is, is.* m.) Fire. 1. A very simple and active element, the principal agent in nature to balance the power and natural effect of attraction. The most useful acceptation of the word fire comprehends *heat* and *light.* There have been several theories proposed respecting fire, but no one as yet is fully established. See *Caloric,* and *Light.*

2. Van Helmont, Paracelsus, and other alchemists applied this term to what they considered as universal solvents.

3. In *Medicine,* the older writers used it to express the heat, redness, acrimony, and erosive power of a disease.

Ignis calidus. A hot fire; a grangene; also a violent inflammation, just about to degenerate into a gangrene, were formerly so called by some.

Ignis fatuus. A luminous appearance or flame, frequently seen in the night in different country places, and called in England *Jack with a lantern,* or *Will with the wisp.* It seems to be mostly occasioned by the extrication of phosphorus from rotting leaves and other vegetable matters. It is probable, that the motionless ignes fatui of Italy, which are seen nightly on the same spot, are produced by the slow combustion of sulphur, emitted through clefts and apertures in the soil of that volcanic country.

Ignis frigidus. A cold fire. A gangrene was so called, because the mortified parts occasionally become as cold as the surrounding air.

Ignis rotæ. Fire for fusion. It is when a vessel which contains some matter for fusion is surrounded with live, *i. e.* red-hot coals.

Ignis sacer. See *Sacer.*

Ignis sancti antonii. See *Erysipelas.*

Ignis sapientium. Heat of horse-dung.

Ignis sylvaticus. An eruption of the impetiginous kind.

Ignis volagrius. An eruption like what is now called impetigo.

Ignis volaticus. See *Erysipelas.*

I'kan radix. A somewhat oval, oblong, compressed root, brought from China. It is extremely rare, and would appear to be the root of some of the orchis tribe.

I'laphis. A name in Myrepsus for the burdock. See *Arctium lappa.*

ILEAC PASSION. (*Passio ileaca.* Ειλεος, ιλεος, is described as a kind of colic, the seat of which is the intestinum ileum.) This disease is also called *Volvulus, Miserere mei, Convolvulus, Chordapsus,* and *Tormentum.* It consists of severe griping pain, vomiting of a fæcal matter, and costiveness, accompanied by retraction and spasms of the abdominal muscles.

The griping pain is very severe: the person at first vomits a bilious fluid, which soon smells like fæces, and at length becomes perfectly stercoraceous, from the peristaltic motion of the bowels being inverted through their whole course; so that, after a time, injections thrown into the rectum will pass along the whole tract of the intestines into the stomach, and escape through the mouth by vomiting. In some cases the skin becomes yellow. Ileus arises from many causes, and is generally symptomatic of other diseases.

1. The most common cause is strangulated hernia; and so frequent an attendant is it on ruptures, that the conviction of no such a thing existing should in every instance be carefully ascertained by practitioners. Many cases of women have been dissected, in which the surgeon had decided that there was no strangulation, where a small portion of the gut was found confined, and had killed the patient.

2. Another frequent cause is an *intus-susception,* or a retention of a part of the bowel within another. Dr. Good, who considers an inflammatory state as productive of ileus, gives an excellent explanation of how this happens. The dissection of persons, he observes, who have died of the stercoraceous or inflammatory colic has shown, in some cases, that one portion of the affected intestine, constringed and lessened in its diameter, has fallen into another portion, and thus produced an involution or introsusception. The fact is not difficult to be accounted for, and it will readily explain the great torture which is often suffered under this grievous malady. In every case in which the intestinal tube is weakened, there is a very copious extrication of air, producing, in many instances, a palpable distension of the parietes of the abdomen. In ileus there is

also, in conjunction with this, a strong inversion of the peristaltic action, operating from the rectum to the stomach, and forcing back whatever recrement or other materials are co-acervated in any part of the intestines. These, by intermixing with the elastic vapour of the intestinal tube, become very voluminous, and distend it to its utmost range, wherever distension can be accomplished. Then if, as is generally the case, a violent spasmodic constriction exists in one or more parts, the distensive force just mentioned cannot expel the contents, and the two powers are thus brought into immediate contact; and while the gut is rigidly contracted above, it is widened almost to bursting below; and, during the struggle which ensues, the contracted or collapsed part is forced into the other, and thus an intussusception takes place. In some cases, though very seldom, it happens, that in the midst of this spasmodic commotion, portions of the bowels have become twisted into nooses and knots, in which the portion, forming an encircling cord or bridle, has been drawn so tight as to produce strangulation. In most cases of the ileac passion, there is a mixture of immediate causes; and though there may be intus-susception, which is not common, there is also always inverted peristaltic motion, more or less of spasmodic contraction, and inflammation of the peritoneal covering.

Acrid, cold, and indigestible esculents, cold beverages on a heated stomach, taking cold in the feet when disposed to intestinal derangements, unalimentary substances swallowed by mistake, as metallic money, pieces of glass, plum, cherry, or other fruit stones, worms, calculous or other balls congested in the intestines and obstructing the regular movement, as scybala, gall-stones, intestinal calculi, are mentioned as having produced ileus: and, as a symptomatic affection, it is common in herniæ, tumours, cancerous or otherwise, and stricture. It has also supervened gout and rheumatism.

The medical treatment consists in removing the exciting causes, if possible, by carminative aperients, fomentations, and glysters; and if, at the commencement, there are evidences of an inflammatory state, blood should be abstracted freely from the arm, and by leeches on the abdomen.

The griping and spasmodic pain, and a restoration of the intestines from a state of inverted action to their proper peristaltic motion, which is sure to remove their constipation, are the points to which attention is to be directed. Dry and humid fomentations, and warm baths, and warm and copious glysters, afford a rational chance of success. The last should be rendered emollient by an admixture of oil, and aperient by the addition of infusions of senna, or decoction of colocynth, so that both intentions of cure should be carried forward at the same time. In combination with these, opium, and various other narcotics, may be tried: thus,

℞. Infus. sennæ compositi, Oj.
Olei olivæ, f. ℥iv.
Tincturæ opii, f. ʒij. Misce. Or,

℞. Extracti colocynthidis compositi, ʒij.
Tincturæ hyosciami, f. ʒiij.
Infusi anthemidis, Oj. Misce. Or,

℞. Olei ricini, f. ℥ij.
Decocti avenæ tenuioris, f. ℥vj.
Tincturæ hyosciami, f. ʒiij. Misce.

One or other of these should be tried occasionally about every six hours, and attention should be given to prevent them immediately returning.

Sir John Pringle speaks highly in favour of a decoction of poppies, which should be thrown up in large quantities, and have been found to succeed, not only in quieting the spasmodic pains, but in obtaining evacuations, after other injections, purgatives by the mouth, fomentations, and opiates have been tried without effect. To render this kind of injection more active, where it is desirable, two drachms of the extract of poppies may be dissolved in a quart of a strong decoction of the capsules, or heads.

Purgatives, combined with antispasmodics, should also be administered by the mouth: though the vomiting is sometimes so incessant, that little or nothing can be got to remain on it, and vast quantities of vitiated and varied secretions are poured out. Calomel is decidedly the most likely to answer, in doses of about two, three, or four grains. It occupies the smallest space, and, in the form of pill, has the fairest chance of being retained. A saline draught, in the act of effervescing, may be given occasionally. Many practitioners are in the habit of combining opium with the submuriate, which, nevertheless, has a tendency to retard its action; but as the opium may mitigate the spasm, and diminish the pain, it will commonly be found a useful adjunct. Calomel is, in my opinion, more to be depended on than any other aperient; but as it is slow in its operation, it is well to give the solutions of the common saline aperients in an effervescing state, at intermediate periods.

Dr. Cullen, on the advice of Dr. Haën, recommends a continued stream of warm water, thrown forcibly and with a proper syringe into the rectum, so that it may play upon the constricted portion of the intestine, and declares that he has found this remedy to be one of the most powerful and effectual.

When the ordinary means, and particularly those of warm injections and warm bath, fail, some practitioners have been courageous enough to try cold applications, both internally and externally. Sir George Baker tells us that a physician of credit informed him, he had once prescribed the cold bath with success. Citois affirms that, in several species of colic, this was his constant practice, and even in the midst of winter; and calls upon all his fellow citizens to attest that most of his patients, thus treated, had been restored to health: the propriety of the practice is, however, very much to be questioned.

ILEACA PASSIO. See *Ileac passion.*

I'LECH. By this word, Paracelsus seems to mean a first principle.

I'LEON CRUENTUM. Hippocrates describes it in lib. De Intern. Affect. In this disease, as well as in the scurvy, the breath is fœtid, the gums recede from the teeth, hæmorrhages of the nose happen, and sometimes there are ulcers in the legs, but the patient can move about.

I'LEUM. (*um, i.* n.; from ειλεω, to turn about; from its convolutions.) *Ileum intestinum.* The last portion of the small intestines, about fifteen hands' breadth in length, which terminates at the valve of the cæcum. See *Intestine.*

ILEUS. (*us, i.* m.) See *Ileac passion.*

I'LEX. (*ex, icis.* f.; the name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Tetragynia.*) The holly.

ILEX AQUIFOLIUM. The systematic name of the common holly: called also, *Agria, Agrifolium,* and *Aquifolium.* The leaves of this plant, *Ilex—foliis ovatis acutis spinosis,* of Linnæus, have been known to cure intermittent fevers; and an infusion of the leaves, drank as tea, is said to be a preventative against the gout.

ILEX CASSINE. *Cassina. Apalachine gallis.* This tree grows in Carolina; the leaves resemble those of senna, blackish when dried, with a bitter taste, and aromatic smell. They are considered as stomachic and stimulant. They are sometimes used as expectorants; and when fresh are emetic.

I'LIA. (The plural of *Ile,* ειλη.)

1. The flanks, or that part in which are enclosed the small intestines.

2. The small intestines.

I'LIAC. (*Iliacus;* from *ilia,* the flanks.) Belonging, situated near to, or connected with parts about the flanks.

ILIAC ARTERIES. *Arteriæ iliacæ.* The arteries so called are formed by the bifurcation of the aorta, near the last lumbar vertebra. They are divided into *internal* and *external.* The *internal iliac,* also called the *hypogastric artery,* is distributed in the fœtus into six, and in the adult into five branches, which are divided about the pelvis; viz. the little iliac, the gluteal, the ischiatic, the pudical, and the obturatory; and in the fœtus, the umbilical. The *external iliac* proceeds out of the pelvis through Poupart's ligament, to form the femoral artery.

ILIAC REGION. The side of the abdomen, between the ribs and the hips.

ILI'ACUS. See *Iliac.*

ILIACUS INTERNUS. *Iliacus,* of Winslow. A thick, broad, and radiated muscle, which is situated in the pelvis, upon the inner surface of the ilium. It arises fleshy from the inner lip of the ilium, from most of the hollow part, and likewise from the edge of that bone, between its anterior superior spinous process and the acetabulum. It joins with the psoas magnus, where it begins to become tendinous, and passing under the ligamentum Fallopii, is inserted in common with that muscle. The tendon of this muscle has been seen distinct from that of the psoas, and, in some subjects, it has been found divided into two portions. The iliacus internus serves to assist the psoas magnus in bending the thigh, and in bringing it directly forwards.

ILI'ADUM. (*um, i.* n.) *Iliadus.* The first matter of all things, consisting of mercury, salt, and sulphur. These are Paracelsus's three principles. His *iliadus* is also a mineral spirit, which is contained in every element, and is the supposed cause of diseases.

ILIA'STER. Paracelsus gives this name to the occult virtue of nature, whence all things have their increase.

ILI'NGOS. (From ιλιγξ, a vortex.) A giddiness, in which all things appear to turn round, and the eyes grow dim.

ILI'SCUS. Avicenna says, it is madness caused by love.

I'LIUM OS. (*Ilium, i.* n.; from *ilia,* the small intestines: so named because it supports the ilia.) The haunch-bone. The superior portion of the os innominatum, which, in the fœtus, is a distinct bone. See *Innominatum os.*

ILLA. See *Ula.*

ILLE'CEBRA. (*a, æ.* f.; from ειλεω, to turn: because its leaves resemble worms.) See *Sedum acre.*

ILLI'CIUM. (*um, ii.* n.; *ab illiciendo,* denoting an enticing plant, from its being very fragrant and aromatic.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order *Polygynia.*

ILLICIUM ANISATUM. The systematic name of the yellow-flowered aniseed-tree: the seeds of which are called the star aniseed. *Anisum stellatum, Anisum sinense,* and also *Semen badian.* They are used with the same views as those of the *Pimpinella anisum.* The same tree is supposed to furnish the aromatic bark, called *cortex anisi stellati,* or *cortex lavola.*

ILLOSIS. (*is, is.* f.; from ιλλος, the eye.) A distortion of the eyes.

ILLUSION. Erroneous imagination.

ILLUTAME'NTUM. An ancient form of an external medicine, like the *Ceroma,* with which the limbs of wrestlers, and others delighting in like exercises, were rubbed, especially after bathing; an account of which may be met with in Bactius de Thermis.

ILLUTA'TIO. (*o, onis.* f.; from *in,* and *lutum,* mud.) Illutation: a besmearing any part of the body with mud, and renewing it as it grows dry, with a view of heating, drying, and discussing. It was chiefly done with the mud found at the bottom of mineral springs.

I'LLYS. (From ιλλος, the eye.) A person who squints, or with distorted eyes.

I'LYS. (From ιλυς, mud.) 1. The fæces of wine. An obsolete term.

2. The sediment in stools, which resemble fæces of wine.

3. The sediment in urine, when it resembles the same.

IMAGINATION. See *Mens.*

IMBECI'LITAS OCULORUM. Celsus speaks of the *Nyctalopia* by this name.

IMBER'BIS. Beardless.

IMBIBI'TION. (*Imbibitio*, *onis.* f.; from *imbibo*, to receive into.) In *Chemistry*, for a kind of cohobation, when the liquor ascends and descends upon a solid substance, till it is fixed therewith.

IMBRICATUS. Imbricate: tiled; like tiles upon a house. Applied to leaves; as those of the *Euphorbia paralia*.

IMMERSUS. Immersed: plunged under water. In *Botany*, this term is applied to leaves which are naturally under the water, and are different from those which naturally float. See *Leaf*. It is remarked by Linnæus, that aquatic plants have their lower, and mountainous ones their upper, leaves most divided, by which they better resist the action of the stream in one case, and of the wind in the other.

2. In *Anatomy*, it is applied by Bartholine, and some other anatomists, to the *Subscapularis* muscle, because it was hidden, or, as it were, sunk.

IMPA'TIENS. (*ens*, *entis.* f.; from *in*, not, and *patior*, to suffer: because its leaves recede from the hand with a crackling noise, as impatient of the touch, or from the great elasticity of the sutures of its seed vessel, which is completely impatient of the touch, curling up with the greatest velocity, and scattering round the seeds, the instant any extraneous body comes in contact with it.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

IMPERATO'RIA. (*a*, *æ.* f.; from *impero*, to overcome: so named because its leaves extend and overwhelm the lesser herbs which grow near it.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

2. The pharmacopœial name of the masterwort. See *Imperatoria ostruthium*.

Imperatoria ostruthium. The systematic name of the master-wort. Called also *Magistrantia*. The roots of this plant are imported from the Alps and Pyrenees, notwithstanding it is indigenous to this island: they have a fragrant smell, and a bitterish pungent taste. The plant, as its name imports, was formerly thought to be of singular efficacy; and its great success, it is said, caused it to be distinguished by the name of *divinum remedium*. At present it is considered merely as an aromatic, and consequently is superseded by many of that class which possess superior qualities.

IMPERFECT. *Imperfectus*. Applied to such flowers as want either anther or pistil, or both.

Impeti'gines. (The plural of *impetigo*; from *impeto*, to infest.) An order in the class *Cachexiæ* of Cullen, the genera of which are characterised by cachexia deforming the external parts of the body with tumours, eruptions, &c.

IMPETI'GO. (*o*, *onis.* f.) A disease of the skin, called the humid or running tetter. It is characterised by the appearance of the small psydraceous pustules. It is not accompanied by fever, not contagious, nor communicable by inoculation. It chiefly occurs on the extremities, and under the following forms: —

1. The *impetigo figurata* is the most common variety of the moist tetter. It appears in circumscribed patches, of various figure and magnitude, which are usually smaller and more circular on the upper, and larger, oval, and irregular on the lower extremities. The patches consist at first of clusters of the yellow psydracious pustules, set close together, and surrounded by a slight inflammatory border; the whole being somewhat raised, but the pustules not very prominent or acuminated. In a few days the pustules break, and discharge their fluid; the surface becomes red and excoriated, shining as if it were stretched, but exhibiting numerous minute pores, from which a considerable ichorous discharge is poured out, accompanied with much troublesome itching, heat, and smarting. The discharge soon concretes partially into thin yellowish or greenish scabs; but still continues to ooze from under the scab which it forms. In the course of three or four weeks, as the quantity of the discharge diminishes, the scabs dry and fall off, leaving the surface of the cuticle red, rough, and somewhat thickened, and at the same time extremely brittle, and liable to crack and to be excoriated; so that the ichorous discharge and scabbing are easily reproduced, and the disease is often thus much prolonged in its duration. Occasionally fresh crops of the psydracious pustules re-appear, as at the commencement; and the whole course of the eruption is repeated.

When the impetigo figurata is beginning to heal, the patches undergo a process somewhat similar to that which takes place in the lepra vulgaris. The amendment commences at the centre of the patch, which first subsides, leaving the border elevated: at length this also disappears; but the cuticle, which was the seat of the patch, remains for some weeks red, shining, and tender.

But though this is the most usual and regular, it is by no means the uniform progress of impetigo: for this eruption, like scabies and eczema, varies so much in its phænomena, as almost to bid defiance to arrangement. Sometimes the patches enlarge by the formation of successive pustular margins; an exterior circle of pustules arising, while the preceding border is drying, to be followed by others which go through the same course, until the patch attains a considerable extent. The area, in the mean time, becomes dry and rough, with a scaly or scabby incrustation in its centre. This impetiginous *ringworm* bears a considerable resemblance to the herpes circinatus, which spreads by a succession of *vesicular* borders. A severe form of this tetter occurs in hot climates, according to the testimony of physicians who have practised there. Sometimes the papulæ of the lichen agrius become pustular, or are intermixed with psydracia, and the disease assumes all the characters of impetigo.

But the affinity of impetigo with the vesi-

cular diseases is manifested by a common variety of it, in the upper extremities, in which the psydracious pustules are intermixed with transparent vesicles, resembling the pustules in size and form. Where this intermixture occurs, the disease is much more troublesome, from the extreme irritation, itching, smarting, and heat which accompany it; and much more tedious and difficult of cure. It takes place chiefly on the hand, about the knuckles and sides of the fingers, or on the wrist; and the space between the metacarpal bones of the forefinger and thumb is usually the seat of one of the blotches. The vesicles are slower in their progress than the psydracia: they remain many days transparent, but not much elevated, the cuticle over them being thick in that situation. When they break, an acrid ichor is discharged, which produces inflamed points where it touches the cuticle, and these become vesicles or psydracia. Each vesicle, thus broken, is not disposed to heal; but the cuticle round its base now becomes inflamed and raised, and discharges a thin ichor, when in any degree irritated. The vesicles appear, in slow succession, at a little distance from each other, and from the pustules; and at length an irregular blotch is produced, of a red, chopped, and thickened cuticle, interspersed with the rising eruptions, little humid ulcers, and chops or fissures. The sense of burning and intense itching, accompanying especially the first rise of the vesicles, is extremely distressing, and is much aggravated by the irritation of almost every application that is resorted to.

2. The *impetigo sparsa* differs from the preceding rather in the *form*, than in the nature and progress of the eruption: for, with the exception of the indeterminate distribution of the pustules, which are not congregated in circumscribed clusters, but dispersed without any regular order along the extremities, and sometimes about the neck and shoulders, the foregoing description is applicable to both species of the disorder. The impetigo sparsa more frequently occurs in the lower extremities, than the former; and is, in that situation, more troublesome and obstinate. In elderly people, especially of debilitated habits, the excoriations are liable to pass into deep, irregular ulcers, surrounded by a purplish colour, and often accompanied with œdema.

These two forms of impetigo are not always traced to any obvious exciting cause: but they are frequently preceded by some derangement of the digestive organs, languor, and headache. A predisposition to the disease appears to be connected with the sanguine temperament, with a thin soft skin, and a relaxed and bloated habit of body; or with the sanguineo-melancholic temperament, a spare form, and a thin but harsh skin. Certain seasons appear to have great influence on the disease, in those who are predisposed to it. The accession of the eruption has been ascribed to violent exercise, intemperance, cold, and sudden depressing passions, especially fear and grief.

Local tetters are produced by the action of particular irritants on the cuticle, which soon disappear when the source of irritation is withdrawn. The affection of the hands and fingers, in those who work among sugar, which is called the grocer's itch, is of this nature; and similar eruptions are produced on the hands of bricklayers, by the acrid stimulus of lime. It is worthy of remark, that both the grocer's and the bricklayer's itch is, in some individuals, a pustular, and in others a vesicular eruption, referable to the eczema; but in neither case contagious, as the popular appellation might lead us to suppose.

Local pustular patches are also the result of the application of the tartrate of antimony to the skin by friction, and in some cases of the application of blisters, and other stimulating plasters. These pustules are liable to extend considerably beyond the blistered or stimulated part, and sometimes continue to arise in succession for a fortnight or more; and many of them often assume the form of phlyzacia, or of large, protuberant pustules, with a hard, elevated, and inflamed base. Some of these even acquire the size of small boils, and suppurate deeply and slowly, with great pain, and considerable restlessness and feverish heat in the night.

The impetigo figurata and sparsa are sometimes confounded with two contagious diseases, of the pustular order, porrigo and scabies. The appellation of *ringworm*, which is popularly given to the oval or circular patches of the first, has partly contributed to occasion this mistake. They differ, however, from the contagious circles of porrigo, inasmuch as they seldom affect children, occur principally on the extremities, and do not continue to discharge a purulent and glutinous, but, after the first eruption, an ichorous humour; nor do they form the thick, soft, and copious scabs of porrigo—not to mention the absence of contagion.

The prevalence of transparent vesicles in the patches of impetigo may mislead an incautious or inexperienced observer into a suspicion that the disease is scabies: but the copious exudation of ichor, the rough, reddened, and fissured cuticle, the magnitude and slow progress of the vesicles, and the heat and smarting which accompany the itching, in this form of impetigo, will serve in general to determine the diagnosis. In the strictly purulent form of scabies, the pustules about the hands arise to a much greater magnitude and elevation than the psydracia; they are filled with a thick yellow pus, and are more considerably inflamed round their base.

In the incipient state of these two forms of impetigo, it is useful to administer sulphur internally, in such quantities as not to induce purging; and, if there is much irritability or inflammation of the cuticle, a portion of nitre or crystals of tartar may be advantageously combined with it. The impetigo sparsa commonly yields to these medicines, if diligent ablution with tepid water be at the same time

employed. But when the disease is of long standing, it requires a treatment somewhat similar to that recommended for inveterate psoriasis; namely, the diet drinks, decoctions of sarsaparilla and cinchona, with the fixed alkalies and antimonials. The mercurial alteratives, however, in this affection, are of essential assistance to this plan of cure; such as small doses of cinnabar, the hydrargyrus cum cretâ, or Plummer's pill.

The external applications adapted to these forms of impetigo, especially to the figured species, are the mild desiccative unguents; for, in the majority of cases, the irritable surface of the tetter will not bear stimulants with impunity. When the discharge is considerable, the ointments prepared with the oxide of zinc alone, or united with saturnine ointment, or with the white precipitated oxide of mercury, are the most efficacious in allaying the inflammatory condition of the excoriated surface, and in reducing the quantity of the discharge. When there is less of this irritability and exudation, the ointment of the nitrate of mercury, much diluted, as with five or six parts of simple ointment, will be beneficial. From the too active employment of this unguent, and still more of that of the nitrico-oxide of mercury, by practitioners unacquainted with the character of the disorder, a great aggravation of the eruption, and of the sufferings of the patient, is sometimes occasioned.

In some instances, indeed, the skin, under this impetiginous affection, is peculiarly sensible to the stimulus of mercury, whether employed internally or externally. But the most irritable of all the varieties of impetigo, are those in which vesicles abound; in some of which the zinc, and saturnine applications, and even simple lard, occasion an aggravation of the symptoms. In these cases, it is particularly necessary to keep the parts covered, with a view to avoid the effects of friction from the clothes, as well as of heat and of cold; to wash the surface daily with some emollient fluid, such as milk and water, or an infusion of bran; to interdict the use of soap; and to besmear the parts with cream, or an emulsion of almonds. A lotion prepared by boiling mallow, digitalis, and poppy-heads has been found serviceable, where the parts were very painful.

In the drier and less irritable forms of the impetigo, the use of the waters of Harrowgate is the most effectual remedy, and likewise the best preventive of its returns: under the same circumstances, the warm sea-water bath, followed by a course of bathing in the open sea, is productive of great benefit.

3. *Impetigo erysipelatodes.* This form of the disease, in its commencement, presents nearly the ordinary appearances of erysipelas; namely, a redness and puffy swelling of the upper part of the face, with œdema of the eyelids; and is accompanied with slight febrile symptoms for the space of two or three days. But, on a minute examination, the surface, instead of the smooth polish of erysipelas, is found to exhibit a slight inequality, as if it were obscurely papulated; and, in a day or two, the true character of the disease is manifested, by the eruption of numerous psydracious pustules over the inflamed and tumid skin, instead of the large irregular bullæ of erysipelas. These pustules first appear below the eyes, but soon cover the greater part of the face, and sometimes extend to the neck and breast: they are accompanied with a distressing sense of heat, smarting, and itching. When they break, they discharge a hot and acrid fluid, which adds to the irritation and excoriation of the surface. In this painful condition the face remains for ten days or a fortnight, when the discharge begins to diminish, and to concrete into thin yellowish scabs. But, on the interstices between the scabs, fresh pustules arise at intervals, with renewed heat and pain, and subsequently discharge, ulcerate, and form scabs like the former. The disease continues thus severe and troublesome for an uncertain period, from one to two or three months, and ultimately leaves the cuticle in the same dry, red, and brittle state which remains after the other forms of impetigo. The constitution is scarcely disturbed during the progress of this disease, and is much less disordered in the outset than in erysipelas.

In the commencement of the disease, purgative medicines, with the antiphlogistic regimen, afford great alleviation to the symptoms; but when the copious exudation and scabbing take place, the cinchona, in considerable doses, alone, or with the sarsaparilla, or mineral acids, is administered with the greatest benefit. The same local treatment is requisite as in the other forms of the eruption; viz. tepid ablution, with emollient liquids; the application of the mildest ointments; and the use of sea-bathing, or of the sulphureous waters, in its decline.

4. *Impetigo scabida.* In this more rare and severe form of the disease, one or more of the limbs becomes encased in a thick, yellowish, scabby crust, not unlike the bark of a tree, which is accompanied with a disagreeable heat and itching, and renders the motion of the affected limbs difficult and painful. This crust is the result of the concretion of an acrimonious humour, which is discharged in great abundance from numerous psydracious pustules, as they successively form, break, and ulcerate over the surface of the limb. The concretion commences about the third or fourth week, when the discharge begins to abate, and invests the whole of the arm from the elbow to the wrist, or the leg from the knee to the ankle. After some time longer, the scabby coating is divided by large cracks or fissures, from which a thin ichor exudes, and concretes into additional layers of scabs. If any portion of the scab be removed, the excoriated surface pours out its fluid again, and fills up the space with a new concretion. In the lower extremities, the disease is most severe and obstinate, is ultimately conjoined with anasarca, and often produces severe ulceration.

The incrustation sometimes extends to the fingers and toes, and destroys the nails; and, as in other similar instances, the new ones are thick, notched, and irregular.

This species requires the same internal medicines which have been recommended for the inveterate forms of the preceding varieties, especially the sulphureous waters. The chief peculiarity of its treatment consists in clearing the surface of its incrustation, and correcting the morbid action of the superficial vessels. The thick scab can only be softened and gradually removed by perseverance in the application of the steam of warm water to it, for a short time, daily. Those parts of the surface, which are thus cleared, must be covered with soft linen, or oiled silk, after tepid ablution, twice a day; and some of the unguentum zinci, or a much diluted ointment of nitrate of mercury, with common cerate, containing a fourth or fifth part of the mercurial, must be interposed.

5. The *impetigo rodens* is a rare but intractable species of the disease, probably of a cancerous nature, in which the cellular membrane is affected, as well as the skin, and seems to shrink away, as the ulceration and discharge go on. The disorder commences with a cluster of pustules, sometimes intermixed with vesicles, which soon break, and discharge for a long period of time an acrid humour, from open pores or from under scabs; and the skin and cellular texture are slowly, but deeply and extensively corroded, with extreme irritation and pain, which are only to be alleviated by large doses of opium. The disease commonly begins on the side of the chest or trunk of the body, and gradually extends itself.

Impetum faciens. See *Vis vitæ*.

I'mpia herba. (From *in*, not, and *pius*, good: because it grows only on barren ground.) See *Gnaphalium*.

IMPLICATUS. Implicate. Celsus, Scribonius, and some others, call those parts of physic so which have a necessary dependance on one another; but the term has been more significantly applied, by Bellini, to fevers, where two at a time afflict a person, either of the same kind, as a double tertian; or of different kinds, as an intermittent tertian, and a quotidian, called a *semitertian*.

Implu'vium. (From *impluo*, to shower upon.) 1. The shower bath.

2. An embrocation.

IMPOSTHUMA. A term corrupted from *impostem* and *apostem*. An abscess.

IMPO'TENCY. See *Sterility*.

IMPREGNA'TION. *Impregnatio*. See *Conception*, and *Generation*.

INANIS. Pithy.

INANI'TION. (*Inanitio, onis*. f.; from *inanio*, to empty.) Applied to the body or vessels, it means emptiness: applied to the mind, it means a defect of its powers.

INCANTA'TION. (*Incantatio, onis*. f.; from *Incantamentum*.) A way of curing diseases by charms, defended by Paracelsus, Helmont, and some other chemical enthusiasts.

INCANUS. Hoary. Applied to stems and leaves which are covered with a kind of scaly mealiness; as that of the *Artemisia absinthium*, and *Atriplex portulacoides*. See *Glaucus*.

INCE'NDIUM. (From *incendo*, to burn.) A burning fever, or heat.

INCE'NSIO. 1. A burning fever.

2. A hot inflammatory tumour.

INCERNI'CULUM. (From *incerno*, to sift.) 1. A strainer, or sieve.

2. A name for the pelvis of the kidney, from its office as a strainer.

INCIDENS. (From *incido*, to cut.) A medicine which consists of pointed and sharp particles, as acids, and most salts, which are said to incide or cut the phlegm, when they break it so as to occasion its discharge.

INCINERA'TION. (*Incineratio*; from *incinero*, to reduce to ashes.) The combustion of vegetable or animal substances, for the purpose of obtaining their ashes or fixed residue.

INCISI'VUS. (From *incido*, to cut.) A name given to some muscles, &c.

Incisivus inferior. See *Levator labii inferioris*.

Incisivus lateralis. See *Levator labii superioris alæque nasi*.

Incisivus medius. See *Depressor labii superioris alæque nasi*.

INCI'SOR. (*or, oris*. m.; from *incido*, to cut, from its use in cutting the food.) The four front teeth of both jaws are called incisors, because they cut the food. See *Teeth*.

INCISO'RIUM. (*um, i*. n.; from *incido*, to cut.) A table whereon a patient is laid for an operation.

Incisorium foramen. A name of the foramen, which lies behind the dentes incisores of the upper jaw.

INCISUS. (From *incido*, to cut.) Cut; snipped: applied, in *Botany*, synonymously with *dissectus*, to leaves; as those of the *Geranium dissectum*.

INCLINANS. Leaning.

INCLUDENS. Inclosing.

INCLUSUS. Inclosed.

INCOMPLETUS. Incomplete: applied to flowers, such as want either the cup or the blossom: the tulip, for example, wants the cup.

INCONTINE'NTIA. (*a, æ*. f.; from *in*, and *contineo*, to contain.) Incontinence. Inability to retain the natural evacuations. Hence we say, incontinence of urine, &c.

INCRASSANS. (From *incrasso*, to make thick.) Having the property of thickening the fluids.

INCREMENTUM. Increase: growth. See *Nutritio*.

I'NCUBUS. (*us, i*. m.; from *incubo*, to lie upon: because the patient fancies that something lies upon his chest.) See *Oneirodynia*.

INCURVA'TUS. Bowed or bent inwards.

INCURVUS. Curved inwards: applied to leaves. See *Inflexus*.

INCUS. (*us, udis*. f.; a smith's anvil; from *incudo*, to smite upon: so named from

its likeness in shape to an anvil.) The largest and strongest of the bones of the ear in the tympanum. It is divided into a body and two crura. Its body is situated anteriorly, is rather broad and thick, and has two eminences and two depressions, both covered with cartilage, and intended for the reception of the head of the malleus. Its shorter crus extends no farther than the cells of the mastoid apophysis. Its longer crus, together with the manubrium of the malleus, to which it is connected by a ligament, is of the same extent as the shorter; but its extremity is curved inwards, to receive the os orbiculare, by the intervention of which it is united with the stapes.

INDENTED. See *Sinuatus.*

I'NDEX. (*ex, icis.* c. g.; from *indico,* to point out: because it is generally used for such purposes.) The fore-finger.

Indian arrow-root. See *Maranta.*

Indian cress. See *Tropæolum majus.*

Indian date-plum. See *Diospyros lotus.*

Indian leaf. See *Laurus cassia.*

Indian pink. See *Spigelia.*

Indian rubber. See *Caoutchouc.*

Indian wheat. See *Zea mays.*

INDIA'NA RADIX. Ipecacuanha.

I'NDICA CAMOTES. Potatoes.

INDICANT. (*Indicans;* from *indico,* to show.) That from which the indication is drawn, which is in reality the proximate cause of a disease, or the disease itself.

Indicating days. Critical days.

INDICA'TION. (*Indicatio, onis.* f.; from *indico,* to show.) An indication is that which demonstrates in a disease what ought to be done. It is three-fold: preservative, which preserves health; curative, which expels a present disease; and vital, which respects the powers and reasons of diet. The scope from which indications are taken, or determined, is comprehended in this distich:

——*Ars, ætas, regio, complexio, virtus,*
Mos et symptoma, repletio, tempus, et usus.

INDICATOR. (*or, oris.* m.; from *indico,* to point: so named from its office of extending the index, or fore-finger.) An extensor muscle of the fore-finger, situated chiefly on the lower and posterior part of the fore-arm. *Extensor indicis,* of Cowper. *Extensor secundii internodii indicis proprius, vulgo indicator,* of Douglas. It arises, by an acute fleshy beginning, from the middle of the posterior part of the ulna; its tendon passes under the same ligament with the extensor digitorum communis, with part of which it is inserted into the posterior part of the fore-finger.

INDICUM LIGNUM. Logwood.

INDICUS MORBUS. The venereal disease.

INDI'GENOUS. (*Indigenus; ab indu, i. e. in et geno, i. e. gigno,* to beget.) Applied to diseases, plants, and other objects which are peculiar to any country.

INDIGESTION. See *Dyspepsia.*

INDIGO. A blue colouring matter extracted from the *Indigofera tinctoria.* Anil, or the indigo plant.

INDIGOFERA. (From *indigo,* and *fero,* to bear.) The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

INDIGOFERA TINCTORIA. The systematic name of the plant which affords indigo.

INDUCIUM. (*um, ii.* n.; from *induco,* to cover or draw over.) A covering. 1. A shirt.

2. The name of the amnios, from its covering the fœtus like a shirt.

3. Wildenow and Swart's name for the involucrum, or thin membraneous covering of the fructification of ferns.

Its varieties are,

1. *Inducium planum,* flat; as in the genus *Polypodium.*

2. *Peltatum,* connected with the seed by a filament or stalk; as in *Aspidium filixmas.*

3. *Corniculatum,* round and hollow; as in *Equisetum.*

INDURANS. (From *induro,* to harden.) A medicine which hardens.

INDURATE. *Induratus.* Hardened.

INEQUALIS. Unequal. Applied to a leaf when the two halves are unequal in dimensions and the base end parallel; as in *Eucalyptus resinifera.*

INERMIS. (From *in,* priv. and *arma.*) Unarmed: opposed, in designating leaves, to such as are spinous.

INE'SIS. (From ινάω, to evacuate.) *Inethus.* An evacuation of the humours.

INFECTION. See *Contagion.*

INFERNAL. *Infernalis.* A name given to a caustic, *lapis infernalis,* from its strong burning property. See *Argenti nitras.*

INFERUS. Beneath. Much used in *Botany:* thus, a blossom is said to be *beneath* when it includes the germen, and is attached to the part immediately below it; as the blossom of sage, borage, &c. A germen is *beneath* when it is placed below the attachment of the blossom, and therefore not included within it; as in *Lonicera, Ribes, Cratægus,* &c.

INFIBULA'TIO. (From *infibulo,* to button together.) An impediment to the retraction of the prepuce.

INFLAMMABLE. (*Inflammabilis;* from *inflammo,* to burn.) Chemists distinguish by this term such bodies as burn with facility, and flame in an increased temperature.

Inflammable air. See *Hydrogene gas.*

Inflammable air, heavy. See *Carburetted hydrogene gas.*

INFLAMMATION. (*Inflammatio, onis.* f.; from *inflammo,* to burn.) Phlogosis. 1. In *Pathology,* a disease characterised by redness, attended with more or less of heat and pain, tumefaction, and fever.

When an inflammation takes place near the surface of the body, there is heat and pain, or soreness, and more or less swelling, hardness, and redness; and we hence infer the existence of these last symptoms in inflamed parts which lie beyond the reach of vision.

Inflammation in most cases appears to begin at a point; for, at the commencement, all the local symptoms are within a very small compass. The spreading of the inflammation is owing to continued sympathy, the surrounding

parts participating with the point of irritation; and, in proportion to the health of the surrounding parts and constitution, this sympathy is less.

The act of inflammation seems to consist in an increased action of the vessels; mostly, if not altogether, of the extreme vessels: for wherever inflammation appears, it may be confined to a point in which none but the smallest vessels can exist. The first act of the vessels, when the stimulus which excites inflammation is applied, John Hunter supposes to be precisely similar to a blush, and to consist in a simple distension or increased diameter beyond their natural size, such as we see take place on the application of a gentle friction, or of gently stimulating medicines, to the skin; and the consequence of which is a warm glow, when limited to the degree we are now supposing, but which, if carried farther, would be followed with excoriation, suppuration, and ulceration.

The inflamed vessels, being thus enlarged and irritated, begin to separate from the blood they contain some portion of its coagulating lymph, together with some serum, and red globules, and to throw these materials out on the internal surface of the part inflamed; probably through the exhalents, or perhaps through new vessels which may be now forming around them; whence the sides of the cellular tissue, which receive the effusion, become covered with it, unite with the opposite sides with which they are in contact, and thus form the first foundation of adhesions. The increased bulk of an inflamed part is produced chiefly by this effusion; and the increased redness, partly by the larger quantity of blood continued in the distended old vessels, and partly by the production of new vessels formed out of the coagulable lymph thus extravasated; and which, by innumerable inosculations and adhesions, interpose a check to suppuration, which would otherwise most probably take place.

Inflammation, therefore, consists in an increased impetus and accumulation of blood in the vessels affected, accompanied with a proportionate swelling and sense of heat. Physiologists have pretty generally concurred in ascribing this accumulation of blood to an obstruction of some kind or other, but they have differed upon its nature and origin, and have not been able to determine whether it be dependent upon the crasis of the blood itself, or the resistance of the vessels that contain it. Generally speaking, however, it has by all the school of medicine been ascribed to whatever has been supposed to be the proximate cause of fever: and hence the humoral pathologists attributed it to a *lentor* or *viscidity* of the circulating fluid; and the corpuscular, to an *error loci*,—the cause of obstruction, in the view of either hypothesis, being seated in the nature or misdirection of the constituent parts of the blood itself: while Cullen refers it to the same kind of spasm which he regarded as the proximate cause of fever, and hence derived the obstruction from a constrictive resistance in the vessels of the part affected: which, he farther supposes, forms but a mere link in the tensive chain of a phlogistic diathesis, which more or less runs through the entire habit at the time of inflammation, and constitutes the predisposition to its rise and progress. "That a spasm," says he, "of the extreme vessels takes place in inflammation, is presumed from what is at the same time the state of the whole arterial system. In all considerable inflammations, though arising in one part only, an affection is communicated to the whole system, in consequence of which an inflammation is readily produced in other parts besides that first affected. This general affection is well known to physicians under the name of *diathesis phlogistica*. It most commonly appears in persons of the most rigid fibres; is often manifestly induced by the tonic or astringent power of cold; increased by all tonic and stimulant powers applied to the body; always attended by hardness of the pulse; and most effectually taken off by the relaxing power of blood-letting. From these circumstances it is probable that the diathesis phlogistica consists in an increased tone or contractibility, and, perhaps, contraction of the muscular fibres of the whole arterial system."

To the first two of these hypotheses the same objections apply that apply to them as causes of fever. That an error loci occasionally takes place, or, in other words, an entrance of red or other particles of blood into minute vessels to which they do not naturally belong, is unquestionable; but then this is rather a secondary than a primary link in the chain of inflammation, and consequently an effect rather than a cause. Yet the hypothesis of Cullen does not seem to be more satisfactory, and is especially open to the two following objections, to say nothing of various minor difficulties with which it is attended.

It supposes, in the first place, as a general rule, that inflammations of every kind, however minute and circumscribed, are dependent upon a particular habit of body at the time, distinguished by the name of a phlogistic diathesis. But we see inflammations occurring in habits of every kind, and varying in many of their features according to the variety of the habit; and we see them also arise in individuals who have no such phlogistic habit or diathesis as is here referred to. And we often, moreover, see examples of this very diathesis operating upon individuals for years, without producing any such effect as inflammation in particular parts. And we cannot, therefore, regard such a diathesis as a proximate cause of inflammation in general, though it may often be so of a particular kind of inflammation. Cullen, indeed, was aware of this difficulty, and even admits it. "Such a state of the system," says he, "seems often to arise and subsist for some time without the apparent inflammation of any particular part; but such a state of the system renders it *likely* that a spasm *may*, at the same time, readily arise in any of the extreme

vessels, and a particular inflammation be there produced. It does, however, appear also, that the general diathesis frequently arises from inflammation begun in a particular part."

Now this is not only to admit the difficulty but to fall prostrate before it. It is to admit what at once settles the entire question. The cause and the effect are made to change places; and the phlogistic diathesis is as broadly stated to originate from inflammation in a particular part, as inflammation in a particular part is stated to originate in the phlogistic diathesis.

But, secondly, this hypothesis seems not only to be chargeable with incongruity, but to be directly at variance with the ordinary train of phænomena by which inflammation is accompanied. That the habit here alluded to under the name of diathesis phlogistica exists, and that very frequently, is not to be questioned; and Cullen has very lucidly described what is ordinarily meant by it. "It seems probable," says he, "that the diathesis phlogistica consists in an increased tone or contractility, and perhaps in an increased contraction of the muscular fibres of the whole arterial system;"—"it appears most commonly in persons of the most rigid fibres." But it will be found by every one who investigates the subject, that so far from this being the habit of body in which inflammation is most frequently to be met with, it is that in which it occurs more rarely than in many others. That it occurs in it at times is unquestionable, for inflammation under some form or other occurs in habits of every kind: but if we look for specimens of larger or smaller inflammation, of deep-seated or superficial, nay, even of suppurative or ulcerative, we shall meet with them far more generally in constitutions marked by mobile and irritable than by firm and rigid fibres; in habits characterised by atonic rather than by tonic action. It is not till the constitution has been broken down, and the liver rendered feeble and torpid by the influence of a tropical sun, that hepatitis makes its appearance in its ordinary course of attack; phthisis occurs in relaxed and delicate, and not in hardy and robust frames; psoas abscess, peritoneal inflammation, scrofula, and those vast formations of pus which are sometimes found in tumours, for the most part follow the same track; while the best, if not the only, remedy for the innumerable host of inflammations, whether erysipelatous, gangrenous, or vesicular, pernio or intertrigo, is to raise the part or the constitution to that scale of vigour the reduction of which is well known to form a common predisposition to all of them. That there may exist such a condition of body as an inflammatory diathesis, or a predisposition to inflammatory action of some kind or other, according to the idiosyncrasy or established habit, or some controlling accident, is unquestionable; but such a diathesis cannot be made synonymous with the phlogistic diathesis as described by Cullen, unless there be but one kind of inflammation, and that such an inflammation as has a natural and necessary relation to the entony and rigidity of fibre which is here presupposed.

The little that we know upon the subject may, perhaps, be comprised in a few words:—The standard of firm health is the best guard against inflammations of every kind, or the state in which a man is least susceptive of them; and a deviation in either direction, whether towards a habit of entony or of atony, capacifies him for breeding them. But it does not capacify him equally: for, in the latter case, they are produced far more easily and generally than in the former. In fibrous entony, obstruction appears to take place, and inflammation to follow, from an increased tendency to constriction and rigidity in the muscular tunic of the arteries generally, and an actual constriction in those of the part affected; in consequence of which the diameter of the tube is diminished, and the blood, though urged by a stronger impetus from behind, works onward with less freedom than usual. In fibrous atony, obstruction takes place from the relaxed and yielding state of the vessels, which admit grosser corpuscles of the blood than what naturally belong to them, and thus become accessory to the error loci of the Boerhaavian school. But a mere error loci is not sufficient for inflammation; since the erratic corpuscles are readily forced back, or pass diagonally into larger vessels from the numerous anastomoses that prevail in the arterial system. Of this we have a pertinent example in the red suffusion which frequently takes place in the tunica albuginea of the eye, which is often an effect of weakness alone, is unaccompanied with heat or pain, and consequently with inflammation, and perhaps passes off by the next day. In addition, therefore, to the relaxed state of fibres and the error loci before us, there must be something of that irritability which is so frequently an attendant upon relaxed and mobile organs, and which produces spasmodic and contractile action in a far higher degree, though perhaps in irregular fluxes and refluxes, than any habitual firmness or rigidity of fibre does at any time.

And as, in weak parts or habits, a peculiar susceptibility of irritation seems to be a necessary adjunct in the production of inflammation, it is possible that it may be equally necessary in the opposite state of excessive firmness and rigidity of fibre; since this also, as just observed, will at times continue for years without giving rise to any inflammation whatever, and seems equally to demand an exciting accessary. And hence the real inflammatory or phlogistic diathesis, constituting, however, a remote, more properly than a proximate cause, is perhaps to be found in increased irritability of the living fibre rather than increased rigidity and vigour. Concerning then the proximate cause of inflammation, there is yet much to be unravelled. Of its remote causes, and a few of its laws, we are in some degree better informed. The remote causes may be

contemplated under the three following divisions:—

First, some accidental violence applied to a part, so as to make a wound or bruise, from which it cannot recover except by the process of inflammation, or which, at least, has a natural tendency to excite such a process.

Secondly, some irritation which does not destroy the texture of the part, but merely its natural action; as pressure, heat, cold, blisters, pungent applications, and often fevers of every kind.

Thirdly, a particular disposition to inflammation, founded, perhaps, as we have just observed, in an irritability in the morbid part itself, and which we often behold in constitutions of the best state of health; affording proof that the general habit is not, in such cases, concerned in the morbid change. Inflammations from any of these causes will, however, partake of the character of the constitution, and hence proceed kindly or unkindly, according as the constitution is in a diseased or a healthy condition. Yet the general principle of inflammation is the same in all; for we can only contemplate it as a remedial process, an instinctive effort or exertion of the vis medicatrix naturæ, to bring about a reinstatement of the parts nearly to their natural functions.

Yet, though inflammation is uniformly the same in its principle, it often differs widely in its mode of action, and consequently in its result: for, as it has a tendency to partake of the character of the constitution, and, especially where it is extensive, according as the constitution is healthy or unhealthy, so will be the nature of the inflammation and the diversity of its progress.

Healthy inflammation consists probably of one kind alone, and is no farther divisible than into different stages of a restorative action, the effect of an instinctive stimulus rather than of morbid irritation. Unhealthy inflammation consists of many species: for numberless are the diseases that affect the health of the constitution, and, consequently, that may influence the character of the inflammation, by superadding peculiarities or specific actions of its own; though it is often affected, also, by the particular condition of the part in which the inflammation takes place. And hence it is no uncommon thing for particular parts to run into particular inflammations, with the character of which the constitution has little concern; such as those that are occasionally found on the skin, particularly the erysipelatous, as they are commonly denominated.

Simple or healthy inflammation is capable of producing three different effects, which, where the whole take place healthily, follow in regular order, and constitute so many stages. These are, adhesions of the parts inflamed, suppuration, and ulceration; to which three different effects John Hunter has given the names of the adhesive, the suppurative, and the ulcerative inflammation.

There is good reason for this division into different heads: for although, where the whole take place healthily, they follow in the order now enumerated, yet the whole do not always take place either healthily or unhealthily; nor is the order thus enumerated in every instance attended to. For pus is often produced when there is no adhesive inflammation, and ulceration when there is neither adhesion nor suppuration; while, occasionally, the suppurative and adhesive inflammations take place simultaneously, the former being hurried on before the other has completed its own bounds, as is often the case in peritoneal inflammation after childbirth. The degree of violence also with which the inflammation commences, produces a considerable influence upon these points; and the nature of the parts themselves still more.

With the nature of the parts that constitute the chief fields of inflammation, it is of high importance that we should make ourselves deeply acquainted from the first, that we may be able to determine concerning the particular course the inflammation is likely to run, and regulate our treatment accordingly. And it is of still farther importance that this subject should be attended to on the present occasion, because it is on this distinction of parts, producing a natural tendency to distinct inflammations, that the genera of the order before us are principally constructed.

The whole of the observations of John Hunter upon this interesting point are entitled to the most patient study, and cannot be too closely committed to memory. In the present place it is only necessary to remark, that, in treating of inflammation, he divides the body into two parts: firstly, the circumscribed cavities, organs, and cellular membrane which connects them; and, secondly, the outlets of the body, commonly called mucous membranes, as the ducts of the glands, alimentary canal, and similar organs. He distributes inflammatory affections into three sorts: adhesive, suppurative, and ulcerative.

Inflammation, then, is influenced by the nature of the part in which it takes place. It is also equally influenced by the nature of the constitution itself; and, thirdly, it is influenced by the nature of the remote cause. And we may add, that, where the inflammation is regulated by the constitution, and the constitution itself is healthy, specific irritants will not change the nature of the inflammation, but only determine its situation, extent, duration, or some other peculiar property. But where the constitution is unhealthy, or predisposed to any particular morbid action, as that of erysipelas, putrid fever, &c., as soon as the specific virus is communicated, the disease will degenerate into a mixture of both, and discover its double source; it will give proof that a specific inflammation has been set down upon a constitution of a peculiar kind, and will partake of the nature of both. In consequence of which the specific properties will by no means be so distinct or well formed as if they were to appear in a sound and untainted constitution.

It is a wise and beneficent law of Providence, and affords an incontrovertible proof of the existence of an instinctive remedial power, that inflammation, wherever seated, is always more violent on the side of the inflamed point nearest the surface, and shows a constant tendency to work its way externally rather than internally. This law applies equally to the thorax, to the abdomen, and to parts which lie close to the different outlets of the body.

It appears, then, that simple or healthy inflammation is a remedial process for restoring a part to soundness when affected by a morbid impression that has a tendency to injure or destroy it; and that the first stage of this process consists in the effusion of a coagulable lymph, which binds the weakened organisation into a closer bond of union, creates new vessels, and consequently introduces new life. If this effort do not succeed, and the morbid action still continues its progress, the affected part dies to a certain extent; but the coagulable lymph which has been thrown out, and introduced new vascularity around it, still sets a boundary to the destructive career, and prevents it from spreading into the neighbourhood, or at least from spreading as far as it otherwise would do. When, however, a part is thus killed or destroyed, it becomes a substance foreign to the body, and must be removed, and have its place supplied by a formation of new living matter. The process of suppuration, which is explained under the head of apostema, prepares equally for the removal of the dead matter and the formation of that which is to fill up its post. This, however, is the progress of healthy inflammation alone; for, as already observed, in unhealthy inflammation the morbid action will often run on to the ulcerative process or last stage at once; or the adhesive or the suppurative may intermix with it; or all may imperfectly take place together.

In attempting the cure of inflammation, our first endeavour should be to obtain what has been called a resolution of the general enlargement; or, in other words, a restoration of the part to its state of former health, without the necessity of its going through the entire range of the inflammatory process. And in doing this we are to be guided by the principle of being able to make a new impression upon the part, and to oppose a healthy or remedial to an unhealthy and mischievous action. The nature of the cause must hence be sedulously enquired into: for, till this is ascertained and removed, it will be in vain to expect that resolution can take place; and where we can speedily accomplish such removal, resolution will often follow spontaneously: for the animal economy having a disposition in itself to discontinue diseased action, such action will readily subside upon a disappearance of the cause that maintains it. And hence, by taking off the venereal action by the use of mercury, in the case of a bubo, the inflammation will gradually cease, provided no other morbid action has already arisen and united itself with the syphilitic.

Resolution, however, is not always to be attempted; for there are many cases in which the attempt would be in vain, and possibly a few in which it would be improper. It is not to be attempted in accidents where there is a considerable exposure of the injured part; and still less in accidents where the part has been killed by their violence: for in these, suppuration is the first natural step to a cure, and we cannot prevent it if we would.

Where inflammation arises from a morbid predisposition in the constitution, and belongs to the description which has been called critical, there is some doubt, and much demand for circumspection: and in this case resolution is called repulsion. If the inflammation be really a concentration of the constitutional complaint, which, by being driven from the part fixed upon, may be again diffused over the entire frame, and in waiting to fasten on some other part, it will often be better to encourage its stay. But the determination, even in this case, must be subject to the two following conditions: first, that the inflammation so concentrated will readily admit of a cure; and, next, that the part on which it fixes is not of vital importance, for otherwise the remedy may prove worse than the disease.

When resolution is determined upon, independently of removing the cause of the inflammation, we may advantageously follow up its effects by all the common modes employed for this purpose, according to the nature of the particular case. The undue degree of action may be diminished by bleeding and purging; the distension by local applications that tend to contract the diameter of the vessels, as cold, and metallic or other astringents; and if, along with the distension, there should be great pain, narcotics and relaxants will generally be found useful auxiliaries. To these, in the present day, are often added nausea and vomiting, the former of which operates by lowering the action of the vessels; the latter by giving a tendency to a new action. The nature of the case must determine our choice.—*Good's Study of Physic.*

2. In *Chemistry*,—See *Combustion.*

Inflammation of the bladder. See *Cystitis.*

Inflammation of the brain. See *Phrenitis.*

Inflammation of the breast. See *Mastitis.*

Inflammation of the cellular membrane. See *Arachnitis.*

Inflammation of the choroid membrane. See *Iritis.*

Inflammation of the dura mater. See *Meningitis.*

Inflammation of the eye. See *Ophthalmitis.*

Inflammation of the intestine. See *Enteritis.*

Inflammation of the iris. See *Iritis.*

Inflammation of the kidney. See *Nephritis.*

Inflammation of the liver. See *Hepatitis.*

Inflammation of the lungs. See *Pneumonitis.*

Inflammation of a nerve. See *Neuritis.*

Inflammation of the peritonæum. See *Peritonitis.*

Inflammation of the pia mater. See *Meningitis.*

Inflammation of the pleura. See *Pleuritis.*

Inflammation of the retina. See *Retinitis.*

Inflammation of the stomach. See *Gastritis.*

Inflammation of the testicle. See *Orchitis.*

Inflammation of the tunica arachnoides. See *Meningitis.*

Inflammation of the urethra. See *Urethritis.*

Inflammation of the uterus. See *Hysteritis.*

Inflammation of a vein. See *Phlebitis.*

INFLAMMATORY. (*Inflammatorius;* from *inflammatio.*) Of the nature of inflammation.

INFLAMMATORY FEVER. *Febris inflammatoria. Synocha.* The pure inflammatory fever is the synocha of Cullen, Linnæus, and Sauvages. Galen called it *imputrid synochus;* Boerhaave, *imputrid continued* fever; Lommius, *imputrid continent;* Hoffmann, *sanguineous continued* fever; and Vogel calls it *synochus* (the name now used very generally for mixed fever); Drs. Young and Mason Good, *cauma.*

A pure inflammatory fever is a species of continued fever, characterised by increased heat; frequent, strong, hard pulse; urine high-coloured; senses not impaired. It is so named from its being attended with symptoms denoting general inflammation in the system, by which we shall always be able readily to distinguish it from either the nervous or putrid. It makes its attack at all seasons of the year, but is most prevalent in the spring; and it seizes persons of all ages and habits, but more particularly those in the vigour of life, with strong elastic fibres, and of a plethoric constitution. It is a species of fever almost peculiar to cold and temperate climates, being rarely, if ever, met with in very warm ones, except amongst Europeans lately arrived; and even then, the inflammatory stage is of very short duration, as it very soon assumes either the nervous or putrid type.

The exciting causes are, sudden transitions from heat to cold, swallowing cold liquors when the body is much heated by exercise, too free a use of vinous and spirituous liquors, great intemperance, violent passions of the mind, the sudden suppression of habitual evacuations, and the sudden repulsion of eruptions. It may be doubted if this fever ever originates from personal infection; but it is possible for it to appear as an epidemic amongst such as are of a robust habit, from a peculiar state of the atmosphere. It comes on with a sense of lassitude and inactivity, succeeded by vertigo, rigors, and pains over the whole body, but more particularly in the head and back; which symptoms are shortly followed by redness of the face and eyes, great restlessness, intense heat, and unquenchable thirst, oppression of breathing, and nausea. The skin is dry and parched; the tongue is of a scarlet colour at the sides, and furred with white in the centre; the urine is red and scanty; the body is costive, and there is a quickness, with a fulness and hardness in the pulse, not much affected by any pressure made on the artery. If the febrile symptoms run very high, and proper means are not used at an early period, stupor and delirium come on, the imagination becomes much disturbed and hurried, and the patient raves violently. The disease usually goes through its course in about fourteen days, and terminates in a crisis, either by diaphoresis, diarrhœa, hæmorrhage from the nose, or the deposit of a copious sediment in the urine; which crisis is usually preceded by some variation in the pulse.

Our judgment, as to the termination of the disease, must be formed from the violence of the attack, and the nature of the symptoms. If the fever runs high, or continues many days with stupor or delirium, the event may be doubtful; but if to these are added, picking at the bed-clothes, startings of the tendons, involuntary discharges by stool and urine, and hiccough, it will then certainly be fatal. On the contrary, if the febrile heat abates, the other symptoms moderate, and there is a tendency to a crisis, we may then expect a recovery. In a few instances, this fever has been known to terminate in mania.

On opening those who die of an inflammatory fever, an effusion is often perceived within the cranium, and, now and then, topical affections of some of the viscera are to be observed.

The chief indication in an inflammatory fever is to lessen the excessive vascular action by evacuations, and the antiphlogistic regimen. Of the former, by far the most important is blood-letting, which should be freely practised in this disease, making a large orifice into the vein, and taking from ten to twenty-four ounces of blood, according to the violence of the symptoms, and the strength of the patient. The disorder may sometimes be cut short at once by this active treatment in the beginning; but if it should continue urgent, and the strength of the pulse keep up, the repetition of it within more moderate limits will be from time to time advisable. Purging is next in efficacy, especially with those articles which produce copious serous discharges, and thoroughly clear out the intestines; as the saline cathartics, with infusion of senna, jalap with supertartrate of potash, &c. As the disease advances, however, we must act less on this part, and attempt to promote the other discharges, particularly that by the skin; for which purpose calomel, antimonials, and the saline diaphoretics are to be exhibited. The antiphlogistic regimen consists in obviating stimuli of every kind, so far as this can be done safely; impressions on the senses, particularly the sight and hearing, bodily and mental exertion, &c. must be guarded against as much as possible. The diet should be of the most sparing kind: barley-water, or other mild liquid, with some acid, perhaps, added, or a little nitrate of potash dissolved in it, taken in small quantities from time to time, chiefly

to quench the thirst and cool the body, will be the most proper, strictly interdicting animal food, fermented liquors, and the like. The stimulus of heat must be especially obviated by light clothing, or even exposing the body to the air, ventilating the apartment, sprinkling the floor with vinegar and water, &c. When the head is much affected, besides the general treatment, it will be proper to take blood locally, have the head shaved and cooled by some evaporating lotion, apply a blister to the neck, and, perhaps, stimulate the lower extremities. In like manner, any other organ being particularly pressed upon, may require additional means, which will be sufficiently understood by adverting to the several phlegmasiæ; cephalitis, pneumonitis, hepatitis, &c.

INFLA'TIO. (*o, onis.* f.; from *inflo*, to puff up.) A windy swelling. See *Pneumatosis.*

Infla'tivus. (From *inflo*, to puff up with wind.) Medicine, or food, or any thing which causes flatulence.

INFLATUS. Inflated: applied to parts which are distended like a blown bladder; as *legumen inflatum*, seen in *Astragalus vesicarius;* and the distended and hollow perianths of the *Cucubalus behen*, and *Physalis alkekengi*, in fruit.

INFLEXUS. Curved, or bent inwards; synonymous to *incurvus:* applied to leaves, petals, &c.; as the petals of the *Pimpinella*, and *Chærophyllum.*

INFLORESCENCE. (*Inflorescentia, æ.* f.; from *infloresco*, to flower, or blossom.) A term used by Linnæus to express the particular manner in which flowers are situated upon a plant; denominated by preceding writers, *modus florendi*, or manner of flowering.

It is divided into *simple*, when solitary, and *compound*, when many flowers are placed together in one place.

The first affords the following distinctions: —

1. The *Pedunculate*, furnished with a stalk; as in *Gratiolus*, and *Vinca.*
2. *Sessile*, adhering to the plant without a flower-stalk; as in *Daphne mezereum*, and *Zinia pauciflora.*
3. *Cauline*, when on the stem.
4. *Rameal*, when on the branch.
5. *Terminal*, when on the apex of the stem, or branch; as *Paris quadrifolia*, and *Chrysanthemum leucanthemum.*
6. *Axillary*, in the axilla; as in *Convallaria multiflora.*
7. *Foliar*, on the surface of the leaf; as in *Phyllanthus.*
8. *Radical*, on the root; as *Carlina acaulis, Crocus*, and *Colchicum.*
9. *Latitant*, concealed in a fleshy receptacle; as in *Ficus carica.*

Again, it is said to be,—

1. *Alternate;* as in *Polyanthes tuberosa.*
2. *Opposite;* as in *Passiflora hirsuta.*
3. *Unilateral*, hanging all to one side; as *Erica herbacea*, and *Silene amœna.*
4. *Solitary;* as in *Campanula speculum*, and *Carduus tuberosus.*

The second, or compound inflorescence, has the following kinds: —

1. The *Verticellus*, or whorl.
2. The *Capitulum*, or tuft.
3. The *Spica*, or spike.
4. The *Racemus*, or cluster.
5. The *Corymbus*, or corymb.
6. The *Umbella*, or umbel.
7. The *Cyma*, or cyme.
8. The *Fasciculus*, or fascicle.
9. The *Panicula*, or panicle.
10. The *Thyrsus*, or bunch.
11. The *Spadix*, or sheath.
12. The *Omentum*, or catkin.

INFLUE'NZA. (*a, æ.* f. The Italian word for influence; and the disease is so named because it was supposed to be produced by a peculiar influence of the stars.) See *Catarrhus à contagione.*

INFRASCAPULA'RIS. (From *infra*, beneath, and *scapula*, the shoulder-blade.) A muscle named from its position beneath the scapula. See *Subscapularis.*

INFRASPINA'TUS. (From *infra*, beneath, and *spina*, the spine.) A muscle of the humerus, situated on the scapula. It arises fleshy, from all that part of the dorsum scapulæ which is below its spine; and from the spine itself, as far as the cervix scapulæ. The fibres run obliquely towards a tendon in the middle of a muscle, which runs forwards, and adheres to the capsular ligament. It is inserted, by a flat thick tendon, into the upper and outer part of the large protuberance on the head of the os humeri. Its use is to roll the os humeri outwards, to assist in raising and supporting it when raised, and to pull the ligament from between the bones. This muscle and the supraspinatus are covered by an aponeurosis, which extends between the costæ, and edges of the spine of the scapula, and gives rise to many of the muscular fibres.

INFUNDIBULIFORM. *Infundibuliformis.* Funnel-shaped: applied to plants, when the blossom consists of one petal, the lower part of which is tubular, the upper part conical; as in *Primula, Cynoglossum*, &c.

INFUNDI'BULUM. (*um, i.* n.; a funnel: from *infundo*, to pour in.) 1. A canal that proceeds from the vulva of the brain to the pituitary gland in the sella turcica.

2. The beginnings of the excretory duct of the kidney, or cavities into which the urine is first received, from the secretory cryptæ, are called *infundibula.*

INFUSION. (*Infusum, i.* n.; and *infusio, onis.* f.: from *infundo*, to pour in.) A process that consists in pouring water, of any required degree of temperature, on such substances as have a loose texture, as thin bark, wood in shavings or small pieces, leaves, flowers, &c. and suffering it to stand a certain time. The liquor obtained by the above process is called an *infusion.* The following are among the most approved infusions.

Infusum anthemidis. Infusion of camomile. Take of camomile flowers, two drachms; boiling water, half a pint. Macerate for ten

minutes, in a covered vessel, and strain. For its virtues, see *Anthemis nobilis*.

INFUSUM ARMORACIÆ COMPOSITUM. Compound infusion of horse-radish. Take of fresh horse-radish root sliced, mustard seeds bruised, of each one ounce; boiling water, a pint. Macerate for two hours, in a covered vessel, and strain; then add compound spirit of horse-radish, a fluid ounce. See *Cochlearia armoracia*.

INFUSUM AURANTII COMPOSITUM. Compound infusion of orange-peel. Take of orange-peel, dried, two drachms; lemon-peel, fresh, a drachm; cloves, bruised, half a drachm; boiling water, half a pint. Macerate for a quarter of an hour, in a covered vessel, and strain. See *Citrus aurantium*.

INFUSUM CALUMBÆ. Infusion of calumba. Take of calumba root, sliced, a drachm; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Calumba*.

INFUSUM CARYOPHYLLORUM. Infusion of cloves. Take of cloves, bruised, a drachm; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Eugenia caryophyllata*.

INFUSUM CASCARILLÆ. Infusion of cascarilla. Take of cascarilla bark, bruised, half an ounce; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Croton cascarilla*.

INFUSUM CATECHU COMPOSITUM. Compound infusion of catechu. Take of extract of catechu, two drachms and a half; cinnamon bark, bruised, half a drachm; boiling water, half a pint. Macerate for an hour, in a covered vessel, and strain. See *Acacia catechu*.

INFUSUM CINCHONÆ. Infusion of cinchona. Take of lance-leaved cinchona bark, bruised, half an ounce; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Cinchona*.

INFUSUM CUSPARIÆ. Infusion of cusparia. Take of cusparia bark, bruised, two drachms; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Cusparia febrifuga*.

INFUSUM DIGITALIS. Infusion of fox-glove. Take of purple fox-glove leaves, dried, a drachm; boiling water, half a pint. Macerate for four hours, in a covered vessel, and strain; then add spirit of cinnamon, half a fluid ounce. See *Digitalis purpurea*.

INFUSUM GENTIANÆ COMPOSITUM. Compound infusion of gentian. Take of gentian root, sliced, orange-peel, dried, of each a drachm; lemon-peel, fresh, two drachms; boiling water, twelve fluid ounces. Macerate for an hour, in a covered vessel, and strain. See *Gentiana lutea*.

INFUSUM LINI. Infusion of linseed. Take of linseed, bruised, an ounce; liquorice root, sliced, half an ounce; boiling water, two pints. Macerate for two hours, near the fire, in a covered vessel, and strain. See *Linum usitatissimum*.

INFUSUM QUASSIÆ. Infusion of quassia. Take of quassia wood, a scruple; boiling water, half a pint. Macerate for two hours, and strain. See *Quassia amara*.

INFUSUM RHEI. Infusion of rhubarb. Take of rhubarb root, sliced, a drachm; boiling water, half a pint. Macerate for two hours, and strain. See *Rheum*.

INFUSUM ROSÆ. Take of the petals of red rose, dried, half an ounce; boiling water, two pints and a half; dilute sulphuric acid, three fluid drachms; double-refined sugar, an ounce and a half. Pour the water upon the petals of the rose, in a glass vessel; then add the acid, and macerate for half an hour. Lastly, strain the infusion, and add the sugar to it. See *Rosa Gallica*.

INFUSUM SENNÆ. Infusion of senna. Take of senna leaves, an ounce and a half; ginger root, sliced, a drachm; boiling water, a pint. Macerate for an hour, in a covered vessel, and strain the liquor. See *Cassia senna*.

INFUSUM SIMAROUBÆ. Infusion of simarouba. Take of simarouba bark, bruised, half a drachm; boiling water, half a pint. Macerate for two hours, in a covered vessel, and strain. See *Quassia simarouba*.

INFUSUM TABACI. Infusion of tobacco. Take of tobacco leaves, a drachm; boiling water, a pint. Macerate for an hour, in a covered vessel, and strain. See *Nicotiana*.

INGENHOUZ, JOHN, was born at Breda, in 1730. He published *Experiments on Vegetables*, discovering their great power of purifying the air in sunshine, but injuring it in the shade and night. He was also author of several papers in the Philosophical Transactions, being an active member of the Royal Society.

INGLUVIES. (*es, ei.* f.) 1. Gluttony. 2. The craw, crop, or gorge of a bird.

INGRASSIAS, JOHN PHILIP, was born in Sicily, in 1510. He published several works, particularly an account of the plague; and a treatise *De Tumoribus præter Naturam*, which is chiefly a commentary on Avicenna, but is deserving of notice, as containing the first modern description of scarlatina, under the name of rossalia; and perhaps the first account of varicella, which he called crystalli. But his principal work was published by his nephew in 1603, entitled, *Commentaries on Galen's Book concerning the Bones*.

INGRAVIDATION. (From *ingravidor*, to be great with child.) The same as impregnation, or going with child.

I'NGUEN. (*en, inis.* n.) The groin. The lower and lateral part of the abdomen, above the thigh.

INGUINAL. (*Inguinalis*; from *inguen*, the groin.) Appertaining to the groin.

Inguinal hernia. See *Hernia*.

Inguinal ligament. See *Poupart's ligament*.

INHUMATION. (*Inhumatio, onis.* f.; from *inhumo*, to put into the ground.) The burying a patient in warm or medicated earth. Some chemists have fancied thus to call that kind of digestion which is performed by burying the materials in dung, or in the earth.

I'NION. (From *ις*, a nerve; as being the place where nerves originate.) The occiput. Blanchard says it is the beginning of the spinal marrow; others say it is the back part of the neck.

INJACULA'TIO. (From *injaculor*, to shoot into.) So Helmont calls the disorder which consists of a violent spasmodic pain in the stomach, and an immobility of the body.

INJE'CTION. (*Injectio, onis.* f.; from *injicio*, to cast into.) A medicated liquor to throw into a natural or preternatural cavity of the body by means of a syringe.

INNOMINA'TUS. (From *in*, priv. and *nomen*, a name.) Some parts of the body are so named: thus, the pelvic bones, which in the young subject are three in number, to which names are given, become one in the adult, which was without a name; an artery from the arch of the aorta, and the fifth pair of nerves, because they appeared to have been forgotten by the older anatomists.

INNOMINATA ARTERIA. The first branch given off by the arch of the aorta. It soon divides into the right carotid and right subclavian arteries.

INNOMINATI NERVI. The fifth pair of nerves. See *Trigemini*.

INNOMINATUM OS. (So called, because the three bones of which it originally was formed grew together, and formed one complete bone, which was then left nameless.) A large irregular bone, situated at the side of the pelvis. It is divided into three portions, viz. the iliac, ischiatic, and pubic, which are usually described as three distinct bones.

The *os ilium*, or haunch-bone, is of a very irregular shape. The lower part of it is thick and narrow; its superior portion is broad and thin, terminating in a ridge, called the *spine* of the ilium, and more commonly known by the name of the *haunch*. The spine rises up like an arch, being turned somewhat outward, and from this appearance, the upper part of the pelvis, when viewed together, has not been improperly compared to the wings of a phæton. This spine, in the recent subject, appears as if tipped with cartilage; but this appearance is nothing more than the tendinous fibres of the muscles that are inserted into it. Externally, this bone is unequally prominent, and hollowed for the attachment of muscles; and internally, at its broadest fore-part, it is smooth and concave. At its lower part, there is a considerable ridge on its inner surface. This ridge, which extends from the os sacrum, and corresponds with a similar prominence, both on that bone and the ischium, forms, with the inner part of the ossa pubis, what is called the brim of the pelvis. The whole of the internal surface, behind this ridge, is very unequal. The os ilium has likewise a smaller surface posteriorly, by which it is articulated to the sides of the os sacrum. This surface has, by some, been compared to the human ear; and, by others, to the head of a bird; but neither of these comparisons seem to convey any just idea of its form or appearance. Its upper part is rough and porous; lower down it is more solid. It is firmly united to the os sacrum by a cartilaginous substance, and likewise by very strong ligamentous fibres, which are extended to that bone from the whole circumference of this irregular surface. The spine of this bone, which is originally an epiphysis, has two considerable tuberosities, one anteriorly, and the other posteriorly, which is the largest of the two. The ends of this spine too, from their projecting more than the parts of the bone below them, are called spinal processes. Before the anterior spinal process, the spine is hollowed, where part of the sartorius muscle is placed; and below the posterior spinal process there is a very large niche in the bone, which, in the recent subject, has a strong ligament stretched over its lower part, from the os sacrum to the sharp-pointed process of the ischium; so that a great hole is formed, through which pass the great sciatic nerve, and the posterior crural vessels, under the pyriform muscle, part of which is likewise lodged in this hole. The lowest, thickest, and narrowest part of the ilium, in conjunction with the other two portions of each os innominatum, helps to form the acetabulum for the os femoris.

The *os ischium*, or hip-bone, which is the lowest of the three portions of each os innominatum, is of a very irregular figure, and usually divided into its body, tuberosity, and ramus. The body externally forms the inferior portion of the acetabulum, and sends a sharp-pointed process backward, called the spine of the ischium. This is the process to which the ligament is attached, which was just now described as forming a great foramen for the passage of the sciatic nerve. The tuberosity is large and irregular, and is placed at the inferior part of the bone, giving origin to several muscles. In the recent subject, it seems covered with a cartilaginous crust; but this appearance, as in the spine of the ilium, is nothing more than the tendinous fibres of the muscles that are inserted into it. This tuberosity, which is the lowest portion of the trunk, supports us when we sit. Between the spine and the tuberosity is observed a sinuosity, covered with a cartilaginous crust, which serves as a pulley, on which the obturator muscle plays. From the tuberosity, the bone, becoming narrower and thinner, forms the ramus, or branch, which, passing forwards and upwards, makes, with the ramus of the os pubis, a large hole, of an oval shape, the *foramen magnum ischii*, which affords, through its whole circumference, attachment to muscles. This foramen is more particularly noticed in describing the os pubis.

The *os pubis*, or share-bone, which is the smallest of the three portions of the os innominatum, is placed at the upper and fore-part of the pelvis, where the two ossa pubis meet, and are united to each other by means of a

very strong cartilage, which constitutes what is called the *symphysis pubis.* Each os pubis may be divided into its body, angle, and ramus. The body, which is the outer part, is joined to the os ilium. The angle comes forward to form the symphysis, and the ramus is a thin apophysis, which, uniting with the ramus of the ischium, forms the *foramen magnum ischii,* or *thyroideum,* as it has been sometimes called, from its resemblance to a door or shield. This foramen is somewhat wider above than below, and its greatest diameter is from above downwards, and obliquely from within outwards. In the recent subject, it is almost completely closed by a strong fibrous membrane, called the *obturator* ligament. Upwards and outwards, where we observe a niche in the bone, the fibres of this ligament are separated, to allow a passage to the posterior crural nerve, an artery and vein. The great uses of this foramen seem to be to lighten the bones of the pelvis, and to afford a convenient lodgment to the obturator muscles. The three bones now described as constituting the os innominatum on each side, all concur to form the great *acetabulum,* or cotyloid cavity, which receives the head of the thigh-bone; the os ilium and os ischium making each about two fifths, and the os pubis one fifth, of the cavity. This acetabulum, which is of considerable depth, is of a spherical shape. Its brims are high, and, in the recent subject, it is tipped with cartilage. These brims, however, are higher above and externally than they are internally, and below, where we observe a niche in the bone (namely, the ischium), across which is stretched a ligament, forming a hole for the transmission of blood-vessels and nerves to the cavity of the joint. The cartilage which lines the acetabulum is thickest at its circumference, and thinner within, where a little hole is to be observed, in which is placed the apparatus that serves to lubricate the joint, and facilitate its motions. We are likewise able to discover the impression made by the internal ligament of the os femoris, which, by being attached both to this cavity, and to the head of the os femoris, helps to secure the latter in the acetabulum. The bones of the pelvis serve to support the spine and upper parts of the body, to lodge the intestines, urinary bladder, and other viscera, and likewise to unite the trunk to the lower extremities. But, besides these uses, they are destined, in the female subject, for other important purposes; and the accoucheur finds, in the study of these bones, the foundation of all midwifery knowledge. Several eminent writers are of opinion, that, in difficult parturition, all the bones of the pelvis undergo a certain degree of separation. It has been observed, likewise, that the cartilage uniting the ossa pubis is thicker, and of a more spongy texture, in women than in men, and therefore more likely to swell and enlarge during pregnancy. That many instances of a partial separation of these bones, during labour, have happened, there can be no doubt; such a separation, however, ought by no means to be considered as an uniform and salutary work of nature, as some writers seem to think, but as the effect of disease. But there is another circumstance, in regard to this part of osteology, which is well worthy of attention; and this is, the different capacities of the pelvis in the male and female subject. It has been observed, that the os sacrum is shorter and broader in women than in men; the ossa ilia are also found more expanded; whence it happens, that in women the centre of gravity does not fall so directly on the upper part of the thigh as in men, and this seems to be the reason why, in general, they step with less firmness, and move their hips forward in walking. From these circumstances, also, the brim of the female pelvis is nearly of an oval shape, being considerably wider from side to side, than from the symphysis pubis to the os sacrum; whereas, in men, it is rounder, and every where of less diameter. The inferior opening of the pelvis is likewise proportionably larger in the female subject, the ossa ischia being more separated from each other, and the foramen ischii larger, so that, where the os ischium and os pubis are united together, they form a greater circle; the os sacrum is also more hollowed, though shorter, and the os coccygis more loosely connected, and, therefore, capable of a greater degree of motion than in men.

INOCULATION. (*Inoculatio, onis.* f.) The insertion of a poison into any part of the body. It was mostly practised with that of the small-pox, because we had learned, from experience, that by so doing, we generally procured fewer pustules, and a much milder disease, than when the small-pox was taken in a natural way. Although the advantages were evident, yet objections were raised against inoculation, on the notion that it exposed the person to some risk, when he might have passed through life without ever taking the disease naturally; but it is obvious that he was exposed to much greater danger, from the intercourse which he must have with his fellow-creatures, by taking the disorder in a natural way. It has also been adduced, that a person is liable to take the small-pox a second time, when produced at first by artificial means; but such instances are very rare, besides not being sufficiently authentic. We may conjecture that, in most of those cases, the matter used was not variolous, but that of some other eruptive disorder, such as the chicken-pox, which has often been mistaken for the small-pox. However, since the discovery of the preventive power of the cow-pock, small-pox inoculation has been rapidly falling into disuse. See *Cow-pox.*

To illustrate the benefits arising from inoculation, it has been calculated that a third of the adults die who take the disease in a natural way, and about one seventh of the children; whereas of those who are inoculated, and are properly treated afterwards, the pro-

portion is probably not greater than one in five or six hundred.

Inoculation is generally thought to have been introduced into Britain from Turkey, by Lady Mary Wortley Montague, about the year 1721, whose son had been inoculated at Constantinople, during her residence there, and whose infant daughter was the first that underwent the operation in this country. It appears, however, to have been well known before this period, both in the south of Wales and Highlands of Scotland. Mungo Park, in his travels into the interior of Africa, found that inoculation had been long practised by the Negroes on the Guinea coast; and nearly in the same manner, and at the same time of life, as in Europe. It is not clearly ascertained where inoculation really originated. It has been ascribed to the Circassians, who employed it as the means of preserving the beauty of their women. It appears more probable that accident first suggested the expedient among different nations, to whom the small-pox had long been known, independently of any intercourse with each other; and what adds to the probability of this conjecture is, that in most places where inoculation can be traced back, for a considerable length of time, it seems to have been practised chiefly by old women, before it was adopted by regular practitioners.

Many physicians held inoculation in the greatest contempt at first, from its supposed origin; others, again, discredited the fact of its utility; while others, on the testimony of the success in distant countries, believed in the advantages it afforded, but still did not think themselves warranted to recommend it to the families they attended; and it was not until the experiment of it had been made on six criminals (all of whom recovered from the disease and regained their liberty), that it was practised, in the year 1726, on the royal family, and afterwards very generally adopted.

To insure success from inoculation, the following precautions should strictly be attended to: —

1. That the person should be of a good habit of body, and free from any disease, apparent or latent, in order that he may not have the disease and a bad constitution, or perhaps another disorder, to struggle with at the same time.

2. To enjoin a temperate diet and proper regimen; and, where the body is plethoric, or gross, to make use of gentle purges, together with mercurial and antimonial medicines.

3. That the age of the person be as little advanced as possible, but not younger, if it can be avoided, than four months.

4. To choose a cool season of the year, and to avoid external heat, either by exposure to the sun, sitting by fires, or in warm chambers, or by going too warmly clothed, or being too much in bed.

5. To take the matter from a young subject, who has the small-pox in a favourable way, and who is otherwise healthy, and free from disease; and, when fresh matter can be procured, to give it the preference.

Where matter of a benign kind cannot be procured, and the patient is evidently in danger of the casual small-pox, we should not, however, hesitate a moment to inoculate from any kind of matter that can be procured; as what has been taken in malignant kinds of small-pox has been found to produce a very mild disease. The mildness or malignity of the disease appears, therefore, to depend little or not at all on the inoculating matter. Variolous matter, as well as the vaccine, by being kept for a length of time, particularly in a warm place, is apt, however, to undergo decomposition by putrefaction; and then another kind of contagious material has been produced.

In inoculating, the operator is to make the slightest puncture or scratch imaginable in the arm of the person, rubbing that part of the lancet which is besmeared with matter repeatedly over it, by way of insuring the absorption; and, in order to prevent its being wiped off, the shirt-sleeve ought not to be pulled down until the part is dry.

A singular circumstance attending inoculation is, that when this fails in producing the disease, the inoculated part nevertheless sometimes inflames and suppurates, as in cases where the complaint is about to follow; and the matter produced in those cases is as fit for inoculation as that taken from a person actually labouring under the disease. The same happens very frequently in inoculation for the cow-pox.

If, on the fourth or fifth day after the operation, no redness or inflammation is apparent on the edge of the wound, we ought then to inoculate in the other arm, in the same manner as before; or, for greater certainty, we may do it in both.

Some constitutions are incapable of having the disease in any form. Others do not receive the disease at one time, however freely exposed to its contagion, even though repeatedly inoculated, and yet receive it afterwards by merely approaching those labouring under it.

On the coming on of the febrile symptoms, which is generally on the seventh day in the inoculated small-pox, the patient is not to be suffered to lie a-bed, but should be kept cool, and partake freely of antiseptic cooling drinks. See *Variola*.

INOSCULA'TION. (*Inosculatio, onis.* f.; from *in*, and *osculum*, a little mouth.) The running of the veins and arteries into one another, or the interunion of the extremities of the arteries and veins.

INSA'NIA. (*a*, *æ*. f.; from *in*, not, and *sanus*, sound.) Insanity, or deranged intellect. See *Mania*.

Inse'ssus. (From *insideo*, to sit upon.) A hot-bath, simple or medicated, over which the patient sits.

Insipie'ntia. (From *in*, and *sapientia*, wisdom.) A delirium without fever.

INSOLA'TIO. (*o, onis.* f.; from *in*, upon, and *sol*, the sun.) 1. Bleaching or blanching.

2. A disease which arises from a too great influence of the sun's heat upon the head; a coup de soleil.

INSPIRA'TION. (*Inspiratio, onis.* f.; from *in*, and *spiro*, to breathe.) The act of drawing the air into the lungs. See *Respiration.*

INSTINCT. (*Instinctus, ûs.* m.) Animals are not abandoned by nature to themselves: they are all employed in a series of actions; whence results that marvellous whole that is seen amongst organised beings. To incline animals to the punctual execution of those actions which are necessary for them, nature has provided them with *instinct*; that is, propensities, inclinations, wants, by which they are constantly excited, and forced to fulfil the intentions of nature.

Instinct may excite in two different modes, with or without knowledge of the end. The first is enlightened instinct, the second is blind instinct; the one is particularly the gift of man, the other belongs to animals.

In examining carefully the numerous phænomena which depend on instinct, we see that there is a double design in every animal: — 1. The preservation of the individual. 2. The preservation of the species. Every animal fulfils this end in its own way, and according to its organisation: there are therefore as many different instincts as there are different species; and as the organisation varies in individuals, instinct presents individual differences sometimes strongly marked.

We recognise two sorts of instinct in man: the one depends more evidently on his organisation, on his animal state; he presents it in whatever state he is found. This sort of instinct is nearly the same as that of animals. The other kind of instinct springs from the social state; and, without doubt, depends on organisation: what vital phænomenon does not depend on it? But it does not display itself except when man lives in civilised society, and when he enjoys all the advantages of that state.

To the first, that may be called animal instinct, belong hunger, thirst, the necessity of clothing, of a covering from the weather; the desire of agreeable sensations; the fear of pain and of death; the desire to injure others, if there is any danger to be feared from them, or any advantage to arise from hurting them; the venereal inclinations; the interest inspired by children; inclination to imitation; to live in society, which leads man to pass through the different degrees of civilisation, &c. These different instinctive feelings incline him to concur in the established order of organised beings. Man is, of all the animals, the one whose natural wants are most numerous, and of the greatest variety, which is in proportion to the extent of his intelligence; if he had only these wants, he would have always a marked superiority over the animals.

When man, living in society, can easily provide for all the wants which we have mentioned, he has then time and powers of action more than his original wants require: then new wants arise, that may be called social wants: such as that of a lively perception of existence; a want which, the more it is satisfied, the more difficult it becomes, because the sensations become blunted by habit.

This want of a vivid existence, added to the continually increasing feebleness of the sensations, causes a mechanical restlessness, vague desires, excited by the remembrance of vivid sensations formerly felt: in order to escape from this state, man is continually forced to change his object, or to overstrain sensations of the same kind. Thence arises an inconstancy which never permits our desires to rest, and a progression of desires, which, always annihilated by enjoyment, and irritated by remembrance, proceed forward without end: thence arises *ennui*, by which the civilised idler is incessantly tormented.

The want of vivid sensations is balanced by the love of repose and idleness in the opulent classes of society. These contradictory feelings modify each other, and from their reciprocal re-action results the love of power, of consideration, of fortune, &c. which give us the means of satisfying both.

These two instinctive sensations are not the only ones which spring from the social state: a crowd of others arise from it, equally real, though less important: besides, the natural wants become so changed as no longer to be known: hunger is often replaced by a capricious taste; the venereal desires by a feeling of quite another nature, &c.

The natural wants have a considerable influence upon those which arise from society; these, in their turn, modify the former; and if we add age, temperament, sex, &c., which tend to change every sort of want, we shall have an idea of the difficulty which the study of the instinct of man presents. This part of physiology is also scarcely begun. We remark, however, that the social wants necessarily carry along with them the enlargement of the understanding: there is no comparison in regard to the capacity of the mind, between a man in the higher class of society, and a man whose physical powers are scarcely sufficient to provide for his natural wants.

INTEGER. Entire. When applied to leaves, perianths, petals, &c. *folia integra* means undivided; and it is said of the simple leaves, as those of the orchises and grasses. It is opposed to cloven, gashed, indented, &c.; but it does not signify that it is not serrated or scolloped. When, however, a leaf is said to be very entire (See *Integerrimus*), it is not even scolloped or serrated. The female flower of the oak affords an example of the *perianthium integrum*, and the petals of the *Nigella arvensis* and *Silene quinquevulnera* are described as *petala integra*.

INTEGERRIMUS. Most perfect or entire. Applied to leaves, the margin of which has no teeth, notches, or incisions. It re-

gards solely the margin; whereas the *folium integrum* respects the whole shape, and has nothing to do with the margin.

INTELLECTUAL FACULTY. See *Mens*.

INTERCO'STAL. (*Intercostalis;* from *inter*, between, and *costa*, a rib.) A name given to muscles, vessels, &c. which are between the ribs.

INTERCOSTAL ARTERY. *Arteria intercostalis.* The arteries which run between the ribs. The superior intercostal artery is a branch of the subclavian. The other intercostal arteries are given off from the aorta.

INTERCOSTAL MUSCLE. *Intercostalis externus et internus.* Between the ribs on each side are eleven double rows of muscles: these are the *intercostales externi* and *interni*. Galen has very properly observed, that they decussate each other like the strokes of the letter X. The *intercostales externi* arise from the lower edge of each superior rib, and, running obliquely downwards and forwards, are inserted into the upper edge of each inferior rib, so as to occupy the intervals of the ribs, from as far back as the spine to their cartilages; but from their cartilages to the sternum, there is only a thin aponeurosis covering the internal intercostales. The *intercostales interni* arise and are inserted in the same manner as the external. They begin at the sternum, and extend as far as the angles of the ribs, their fibres running obliquely backwards. These fibres are spread over a considerable part of the inner surface of the ribs, so as to be longer than those of the external intercostals. Some of the posterior portions of the internal intercostals pass over one rib, and are inserted into the rib below. Verheyen first described these portions as separate muscles, under the name of *infracostales.* Winslow has adopted the same name. Cowper, and after him Douglas, call them *costarum depressores proprii.* These distinctions, however, are altogether superfluous, as they are evidently nothing more than appendages of the intercostals. The number of these portions varies in different subjects. Most commonly there are only four, the first of which runs from the second rib to the fourth, the second from the third rib to the fifth, the third from the fourth rib to the sixth, and the fourth from the fifth rib to the seventh. The internal intercostals of the two inferior false ribs are frequently so thin, as to be with difficulty separated from the external; and, in some subjects, one or both of them seem to be altogether wanting.

INTERCOSTAL NERVE. *Nervus intercostalis.* Great intercostal nerve. Sympathetic nerve. The great intercostal nerve arises in the cavity of the cranium, from a branch of the sixth and one of the fifth pair, uniting into one trunk, which passes out of the cranium through the carotid canal, and descends by the sides of the bodies of the vertebræ of the neck, thorax, loins, and os sacrum: in its course, it receives the small accessory branches from all the thirty pair of spinal nerves. In the neck, it gives off three cervical ganglions, the upper, middle, and lower; from which the cardiac and pulmonary nerves arise. In the thorax, it gives off the splanchnic or anterior intercostal, which perforates the diaphragm, and forms the semilunar ganglions, from which nerves pass to all the abdominal viscera. They also form in the abdomen ten peculiar plexuses, distinguished by the name of the viscus to which they belong, as the cœliac, splenic, hepatic, superior, middle, and lower, mesenteric, two renal, and two spermatic plexuses. The posterior intercostal nerve gives accessory branches about the pelvis and ischiatic nerve, and at length terminates.

INTERCOSTAL VEIN. The intercostal veins empty their blood into the vena azygos.

INTERCU'RRENT. *Intercurrens.* Those fevers which happen in certain seasons only, are called stationary: others are called, by Sydenham, intercurrents.

INTE'RCUS. (From *inter*, between, and *cutis*, the skin.) A dropsy between the skin and the flesh. See *Anasarca.*

INTERDE'NTIUM. (*um, i.* n.; from *inter*, between, and *dens*, a tooth.) The intervals between teeth of the same order.

INTERDI'GITUM. (*um, i.* n.; from *inter*, between, and *digitus*, a toe, or finger.) Betwixt the fingers: applied to corns, warts, &c.

INTERFÆMI'NEUM. (From *inter*, between, and *femur*, the thigh.) The space between the anus and pudendum. See *Perineum.*

INTERLU'NIUS. (From *inter*, between, and *luna*, the moon: because it was supposed to affect those who were born in the wane of the moon.) The epilepsy.

INTERMITTENT. (*Intermittens;* from *inter*, between, and *mitto*, to send away.) A disease which does not continue until it finishes one way or the other, as most diseases do, but ceases and returns again at regular or uncertain period; as agues, &c.

Intermittent fever. See *Ague.*

INTERNODIS. The space between the joints: applied to a flower-stalk or pedunculus, when it proceeds from the intermediate part of a branch between two leaves; as in *Ehretia internodis.*

INTERNU'NTII DIES. (From *internuncio*, to go between.) Applied to critical days, or such as stand between the increase of a disorder and its decrease.

INTERO'SSEI MANUS. These are small muscles situated between the metacarpal bones, and extending from the bones of the carpus to the fingers. They are divided into *internal* and *external;* the former are to be seen only on the palm of the hand, but the latter are conspicuous both on the palm and back of the hand. The *interossei interni* are three in number. The first, which Albinus names *posterior indicis*, arises tendinous and fleshy from the basis and inner part of the metacarpal bone of the fore-finger, and likewise from

the upper part of that which supports the middle finger. Its tendon passes over the articulation of this part of these bones with the fore-finger, and, uniting with the tendinous expansion that is sent off from the extensor digitorum communis, is inserted into the posterior convex surface of the first phalanx of that finger. The second and third, to which Albinus gives the names of *prior annularis*, and *interrosseus auricularis*, arise, in the same manner, from the basis of the outsides of the metacarpal bones that sustain the ring-finger and the little finger, and are inserted into the outside of the tendinous expansion of the extensor digitorum communis that covers each of those fingers. These three muscles draw the fingers into which they are inserted towards the thumb. The *interossei externi* are four in number; for among these is included the small muscle that is situated on the outside of the metacarpal bone that supports the fore-finger. Douglas calls it *extensor tertii internodii indicis*, and Winslow, *semi interosseus indicio*. Albinus, who describes it among the interossei, gives it the name of *prior indicis*. This first interosseus externus arises by two tendinous and fleshy portions. One of these springs from the upper half of the inner side of the first bone of the thumb, and the other from the ligaments that unite the os trapezoides to the metacarpal bone of the fore-finger, and likewise from all the outside of this latter bone. These two portions unite as they descend, and terminate in a tendon, which is inserted into the outside of that part of the tendinous expansion from the extensor digitorum communis that is spread over the posterior convex surface of the fore-finger. The second, to which Albinus gives the name of *prior medii*, is not quite so thick as the last-described muscle. It arises by two heads, one of which springs from the inner side of the metacarpal bone of the fore-finger, chiefly towards its convex surface, and the other arises from the adjacent ligaments, and from the whole outer side of the metacarpal bone that sustains the middle finger. These two portions unite as they descend, and terminate in a tendon, which is inserted, in the same manner as the preceding muscle, into the outside of the tendinous expansion that covers the posterior part of the middle finger. The third belongs likewise to the middle finger, and is therefore named *posterior medii* by Albinus. It arises, like the last-described muscle, by two origins, which spring from the roots of the metacarpal bones of the ring and middle fingers, and from the adjacent ligaments, and is inserted into the inside of the same tendinous expansion as the preceding muscle. The fourth, to which Albinus gives the name of *posterior annularis*, differs from the two last only in its situation, which is between the metacarpal bones of the ring and little fingers. It is inserted into the inside of the tendinous expansion of the extensor digitorum communis, that covers the posterior part of the ring finger. All these four muscles serve to extend the fingers into which they are inserted, and likewise to draw them inwards, towards the thumb, except the third, or *posterii medii*, which, from its situation and insertion, is calculated to pull the middle finger outwards.

Interossei pedis. These small muscles, in their situation between the metatarsal bones, resemble the interossei of the hand, and, like them, are divided into *internal* and *external*. The *interossei pedis interni* are three in number. They arise, tendinous and fleshy, from the basis and inside of the metatarsal bones of the middle, the third, and the little toes, in the same manner as those of the hand, and they each terminate in a tendon that runs to the inside of the first joint of these toes, and from thence to their upper surface, where it loses itself in the tendinous expansion that is sent off from the extensors. Each of these three muscles serves to draw the toe into which it is inserted towards the great toe. The *interossei externi* are four in number. The first arises tendinous and fleshy from the outside of the root of the metatarsal bone of the great toe, from the os cuneiforme internum, and from the root of the inside of the metatarsal bone of the fore-toe. Its tendon is inserted into the inside of the tendinous expansion that covers the back part of the toes. The second is placed in a similar manner between the metatarsal bones of the fore and middle toes, and is inserted into the outside of the tendinous expansion on the back part of the fore-toe. The third and fourth are placed between the two next metatarsal bones, and are inserted into the outside of the middle and third toes. The first of these muscles draws the fore-toe inwards towards the great toe. The three others pull the toes, into which they are inserted, outwards. They all assist in extending the toes.

INTEROSSEOUS. (*Interosseus*; from *inter*, between, and *os*, a bone.) Between bone: applied to muscles, ligaments, &c. which are between bones.

Interpella'tus. (From *interpello*, to interrupt.) A name given by Paracelsus to a disease attended with irregular or uncertain paroxysms.

Interpola'ti dies. (From *interpolo*, to renew.) In Paracelsus, these are the days interpolated betwixt two paroxysms.

INTERRUPTUS. Interrupted; broken in its regular form: applied to stems, leaves, &c.; as the spike of the *Betonica officinalis*. A stem is sometimes interrupted by the intervention of leaves, or smaller sets of flowers, or by the naked stem appearing.

INTERSCAPU'LIUM. (*um, i.* n.; from *inter*, between, and *scapula*, the shoulder-blade.) That part of the spine which lies between the shoulders.

INTERSE'PTUM. (*um, i.* n.; from *inter*, between, and *septum*, an inclosure.) The uvula and the septum narium.

INTERSPINA'LIS. (From *inter*, be-

tween, and *spina*, the spine.) Muscles, nerves, &c. are so named which are between the processes of the spine.

INTERSPINALES. The fleshy portions between the spinous processes of the neck, back, and loins, distinguished by the names of *interspinalis colli, dorsi, et lumborum.* Those which connect the processes of the back and loins, are rather small tendons than muscles: they draw these processes nearer to each other.

INTERTRANSVERSA'LES. Four distinct small bundles of flesh, which fill up the spaces between the transverse processes of the vertebræ of the loins, and serve to draw them towards each other.

INTERTRI'GO. (*o, inis.* f.; from *inter*, between, and *tero*, to rub.) An excoriation, fret, or galling of the skin, about the anus, groins, axilla, or other parts of the body, attended with inflammation and moisture. It is most commonly produced by the irritation of the urine, from riding, or some acrimony in children; and is relieved by the liquor plumbi acetatis dilutus, ointment of flowers of zinc, powdered starch, and the compound sarcocolla powder.

INTE'STINE. (*Intestinum, i.* n.; from *intus*, within.) The convoluted membraneous tube that extends from the stomach to the anus, receives the ingested food, retains it a certain time, mixes with it the bile and pancreatic juice, propels the chyle into the lacteals, and covers the fæces with mucus, is so called. The intestines are situated in the cavity of the abdomen, and are divided into the small and large, which have, besides their size, other circumstances of distinction.

The *small* intestines are supplied internally with folds, called *valvulæ conniventes*, and have no bands on their external surface. The *large* intestines have no folds internally; are supplied externally with three strong muscular bands, which run parallel upon the surface, and give the intestines a saccated appearance; they have also small fatty appendages, called *appendiculæ epiploicæ.*

The first portion of the intestinal tube, for about the extent of twelve fingers' breadth, is called the *duodenum;* it lies in the epigastric region; makes three turnings, and between the first and second flexure receives, by a common opening, the pancreatic duct and the ductus communis choledochus. It is in this portion of the intestines that chylification is chiefly performed. The remaining portion of the small intestines is distinguished by an imaginary division into the jejunum and ileum.

The *jejunum*, which commences where the duodenum ends, is situated in the umbilical region, and is mostly found empty: hence its name. It is every where covered with red vessels, and, about an hour and a half after a meal, with distended lacteals.

The *ileum* occupies the hypogastric region and the pelvis; is of a more pallid colour than the former, and terminates by a transverse opening into the large intestines, which is called the *valve of the ileum, valve of the cæcum, or the valve of Tulpius.*

The beginning of the large intestines is firmly tied down in the right iliac region, and, for the extent of about four fingers' breadth, is called the *cæcum*, having adhering to it a worm-like process, called the *processus cæci, vermiformis*, or *appendicula cæci vermiformis.* The great intestine then commences *colon*, ascends towards the liver, passes across the abdomen, under the stomach, to the left side, where it is contorted like the letter *S*, and descends to the pelvis: hence it is divided in this course into the *ascending portion*, the *transverse arch*, and the *sigmoid flexure.* When it has reached the pelvis it is called the *rectum*, from whence it proceeds, in a straight line, to the anus.

The intestinal canal is composed of three membranes, or coats; a *common* one from the peritonæum, a *muscular coat*, and a *villous coat*, the villi being formed of the fine terminations of arteries and nerves, and the origins of lacteals and lymphatics. The intestines are connected to the body by the mesentery; the duodenum has also a peculiar connecting cellular substance, as have, likewise, the colon and rectum, by whose means the former is firmly accreted to the back, the colon to the kidneys, and the latter to the os coccygis, and, in women, to the vagina. The remaining portion of the tube is loose in the cavity of the abdomen. The arteries of this canal are branches of the *superior* and *inferior mesenteric*, and the *duodenal.* The veins evacuate their blood into the vena portæ. The nerves are branches of the eight pair and intercostals. The *lacteal vessels*, which originate principally from the jejunum, proceed to the glands in the mesentery.

INTORSIO. Twisting.

INTRAFOLIACEOUS. *Intrafoliaceus.* Within the leaves: applied to stipulæ, which are above the footstalk, and internal with respect to the leaf; as in *Ficus carica*, and *Morus nigra.*

INTRICA'TUS. (From *intrico*, to entangle: so called from its intricate folds.) A muscle of the ear.

INTRI'NSECUS. (From *intra*, within, and *secus*, towards.) A painful disorder of an internal part.

INTROCE'SSIO. (From *introcedo*, to go in.) A depression or sinking of any part inwards.

INTUS-SUSCE'PTION. (*Intus-susceptio;* from *intus*, within, and *suscipio*, to receive.) A disease of the intestinal tube, and, most frequently, of the small intestines: it consists in a portion of gut passing for some length within another portion.

I'NTYBUS. (*us, i.* m.; from *in*, and *tuba*, a hollow instrument: so named from the hollowness of its stalk.) See *Cichorium endivia.*

I'NULA. (*a, æ.* f.; contracted or corrupted from *helenium*, ἡλενιον, fabled to have sprung from the tears of Helen.) 1. The

name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua*.

2. The herb elecampane. See *Inula helenium*.

Inula, common. See *Inula helenium*.

INULA CRITHMOIDES. *Caaponga* of the Brazilians; called also, *Trifolia spica*, and *Crithmum marinum non spinosum*. The leaves and young stalks of this plant are pickled for the use of the table; they are gently diuretic.

INULA DYSENTERICA. The systematic name of the lesser inula, or flea-bane; called likewise, *Conyza media, Arnica Suedensis, Arnica spuria*, and *Conyza*. *Inula — amplexicaulibus, cordato oblongis; caule villoso, paniculato; squamis calycinis, setaceis*, of Linnæus. This indigenous plant was once considered as possessing great antidysenteric virtues. The whole herb is to the taste acrid, and at the same time rather aromatic. It is now fallen into disuse.

INULA HELENIUM. The systematic name of the common inula, or elecampane; called *Enula campana*, and *Helenium*. *Inula — foliis amplexicaulibus ovatis rugosis subtus tomentosis, calycum squamis ovatis*, of Linnæus. This plant, though a native of Britain, is seldom met with in its wild state, but mostly cultivated. The root, which is the part employed medicinally, in its recent state has a weaker and less grateful smell than when thoroughly dried, and kept for a length of time, by which it is greatly improved; its odour then approaching to that of Florentine orris root. It was formerly in high estimation in dyspepsia, pulmonary affections, and uterine obstructions, but is now fallen into disuse. From the root of this plant, Rose first extracted the peculiar vegetable principle called *inulin*. Funke has since given the following as the analysis of elecampane root: — A crystallisable volatile oil; inulin; extractive; acetic acid; a crystallisable resin; gluten; a fibrous matter. See *Inulin*.

INULIN. In examining the *Inula helenium*, or *Elecampane*, Rose imagined he discovered a new vegetable product, to which the name of *Inulin* has been given. It is white and pulverulent, like starch. When thrown on red-hot coals, it melts, diffusing a white smoke, with the smell of burning sugar. It yields, on distillation in a retort, all the products furnished by gum. It dissolves readily in hot water; and precipitates, almost entirely on cooling, in the form of a white powder; but, before falling down, it gives the liquid a mucilaginous consistence. It precipitates quickly on the addition of alkohol. It is obtained by boiling the root of this plant in four times its weight of water, and leaving the liquid in repose.

INUSTION. (From *in*, and *uro*, to burn.) It is sometimes used for hot and dry seasons; and formerly by surgeons, for the operation of the cautery.

INVERECU'NDUM OS. (From *in*, not, and *verecundus*, modest.) An obsolete name of the frontal bone, from its being regarded as the seat of impudence.

INVERSIO. Inversion. Turned inside outward.

Inversion of the uterus. See *Uterus, inversion of*.

INVOLUCELLUM. A partial involucrum. See *Involucrum*.

INVOLU'CRUM. (*um, i.* n.; from *in*, and *volvo*, to wrap up: because parts are enclosed by it.) A fence. I. In *Anatomy*,

1. A name of the pericardium.

2. A membrane which covers any part.

II. In *Botany*, a leafy calyx, remote from the flower: applied particularly to umbelliferous plants. From the part of the umbel in which it is placed, the involucrum is called,

1. *Universal*, being at the base of the whole umbel; as in *Coriandrum sativum, Scandix cerefolium*, and *Cornus mascula*.

2. *Partial*, called *involucellum*, at the bottom of each umbellula, or partial stalk of the umbel; as in *Daucus carota*.

3. *Dimidiate*, surrounding the middle of the stalk at the base of the umbel; as in *Æthusa cynapium*.

From the number of the involucre leaves,

4. *Monophyllous*; as in *Coriander*, and *Hermas*.

5. *Triphyllous*; as in *Bupleurum junceum*.

6. *Polyphyllous*; as in *Bunium bulbocastanum*, and *Sium*.

7. *Pinnatifid*; as in *Daucus carota*, and *Sium angustifolium*.

8. *Reflex*, turned back; as in *Selinum monnieri*.

Solitary flowers rarely have an involucrum; yet it is found in the anemones.

INVOLUTUS. Involute: rolled inwards. Applied to leaves, petals, &c. when their margins are turned inward; as in the leaves of *Pinguicula*, and petals of *Anethum, Pastinaca*, and *Bupleurum*.

IODATE. (*Iodas, atis.* f.) A compound of iodine with oxygene, and a metallic basis. The *oxyoides* of Davy.

IODES. (From *ιος*, verdigris.) Green matter thrown off by vomiting.

IODIC. (*Iodicus*; from *iodium*, the name of a peculiar substance.) Of or belonging to iodine.

IODIC ACID. *Acidum iodicum*. Oxyodic acid. This is obtained from a mixture of chlorate of potash, muriatic acid, and iodine. It has not yet been applied to any use in medicine.

IODIDE. *Iode. Iodure.* A compound of iodine with a metal; as *Iodide of potassium*.

IODINA. See *Iodium*.

IODINE. See *Iodium*.

IODIUM. (*um, ii.* n.; from *ιωδες*, a violet colour, which it has.) Iodine. A simple body, accidentally discovered, in 1812, by De Courtois, a manufacturer of saltpetre at Paris. In his processes for procuring soda from the ashes of sea-weeds, he found the

metallic vessels much corroded; and, in searching for the cause of the corrosion, he made this important discovery.

Iodine derived its first illustration from Clement and Desormes, in their memoir, read at a meeting of the Institute.

In 1813, Sir H. Davy happened to be on a visit to Paris, receiving, amid the political convulsions of France, the tranquil homage due to his genius. "When Clement showed iodine to me," says Sir H. Davy, "he believed that the hydriodic acid was muriatic acid; and Gay Lussac, after his early experiments, made originally with Clement, formed the same opinion, and *maintained* it, when I *first* stated to him my belief that it was a new and peculiar acid, and that iodine was a substance analogous, in its chemical relations, to chlorine."

Iodine has been found in the following sea-weeds:—Fucus cartilagineus, membranaceus, filamentosus, rubens, nodosus, serratus, siliquosus, palmatus, filum, digitatus, saccharinus; the Ulva umbilicalis, pavonia, linza; and in sponge.

It is from the incinerated sea-weed, or kelp, that iodine in quantities is to be obtained. Dr. Wollaston first communicated a precise formula for extracting it. Dissolve the soluble part of kelp in water. Concentrate the liquid by evaporation, and separate all the crystals that can be obtained. Pour the remaining liquid into a clean vessel, and mix with it an excess of sulphuric acid. Boil this liquid for some time. Sulphur is precipitated, and muriatic acid driven off. Decant off the clear liquid, and strain it through wool. Put it into a small flask, and mix it with as much black oxide of manganese as we used before of sulphuric acid. Apply to the top of the flask a glass tube, shut at one end. Then heat the mixture in the flask. The iodine sublimes into the glass tube. None can be obtained from sea-water.

This iodium, or iodine, is a solid, of a greyish-black colour and metallic lustre. It is often in scales similar to those of micaceous iron ore, sometimes in rhomboidal plates, very large and very brilliant. Its fracture is lamellated, and it is soft and friable to the touch. Its taste is very acrid, though it be very sparingly soluble in water. It is a deadly poison. It gives a deep brown stain to the skin, which soon vanishes by evaporation. In odour, and power of destroying vegetable colours, it resembles very dilute aqueous chlorine. It dissolves in 7000 parts of water. The solution is of an orange-yellow colour, and in small quantity tinges raw starch of a purple hue.

It melts at 227° F., and is volatilised under the common pressure of the atmosphere, at the temperature of 350°. It evaporates pretty quickly at ordinary temperatures. Boiling water aids its sublimation, as is shown in the above process of extraction.

Iodine forms with sulphur a feeble compound, of a greyish-black colour, radiated like sulphuret of antimony. When it is distilled with water, iodine separates.

Iodine and phosphorus combine with great rapidity at common temperatures, producing heat without light. From the presence of a little moisture, small quantities of hydriodic acid gas are exhaled.

Oxygene expels iodine from both sulphur and phosphorus.

Hydrogene, whether dry or moist, did not seem to have any action on iodine at the ordinary temperature; but if we expose a mixture of hydrogene and iodine to a red heat in a tube, they unite together, and hydriodic acid is produced, which gives a reddish brown colour to water.

Charcoal has no action upon iodine, either at a high or low temperature. Several of the common metals, on the contrary, as zinc, iron, tin, mercury, attack it readily, even at a low temperature, provided they be in a divided state.

The compound of iodine and zinc, or iodide of zinc, is white.

Iron is acted on by iodine in the same way as zinc; and a brown iodide results, which is fusible at a red heat.

The iodine of tin is very fusible.

Antimony presents, with iodine, the same phænomena as tin.

The iodides of lead, copper, bismuth, silver, and mercury are insoluble in water, while the iodides of the very oxidisable metals are soluble in that liquid.

There are two iodides of mercury; the one yellow, the other red; both are fusible and volatile, the yellow or pro-tiodide contains one half less iodine than the deut-iodide. The latter, when crystallised, is a bright crimson.

From all the above-recited facts, it is concluded that iodine is *an undecompounded body.* In its specific gravity, lustre, and magnitude of its prime equivalent, it resembles the metals; but, in all its chemical agencies, it is analogous to oxygene and chlorine.

Iodide of mercury has been proposed for a pigment.

Iodine is now very generally used in the management of scrofula, both internally and externally. It must be given cautiously. Orfila swallowed 6 grains; and was immediately affected with heat, constriction of the throat, nausea, eructation, salivation, and cardialgia. In ten minutes he had copious bilious vomitings, and slight colic pains. His pulse rose from 70 to about 90 beats in the minute. By swallowing large quantities of mucilage, and emollient clysters, he recovered, and felt nothing next day but slight fatigue. About 70 or 80 grains proved a fatal dose to dogs. They usually died on the fourth or fifth day.

The dose is one grain three times a day. Dr. Coindet of Geneva has recommended the use of iodine in the form of tincture, and also hydriodate of potash or soda, as an efficacious remedy for the cure of glandular swellings, of the goitrous and scrofulous kind. An ointment composed of 1 oz. hog's lard, and 1 drachm of iodide of zinc, is a powerful

external application in such cases. About a drachm of this ointment should be used in friction on the swelling once or twice a day.

IODOSULPHURIC. (*Iodosulphuricus*: so named from its constituent principles.) The name of an acid.

Iodosulphuric acid. *Acidum iodosulphuricum.* When sulphuric acid is poured, drop by drop, into a concentrated and hot aqueous solution of iodic acid, there immediately results a precipitate of iodosulphuric acid, possessed of peculiar properties.

IODOUS. (*Iodosus*; from *iodium*, its base.) The name of an acid.

Iodous acid. *Acidum iodosum.* The acid obtained by distilling equal parts of chlorate of potash and iodine.

IOLITE. Dichroite. Prismato-rhomboidal quartz of Mohs. This is of a colour intermediate between black, blue, and violet blue. When viewed in the direction of the axis of the crystals, the colour is dark indigo blue; but perpendicular to the axis of the crystals, pale brownish yellow. It comes from Finland.

I'onis. (From ἴον, a violet.) A carbuncle of a violet colour.

IO'NTHUS. (*us, i.* m.; from ιον, a violet, and ανθος, a flower.) A pimple in the face, of a violet colour. The whelky or bubuckled face, a species of acne. See *Acne*.

IOTACI'SMUS. (*us, i.* m.; from ιωτα, the Greek letter ι.) A defect in the tongue, or organs of speech, which renders a person incapable of pronouncing his letters.

IPECACUA'NHA. (*a, æ.* f.; an Indian word.) See *Callicocca ipecacuanha*.

IPOMŒA. (*a, æ.* f.; so called by Linnæus from ιψ, which he unaccountably mistakes for the convolvulus plant, whereas it means a creeping sort of worm that infests and corrodes vines, and ομοιος, like. By this appellation he evidently intended to express the close resemblance of *Ipomœa* to the genus *convolvulus*, with which it agrees in habit altogether.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

Ipomœa quamoclit. *Batata peregrina.* The cathartic potatoe. If about two ounces are eaten at bed-time, they gently open the bowels by morning.

Iqueta'ia. The inhabitants of the Brazils give this name to the *Scrofularia aquatica*, which is there celebrated as a corrector of the ill flavour of senna.

IRACU'NDUS. (From *ira*, anger: so called because it forms the angry look.) A muscle of the eye.

IRIDIUM. (*um, ii.* n.) A metal found with another called osmium, in the black powder left after dissolving platinum. See *Platinum*.

I'RIS. (*is, idis.* f.; a rainbow: so called because of the variety of its colours.) I. In *Anatomy*, the anterior portion of the continuation of the choroid membrane of the eye, which is perforated in the middle by the pupil. It is of various colours. The posterior surface of the iris is termed the *uvea*. See *Choroid membrane*.

II. In *Botany*, 1. The *flower-de-luce*, from the resemblance of its flowers to the rainbow.

2. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Monogynia*.

Iris florentina. Florentine orris, or iris. The root of this plant, *Iris—corollis barbatis, caule foliis altiore subbifloro, floribus sessilibus*, of Linnæus, which is indigenous to Italy, in its recent state is extremely acrid, and, when chewed, excites a pungent heat in the mouth, that continues several hours: on being dried, this acrimony is almost wholly dissipated; the taste is slightly bitter, and the smell agreeable, and approaching to that of violets. The fresh root is cathartic, and for this purpose has been employed in dropsies. It is now chiefly used in its dried state, and ranked as a pectoral and expectorant, and hence has a place in the *trochisci amyli* of the pharmacopœias.

Iris florentine. See *Iris florentina*.

Iris germanica. The systematic name of the common iris, or orris, or flower-de-luce. *Iris nostra.* The fresh roots of this plant, *Iris—corollis barbatis, caule foliis altiori multifloro, floribus inferioribus pedunculatis*, of Linnæus, have a strong disagreeable smell, and an acrid nauseous taste. They are powerfully cathartic, and are given in dropsical diseases, where such remedies are indicated.

Iris nostras. See *Iris germanica*.

Iris palustris. See *Iris pseudacorus*.

Iris pseudacorus. The systematic name of the yellow water-flag: called also, *Iris palustris*; *Gladiolus luteus*; *Acorus adulterinus*, and *Acorus vulgaris*. This indigenous plant, *Iris—imberbis, foliis ensiformibus, petalis alternis, stigmatibus minoribus*, is common in marshes, and on the banks of rivers. It formerly had a place in the London Pharmacopœia, under the name of *Gladiolus luteus*. The root is without smell, but has an acrid styptic taste, and its juice, on being snuffed up the nostrils, produces a burning heat in the nose and mouth, accompanied by a copious discharge from these organs: hence it is recommended both as an errhine and sialagogue. Given internally, when perfectly dry, its astringent qualities are such as to cure diarrhœas. The expressed juice is likewise said to be an useful application to serpiginous eruptions and scrofulous tumours.

Irish slate. See *Lapis hybernicus*.

IRI'TIS. (*is, idis.* f.; from *iris*, the name of the membrane. The more proper name is *Iriditis*.) Inflammation of the iris: it produces the symptoms of deep-seated or internal inflammation of the eye. See *Ophthalmia*.

IRON. *Ferrum.* Of all the metals, there is none which is so copiously and so variously dispersed through nature as iron. In animals, in vegetables, and in all parts of the mineral kingdom, we detect its presence. Mineralo-

gists are not agreed with respect to the existence of native iron, though immense masses of it have been discovered, which could not have been the products of art; but there is much in favour of the notion that these specimens have been extracted by subterraneous fire. A mass of native iron, of 1600 pounds weight, was found by Pallas, on the river Denisei, in Siberia; and another mass of 300 pounds was found in Paraguay, of which specimens have been distributed every where,

There are a vast variety of iron ores: they may, however, be all arranged under the following genera; namely, sulphurets, carburets, oxides, and salts of iron. The sulphurets of iron form the ores called *pyrites,* of which there are many varieties. Iron in a state of carburet forms *plumbago.* Its combination with oxygene is very abundant, and forms the loadstone, the specular ores, and bloodstones. It is found combined with the carbonic, arsenic, &c. &c.

Properties of iron. — Iron is distinguished from every other metal by its magnetical properties. It is attracted by the magnet, and acquires, under various conditions, the property of attracting other iron. Pure iron is of a whitish grey, or rather bluish colour, very slightly livid; but when polished, it has a great deal of brilliancy. Its texture is either fibrous, fine-grained, or in dense plates. Its specific gravity varies from 7·6 to 7·8. It is the hardest and most elastic of all the metals. It is extremely ductile, and may therefore be drawn into wire as fine as a human hair; it is also more tenacious than any other metal, and yields with facility to pressure. It is extremely infusible, and when not in contact with the fuel, it cannot be melted by the heat which any furnace can excite: it is, however, softened by heat, still preserving its ductility; and when thus softened, different pieces may be united: this constitutes the valuable property of *welding.* It is very dilatable by heat. It is the only metal which takes fire by the collision of flint. Heated in contact with air it becomes oxidised. If intensely and briskly heated, it takes fire with scintillation, and becomes a black oxide. It combines with carbon, and forms what is called *steel.* It combines with phosphorus in a direct and an indirect manner, and unites with sulphur readily by fusion. It decomposes water in the cold slowly, but rapidly when ignited. It decomposes most of the metallic oxides. All acids act upon iron. Very concentrated sulphuric acid has little or no effect upon it, but when diluted it oxidises it rapidly. The nitric acid oxidises it with great vehemence. Muriate of ammonia is decomposed by it. Nitrate of potash detonates very vigorously with it. Iron is likewise dissolved by alkaline sulphurets. It is capable of combining with a number of metals. It does not unite with lead or bismuth, and very feebly with mercury. It detonates by percussion with the oxygenated muriates.

Method of obtaining iron. — The general process by which iron is extracted from its ores, is first to roast them by a strong heat, to expel the sulphur, carbonic acid, and other mineralisers which can be separated by heat. The remaining ore, being reduced to small pieces, is mixed with charcoal, or coke; and is then exposed to an intense heat, in a close furnace, excited by bellows; the oxygene then combines with the carbon, forming carbonic acid gas during the process, and the oxide is reduced to its metallic state.

The metal thus obtained, and called smelted, pig, or cast iron, is far from being pure, always retaining a considerable quantity of carbon and oxygene, as well as several heterogeneous ingredients. According as one or other of these predominates, the property of the metal differs. Where the oxygene is present in a large proportion, the colour of the iron is whitish grey; it is extremely brittle, and its fracture exhibits an appearance of crystallisation: where the carbon exceeds, it is of a dark grey, inclining to blue, or black, and is less brittle. The former is the *white,* the latter the *black crude iron of commerce.* The *grey* is intermediate to both.

To obtain the iron *more pure,* or to free it from the carbon with which it is combined in this state, it must be refined by subjecting it to the operations of melting and forging. By the former, in which the metal is kept in fusion for some time, and constantly kneaded and stirred, the carbon and oxygene it contains are partly combined, and the produced carbonic acid gas is expelled: the metal at length becomes viscid and stiff: it is then subjected to the action of a very large hammer, or to the more equal, but less forcible pressure of large rollers, by which the remaining oxide of iron, and other impurities, not consumed by the fusion, are pressed out. The iron is now no longer granular nor crystallised in its texture; it is fibrous, soft, ductile, malleable, and totally infusible. It is termed forged, wrought, or bar iron, and is the metal in a purer state, though far from being absolutely pure.

The compounds of iron are the following: —

I. *Oxides;* of which there are two, or perhaps three.

1. The *Protoxide.* This, obtained either by digesting an excess of iron filings in water, by the combustion of iron wire in oxygene, or by adding pure ammonia to solution of green copperas, and drying the precipitate out of contact of air, is of a black colour, becoming white by its union with water, in the hydrate, attractible by the magnet, but more feebly than iron.

2. The *deutoxide* of Gay Lussac. He forms it by exposing a coil of fine iron wire, placed in an ignited porcelain tube, to a current of steam, as long as any hydrogene comes over. There is no danger, he says, of generating peroxide in this experiment, because iron once in the state of deutoxide has no such affinity for oxygene as to enable it to decompose water.

3. The *red oxide.* It may be obtained by igniting the nitrate, or carbonate; by calcining iron in open vessels; or simply by treating the metal with strong nitric acid, then washing and drying the residuum. Colcothar of vitriol, or thorough calcined copperas, may be considered as peroxide of iron. It exists abundantly native in the red iron ores.

II. *Chlorides* of iron; of which there are two.

1. The *protochloride* may be procured by heating to redness, in a glass tube with a very small orifice, the residue which is obtained by evaporating to dryness the green muriate of iron. It is a fixed substance, requiring a red heat for its fusion. It has a greyish variegated colour, a metallic splendour, and a lamellar texture.

2. The *deutochloride* may be formed by the combustion of iron wire in chlorine gas, or by gently heating the green muriate in a glass tube.

III. For the *iodide* of iron, see *Iodium.*

IV. *Sulphurets* of iron; of which, according to Porrett, there are four, though only two are usually described, his protosulphuret and persulphuret.

V. *Carburets* of iron. These compounds form steel, and probably cast iron, though the latter contains also some other ingredients.

VI. *Salts of iron.* Of these there are several, formed by the vegetable and mineral acids.

Medical virtues. — The general medicinal properties of iron, and the several preparations of it, are to constringe the fibres, to quicken the circulation, to promote the different secretions in the remoter parts, and at the same time to repress inordinate discharges into the intestinal tube. By the use of chalybeates, the pulse is very sensibly raised, the colour of the face, though before pale, changes to a florid red; the alvine, urinary, and cuticular excretions are increased.

When given improperly, or to excess, iron produces headache, anxiety, heats the body, and often causes hæmorrhages, or even vomiting, pains in the stomach, spasms, and pains of the bowels.

Iron is given in most cases of debility and relaxation; in passive hæmorrhages; in dyspepsia, hysteria, and chlorosis; in most of the cachexiæ; and it has lately been recommended as a specific in cancer. Where either a preternatural discharge, or suppression of natural secretions, proceeds from a languor or sluggishness of the fluids, and weakness of the solids, this metal, by increasing the motion of the former and the strength of the latter, will suppress the flux, or remove the suppression; but where the circulation is already too quick, the solids too tense and rigid, where there is any stricture, or spasmodic contraction of the vessels, iron, and all the preparations of it, will aggravate both diseases. Iron probably has no action on the body when taken into the stomach, unless it be oxidised; but during its oxidisement hydrogene gas is evolved, and accordingly we find that fœtid eructations and black fæces are considered as proofs of the medicine having taken effect. It can only be exhibited internally in the state of filings, which may be given in doses from five to twenty grains. Iron wire is to be preferred for pharmaceutical preparations, both because it is the most convenient form, and because it is the purest iron.

The medicinal preparations of iron now in use are,—

1. The subcarbonate. See *Ferri subcarbonas.*
2. The sulphate. See *Ferri sulphas.*
3. Tartarised iron. See *Ferrum tartarizatum.*
4. The liquor of alkalined iron. See *Ferri alkalini liquor.*
5. The tincture of the acetate of iron. See *Tinctura ferri acetatis.*
6. The tincture of the muriate of iron. See *Tinctura ferri muriatis.*
7. The tincture of ammoniated iron. See *Tinctura ferri ammoniati.*
8. Steel wine. See *Vinum ferri.*
9. Ammoniated iron. See *Ferrum ammoniatum.*
10. The red oxide. See *Oxydum ferri rubrum.*
11. The black oxide. See *Oxydum ferri nigrum.*

IRON-FLINT. This occurs in veins of iron-stone, and in trap-rocks, near Bristol, and in many parts of Germany.

IRRITABILITY. (*Irritabilitas, atis.* f.; from *irrito,* to provoke.) *Vis insita,* of Haller. *Vis vitalis,* of Gærtner. *Oscillation,* of Boerhaave. *Tonic power,* of Stahl. *Muscular power,* of Bell. *Inherent power,* of Cullen. The contractility of muscular fibres, or a property *peculiar* to muscles, by which they contract upon the application of certain stimuli, without a consciousness of action. This power may be seen in the tremulous contraction of muscles when lacerated, or when entirely separated from the body in operations. Even when the body is dead to all appearance, and the nervous power is gone, this contractile power remains till the organisation yields, and begins to be dissolved. It is by this inherent power that a cut muscle contracts and leaves a gap, that a cut artery shrinks and grows stiff after death. This irritability of muscles is so far independent of nerves, and so little connected with feeling, which is the province of the nerves, that upon stimulating any muscle by touching it with caustic, or irritating it with a sharp point, or driving the electric spark through it, or exciting with the metallic conductors, as those of silver or zinc, the muscle instantly contracts, although the nerve of that muscle be tied; although the nerve be cut so as to separate the muscle entirely from all connection with the system; although the muscle be separated from the body; although the creature upon which the experiment is performed may have lost all sense of feeling, and have been long apparently dead. Thus, a

muscle cut from the limb, trembles and palpitates a long time after; the heart, separated from the body, contracts when irritated; the bowels, when torn from the body, continue their peristaltic motion, so as to roll upon the table, ceasing to answer to stimuli only when they become stiff and cold; and too often, in the human body, the vis insita loses the exciting power of the nerves, and then palsy ensues; or, losing all governance of the nerves, the vis insita, acting without the regulating power, falls into partial or general convulsions. Even in vegetables, as in the sensitive plant, this contractile power lives. Thence comes the distinction between the irritability of muscles and the sensibility of nerves: for the *irritability* of muscles survives the animals, as when it is active after death; survives the life of the part, or the feelings of the whole system, as in universal palsy, where the vital motions continue entire and perfect, and where the muscles, though not obedient to the will, are subject to irregular and violent actions; and it survives the connection with the rest of the system, as when animals very tenacious of life are cut into parts: but *sensibility*, the property of the nerves, gives the various modifications of sense, as vision, hearing, and the rest; gives also the general sense of pleasure or pain, and makes the system, according to its various conditions, feel vigorous and healthy, or weary and low. And thus the eye feels, and the skin feels; but their appointed stimuli produce no emotions in these parts: they are sensible, but not irritable. The heart, the intestines, the urinary bladder, and all the muscles of voluntary motion, answer to stimuli with a quick and forcible contraction; and yet they hardly feel the stimuli by which these contractions are produced, or, at least, they do not convey that feeling to the brain. There is no consciousness of present stimulus in those parts which are called into action by the impulse of the nerves, and at the command of the will: so that muscular parts have all the irritability of the system, with but little feeling, and that little owing to the nerves which enter into their substance; while nerves have all the sensibility of the system, but no motion.

The discovery of this singular property belongs to our countryman Glisson; but Baron Haller must be considered as the first who clearly pointed out its existence, and proved it to be the cause of muscular motion.

The laws of irritability, according to Dr. Crichton, are,—1. After every action in an irritable part, a state of rest, or cessation from motion, must take place before the irritable part can be again incited to action. If, by an act of volition, we throw any of our muscles into action, that action can only be continued for a certain space of time: the muscle becomes relaxed, notwithstanding all our endeavours to the contrary, and remains a certain time in that relaxed state, before it can be again thrown into action. 2. Each irritable part has a certain portion or quantity of the principle of irritability which is natural to it, part of which it loses during action, or from the application of stimuli. 3. By a process wholly unknown to us, it regains this lost quantity, during its repose, or state of rest. In order to express the different quantities of irritability in any part, we say that it is either more or less redundant, or more or less defective. It becomes redundant in a part when the stimuli which are calculated to act on that part are withdrawn or withheld for a certain length of time, because then no action can take place; while, on the other hand, the application of stimuli causes it to be exhausted, or to be deficient, not only by exciting action, but by some secret influence, the nature of which has not yet been detected; for it is a circumstance extremely deserving of attention, that an irritable part, or body, may be suddenly deprived of its irritability by powerful stimuli, and yet no apparent muscular or vascular action takes place at the time. A certain quantity of spirits taken at once into the stomach, kills almost as instantaneously as lightning does; the same thing may be observed of some poisons, as opium, distilled laurel-water, the juice of the cerbera ahovai, &c. 4. Each irritable part has stimuli which are peculiar to it, and which are intended to support its natural action: thus, blood, which is the stimulus proper to the heart and arteries, if, by any accident, it gets into the stomach, produces sickness or vomiting. If the gall, which is the natural stimulus to the ducts of the liver, the gall-bladder, and the intestines, is by any accident effused into the cavity of the peritonæum, it excites too great action of the vessels of that part, and induces inflammation. The urine does not irritate the tender fabric of the kidneys, ureters, or bladder, except in such a degree as to preserve their healthy action; but if it be effused into the cellular membrane, it brings on such a violent action of the vessels of these parts as to produce gangrene. Such stimuli are called *habitual* stimuli of parts. 5. Each irritable part differs from the rest in regard to the quantity of irritability which it possesses. This law explains to us the reason of the great diversity which we observe in the action of various irritable parts; thus the muscles of voluntary motion can remain a long time in a state of action, and if it be continued as long as possible, another considerable portion of time is required before they regain the irritability they lost; but the heart and arteries have a more short and sudden action, and their state of rest is equally so. The circular muscles of the intestines have also a quick action and short rest. The urinary bladder does not fully regain the irritability it loses during its contraction for a considerable space of time; the vessels which separate and throw out the menstrual discharge, act, in general, for three or four days, and do not regain the irritability they lose for a lunar month. 6. All stimuli produce action in proportion to their irritating powers. As a person approaches his hand to the fire, the action of all the vessels in the

skin is increased, and it glows with heat; if the hand be approached still nearer, the action is increased to such an unusual degree as to occasion redness and pain; and if it be continued too long, real inflammation takes place; but if this heat be continued, the part at last loses its irritability, and a sphacelus or gangrene ensues. 7. The action of every stimulus is in an inverse ratio to the frequency of its aplication. A small quantity of spirits taken into the stomach, increases the action of its muscular coat, and also of its various vessels, so that digestion is thereby facilitated. If the same quantity, however, be taken frequently, it loses its effect. In order to produce the same effect as at first, a larger quantity is necessary; and hence the origin of dram-drinking. 8. The more the irritability of a part is accumulated, the more that part is disposed to be acted upon. It is on this account that the activity of all animals, while in perfect health, is much livelier in the morning than at any other part of the day: for, during the night, the irritability of the whole frame, and especially that of the muscles destined for labour, viz. the muscles for voluntary action, is re-accumulated. The same law explains why digestion goes on more rapidly the first hour after food is swallowed that at any other time; and it also accounts for the great danger that accrues to a famished person upon first taking in food. 9. If the stimuli which keep up the action of any irritable body be withdrawn for too great a length of time, that process on which the formation of the principle depends is gradually diminished, and at last entirely destroyed. When the irritability of the system is too quickly exhausted by heat, as is the case in certain warm climates, the application of cold invigorates the frame, because cold is a mere diminution of the overplus of that stimulus which was causing the rapid consumption of the principle. Under such, or similar circumstances, therefore, cold is a tonic remedy; but if, in a climate naturally cold, a person were to go into a cold bath, and not soon return into a warmer atmosphere, it would destroy life, just in the same manner as many poor people who have no comfortable dwellings are often destroyed from being too long exposed to the cold in winter. Upon the first application of cold the irritability is accumulated, and the vascular system therefore is exposed to great action; but, after a certain time, all action is so much diminished, that the process, whatever it be, on which the formation of the irritable principle depends, is entirely lost.

IRRITATION. *Irritatio.* The action produced by any stimulus.

ISATIS. (*is, is.* f. Ισατις of Dioscorides, and *Isatis* of Pliny; the derivation of which is unknown.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliquosa.*

Isatis tinctoria. *Glastum.* The systematic name of the plant used for dyeing, called woad. It is said to be astringent.

I'sca. A sort of fungous excrescence of the oak, or of the hazel, &c. The ancients used it as the moderns used moxa.

ISCHÆ'MON. (*on, onis.* m.; from ισχω, to restrain, and αιμα, blood.) A name for any medicine which restrains or stops bleeding.

Ischæ'mum. A species of *Andropogon.*

I'SCHIAS. (*as, adis.* f. Ισχιας; from ισχιον, the hip.) A rheumatic affection of the hip-joint. See *Rheumatismus.*

ISCHIATOCE'LE. (*e, es.* f.; from ισχιον, the hip, and κηλη, a rupture.) *Ischiocele.* An intestinal rupture, through the sciatic ligaments.

Ischio-cavernosus. See *Erector penis.*

Ischioce'le. See *Ischiatocele.*

I'SCHIUM. (*um, i.* n.; from ισχις, the loin; so named because it is near the loin.) A bone of the pelvis of the fœtus, and a part of the os innominatum of the adult. See *Innominatum os.*

ISCHNOPHO'NIA. (*a, æ.* f.; from ισχνος, slender, and φωνη, the voice.) 1. A shrillness of the voice.

2. A hesitation of speech.

Ischure'ticus. (From ισχουρια, a suppression of the urine.) Having the power of relieving a suppression of the urine.

ISCHU'RIA. (*a, æ.* f.; from ισχω, to restrain, and ουρον, the urine.) A retention of urine. When there is a frequent desire of making water, attended with much difficulty in voiding it, the complaint is called a dysury; and when there is a total retention of urine, it is known by the name of an ischury. Both ischuria and dysuria are distinguished into acute, when arising in consequence of inflammation; and chronic, when proceeding from any other cause, such as calculus, &c.

The causes which give rise to these diseases, are an inflammation of the urethra, occasioned either by venereal sores, or by a use of acrid injections, tumour or ulcer of the prostate gland, inflammation of the bladder or kidneys, considerable enlargements of the hæmorrhoidal veins, a lodgment of indurated fæces in the rectum, spasm at the neck of the bladder, the absorption of cantharides applied externally, or taken internally, and excess in drinking either spirituous or vinous liquors; but particles of gravel sticking at the neck of the bladder, or lodging in the urethra, and thereby producing irritation, prove the most frequent cause. Gouty matter falling on the neck of the bladder, will sometimes occasion these complaints.

There are four species of ischuria:

1. *Ischuria renalis,* coming after a disease of the kidneys, with a troublesome sense of weight or pain in that part.

2. *Ischuria ureterica,* after a disease of the kidneys, with a sense of pain or uneasiness in the course of the ureters.

3. *Ischuria vesicalis,* marked by a frequent desire to make water, with a swelling of the hypogastrium, and pain at the neck of the bladder.

4. *Ischuria urethralis,* marked by a frequent desire to make water, with a swelling of the hypogastrium, and pain of some part of the urethra.

In dysury there is a frequent inclination to make water, attended with a smarting pain, heat, and difficulty in voiding it, together with a sense of fulness in the region of the bladder. The symptoms often vary, however, according to the cause which has given rise to it. If it proceeds from a calculus in the kidney or ureter, besides the affections mentioned, it will be accompanied with nausea, vomiting, and acute pains in the loins and regions of the ureter and kidney of the side affected. When a stone in the bladder, or gravel in the urethra, is the cause, an acute pain will be felt at the end of the penis, particularly on voiding the last drops of urine, and the stream of water will either be divided into two, or be discharged in a twisted manner, not unlike a corkscrew. If a scirrhus of the prostate gland has occasioned the suppression or difficulty of urine, a hard indolent tumour, unattended with any acute pain, may readily be felt in the perinæum, or by introducing the finger in ano.

Dysury is seldom attended with much danger, unless, by neglect, it should terminate in a total obstruction. Ischury may always be regarded as a dangerous complaint, when it continues for any length of time, from the great distension and often consequent inflammation which ensue. In those cases where neither a bougie nor a catheter can be introduced, the event, in all probability, will be fatal, as few patients will submit to the only other means of drawing off the urine before a considerable degree of inflammation and tendency to gangrene have taken place.

ISERINE. (So called from the river Iser, near the origin of which it is found.) An iron black-coloured ore.

ISINGLASS. See *Ichthyocolla.*

ISO'CHRONOS. (From ισος, equal, and χρονος, time.) Equal time: applied to the pulse, as preserving an equal distance of time between the beats.

Iso'crates. (From ισος, equal, and κεραννυμι, to mix.) Wine mixed with an equal quantity of water.

ISO'DROMUS. (From ισος, equal, and δρομος, a course.) The same as *Isochronos.*

ISOPY'RUM. (From ισος, equal, and πυρ, fire: so named from its flame-coloured flower.) The *Aquilegia vulgaris.*

ISO'TONUS. (*us, i.* m.; from ισος, equal, and τονος, extension.) Equal extension: applied to fevers which are of equal strength during the whole of the paroxysm.

I'SSUE. See *Fonticulus.*

I'STHMION. (From ισθμος, a narrow piece of land between two seas.) The fauces, or passage between the mouth and gullet.

Isthmus vieussenii. The ridge surrounding the remains of the foramen ovale, in the right auricle of the human heart.

ITCH. See *Scabies.*

Itch, baker's. See *Psoriasis.*

Itch, grocer's. See *Psoriasis.*

Itch, bricklayer's. See *Psoriasis.*

Ithmoi'des. See *Ethmoides.*

Itinera'rium. (From *iter,* a way.) The catheter; also a staff used in cutting for the stone.

ITIS. (From the time of Boerhaave, visceral inflammations have been generally distinguished by anatomical terms derived from the organ affected, with the Greek term *itis,* added as a suffix; as *cephalitis,* &c. *Itis* is sufficiently significant of its purpose; it is immediately derived from ιεμαι, which is itself a ramification from εω, and imports, not merely action, "putting or going forth," which is the strict and simple meaning of εω, but action in its fullest urgency, "violent or impetuous action.") When this term is added to the genitive case of the Greek name of an organ, it means inflammation of that viscus: hence *hepatitis, nephritis, gastritis, carditis,* mean inflammation of the liver, kidney, stomach, heart.—*Good.*

I'va pecanga. See *Smilax sarsaparilla.*

IVORY. The tusk, or tooth of defence of the male elephant. It is an intermediate substance between bone and horn. The dust is occasionally boiled to form jelly, instead of isinglass, for which it is a bad substitute. In 100 parts there are ·24 gelatine, 64 phosphate of lime, and 0·1 carbonate of lime.

IVY. See *Hedera,* and *Glecoma.*

Ivy, ground. See *Glecoma hederacea.*

Ivy-gum. See *Hedera helix.*

I'XIA. (*a, æ.* f.; from ιξος, glue.) 1. A name of the *Carlina gummifera,* from its viscous juice.

2. (From ιξομαι, to proceed from.) A preternatural distension of the veins.

Ixine. See *Atractylis gummifera.*

J.

JA'CEA. (*a, æ.* f.: *quia prodest hominibus tristitia jacentibus;* because it resists sorrow; or from ιαομαι, to heal.) The herb pansey, or heart's-ease. See *Viola tricolor.*

Jaceranta tinga. See *Acorus calamus.*

Jaci'nthus. See *Hyacinthus.*

Jack-by-the-hedge. See *Erysimum alliaria.*

JACOBÆ'A. (*a, æ.* f.; named because

it was dedicated to St. James, or because it was directed to be gathered about the feast of that saint.) See *Senecio Jacobæa.*

JADE. See *Nephrite.*

JAGGED. See *Erosus*, and *Laciniatus.*

JALAP. See *Convolvulus jalapa.*

JALA'PA. (*a, æ.* f. ; from *Chalapa*, or *Xalapa*, in New Spain, whence it is brought.) See *Convolvulus jalapa.*

JALA'PIUM. See *Convolvulus jalapa.*

Jalappa alba. White jalap. See *Convolvulus mecoacan.*

JAMAICA. An island in the West Indies, from which some of our best aromatics, &c. are obtained.

Jamaica bark. See *Cinchona caribæa.*

Jamaica pepper. See *Myrtus pimenta.*

Ja'mblichi sales. A preparation with salammoniac, some aromatic ingredients, &c. so called from Jamblichus, the inventor.

James's powder. An antimonial medicine, much used in this country. The inventor, a man of great skill, and a regularly bred physician, the author of a Medical Dictionary, called it his *fever powder*, and was so successful in his practice with it, that it obtained very great reputation, which it still in some measure retains. Probably, the success of Dr. James was in great measure owing to his free use of the bark, which he always gave as largely as the stomach would bear, as soon as he had completely evacuated the primæ viæ by the use of his antimonial preparation, with which at first he used to combine some mercurial. His specification, lodged in Chancery, is as follows: "Take antimony, calcine it with a continued protracted heat, in a flat, unglazed earthen vessel, adding to it from time to time a sufficient quantity of any animal oil and salt, well dephlegmated; then boil it in melted nitre for a considerable time, and separate the powder from the nitre by dissolving it in water." The real recipe has been concealed, and a false one published in its stead. See also *Antimonialis pulvis.*

JA'NITOR. (*or, oris.* m. ; from *janua*, a gate: so called from its being, as it were, the door or entrance of the intestines.) The pylorus.

Japan earth. See *Acacia catechu.*

Japo'nica terra. (So called from Japan, the place it came from.) See *Acacia catechu.*

JARGON. See *Zircon.*

JA'SMINUM. (*um, i.* n. ; from *jasmen*, Arab. ; or from ιον, a violet, and οσμη, odour, on account of the fine odour of the flowers.)

1. The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.*

2. The pharmacopœial name of the jessamine. See *Jasminum officinale.*

Jasminum officinale. The systematic name of the jessamine-tree. The flowers of this beautiful plant have a very fragrant smell, and a bitter taste. They afford, by distillation, an essential oil, which is much esteemed in Italy to rub paralytic limbs, and in the cure of rheumatic pains.

JASPER. A subspecies of rhomboidal quartz, according to Jameson, who enumerates five kinds: Egyptian, striped, porcelain, common, agate jasper.

JA'TROPHA. (*a, æ.* f. ; most probably from ιατρος, a physician.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.*

Jatropha curcas. The systematic name of a plant, the seeds of which resemble the castor-oil seeds, and which is also called, *Aipima coxera, Aipicoca, Ricinus major, Ricinoides, Pineus purgans, Pinhones indici, Faba cathartica, Nux cathartica, Nux Americana,* and *Nux barbadensis.* The seed or nut is oblong and black, the produce of the *Jatropha—foliis cordatis angulatis*, of Linnæus. It affords a quantity of oil, which is given, in many places, as the castor-oil is in this country, to which it is very nearly allied. The seeds of the *Jatropha multifida* are of an oval and triangular shape, of a pale brown colour, are called purging-nuts, and give out a similar oil.

Jatropha elastica. The juice of this plant affords an elastic gum. See *Caoutchouc.*

Jatropha manihot. This is the plant which affords the Cassada root; called also, *Cassada, Cacavi, Cassave, Cassava, Pain de Madagascar, Ricinus minor, Maniot, Yucca, Manibar, Aipi, Aipima coxera, Aipipoca,* and *Janipha.* The leaves are boiled, and eaten as we do spinach. The root abounds with a milky juice, and every part, when raw, is a fatal poison. It is remarkable that the poisonous quality is destroyed by heat: hence the juice is boiled with meat, pepper, &c. into a wholesome soup, and what remains after expressing the juice is formed into cakes or meal, the principal foot of the inhabitants. This plant, which is a native of three quarters of the world, is one of the most advantageous gifts of Providence, entering into the composition of innumerable preparations of an economical nature.

Cassada roots yield a great quantity of starch, called tapioca, exported in little lumps by the Brazilians, and now well known to us as a diet for sick and weakly persons.

JAUNDICE. See *Icterus.*

JEALOUSY. See *Pathemata animi.*

JEBB, John, was born in 1736. In 1782, he published *Select Cases of Paralysis of the Lower Extremities;* which tend to support the practice of Pott, of applying caustics near the spine. To this work is added, an interesting description of the very rare disease catalepsy.

JECORA'RIA. (From *jecur*, the liver: so named from its supposed efficacy in diseases of the liver.) 1. The name of a plant. See *Marchantia polymorpha.*

2. A name given to a vein in the right hand, because it was usually opened in diseases of the liver.

JE'CUR. (*ur, oris.* or *jecinoris.* neut.) The liver. See *Liver.*

Jecur uterinum. The placenta is, by some,

thus called, from the supposed similitude of its office with that of the liver.

JEJU'NUM. (*um, i.* n.; from *jejunis*, empty.) *Jejunum intestinum.* The second portion of the small intestines, so called because it is mostly found empty. See *Intestine.*

JELLY. See *Gelatine.*

JENITE. See *Lievrite.*

Jerusalem cowslips. See *Pulmonaria.*

Jerusalem oak. See *Chenopodium botrys.*

Jerusalem sage. See *Pulmonaria.*

JESSAMINE. See *Jasminum.*

JESUITA'NUS CORTEX. (From *jesuita*, a jesuit.) A name of the Peruvian bark, because it was first introduced into Europe by Father de Lugo, a jesuit. See *Cinchona.*

JESUI'TICUS CORTEX. See *Cinchona.*

Jesuit's bark. See *Cinchona.*

JET. (So called from the river *Gaza*, in Lesser Asia, from whence it came.) A black bituminous coal, hard and compact, found in great abundance in various parts of France, Sweden, Germany, and Ireland.

Jew's ears. See *Peziza auricula.*

Jew's pitch. See *Bitumen judaicum.*

JOHN'S WORT. See *Hypericum.*

JOINT. See *Articulus.*

Jointed. See *Articulatus.*

Jointed leaf. See *Articulatus.*

JOY. See *Pathemata animi.*

JUDGMENT. The most important of the intellectual faculties. We acquire all our knowledge by this faculty; without it our life would be merely vegetative.

JUDICATO'RIUS. (From *judico*, to discern.) An obsolete term applied to a synocha of four days, because its termination may certainly be foreseen.

JUGAL. (*Jugalis*; from *jugum*, a yoke.) Jugal: appertaining to the cheek or os jugale.

JUGALE OS. (So called from its resemblance; or because it is articulated to the bone of the upper jaw, like a yoke.) *Os malæ. Os zygomaticum.* The cheek-bone. The ossa malarum are the prominent square bones which form the upper part of the cheeks. They are situated close under the eyes, and make part of the orbit. Each of these bones has three surfaces to be considered. One of these is exterior and somewhat convex. The second is superior and concave, serving to form the lower and lateral parts of the orbit. The third, which is posterior, is very unequal and concave, for the lodgment of the lower part of the temporal muscle. Each of these bones may be described as having four processes, formed by their four angles. Two of these may be called *orbitar* processes. The superior one is connected with the orbitar process of the os frontis; and the inferior one with the malar process of the maxillary bone. The third is connected with the temporal process of the sphenoid bone; and the fourth forms a bony arch, by its connection with the zygomatic process of the temporal bone. In infants, these bones are entire and completely ossified.

JU'GLANS. (*ans, andis.* f.; *quasi Jovis glans*, the royal fruit, from its magnitude.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Polyandria.* The walnut tree.

2. The pharmacopœial name of the walnut. See *Juglans regia.*

JUGLANS REGIA. The systematic name of the walnut tree. The tree which bears the walnut is the *Juglans—foliolis ovalibus glabris subserratis subæqualibus*, of Linnæus. It is a native of Persia, but cultivated in this country. The unripe fruit, which has an astringent bitterish taste, and has been long employed as a pickle, is the part which was directed for medicinal use by the London College, on account of its anthelmintic virtues. An extract of the green fruit is the most convenient preparation, as it may be kept for a sufficient length of time, and made agreeable to the stomach of the patient, by mixing it with cinnamon-water.

The *putamen*, or green rind of the walnut, has been celebrated as a powerful anti-venereal remedy, for more than a century and a half; and Petrus Borellus has given directions for a decoction not unlike that which is commonly called the Lisbon diet-drink, in which the walnut, with its green bark, forms a principal ingredient. Ramazzini, whose works were published early in the present century, has likewise informed us that, in his time, the green rind of the walnut was esteemed a good antivenereal remedy in England. This part of the walnut has been much used in decoctions during the last fifty years, both in the green and dried state: it has been greatly recommended by writers on the Continent, as well as by those of our own country; and is, without doubt, a very useful addition to the decoction of the woods. Pearson has employed it during many years, in those cases where pains in the limbs and indurations of the membranes have remained after the venereal disease has been cured by mercury; and he informs us, that he has seldom directed it without manifest advantage.

Brambilla and Girtanner also contend for the antivenereal virtues of the green bark of the walnut: but the result of Pearson's experience will not permit him to add his testimony to theirs. "I have given it," says he, "in as large doses as the stomach could retain, and for as long a time as the strength of the patients, and the nature of their complaints, would permit; but I have uniformly observed, that if they who take it be not previously cured of *lues venerea*, the peculiar symptoms will appear, and proceed in their usual course, in defiance of the powers of this medicine. The *Decoctum Lusitanicum* may be given with great advantage in many of those cutaneous diseases which are attended with aridity of the skin; and I have had some opportunities of observing, that when the putamen of the walnut has been omitted, either intentionally or by accident, the same good effects have not followed the taking of the decoction, as when it contained this ingredient."

JUGULAR. (*Jugularis*; from *jugulum*, the throat.) Belonging to the throat.

JUGULAR VEINS. The veins so called run from the head down the sides of the neck, and are divided, from their situation, into external and internal. The *external*, or *superficial jugular vein*, receives the blood from the frontal, angular, temporal, auricular, sublingual, or ranine, and occipital veins. The *internal*, or *deep-seated jugular vein*, receives the blood from the lateral sinuses of the dura mater, the laryngeal and pharyngeal veins. Both jugulars unite, and form, with the subclavian vein, the superior vena cava, which terminates in the superior part of the right auricle of the heart.

JU'GULUM. (*um, i.* n.; from *jugum*, a yoke: because the yoke is fastened to this part.) The throat, or anterior part of the neck.

JUGUM. (*um, i.* n. Ζυγον.) A yoke. In *Botany*, applied to the leaflets of a compound leaf: thus *bi-juga*, two pairs; *tri-juga*, three pairs, &c.

JUJUBA. (An Arabian word.) Jujube. See *Rhamnus zizyphus*.

JU'JUBE. See *Rhamnus zizyphus*.

JULY-FLOWER. See *Dianthus*.

JUNCKER, GOTTLOB JOHN, was born in 1680, in Hesse. He wrote a *Conspectus of Medicine, Surgery, and Chemistry*; and several academical theses on medical, chirurgical, and philosophical subjects.

JU'NCUS. (*us, i.* m. An old Latin word, *à jungendo*, say the etymologists, from the use of the plants which bear this name in joining or binding things together.) The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia*.

JUNCUS ODORATUS. See *Andropogon*.

JUNIPER. See *Juniperus communis*.

Juniper gum. See *Juniperus communis*.

JUNI'PERUS. (*us, i.* f.; from *juvenis*, young, and *pario*, to bring forth: so called because it produces its young berries while the old ones are ripening.) 1. The name of a genus of plants. Class, *Diœcia*; Order, *Monodelphia*.

2. The pharmacopœial name of the common juniper. See *Juniperus communis*.

JUNIPERUS COMMUNIS. The systematic name of the juniper-tree. *Juniperus—foliis ternis patentibus mucronatis, baccis longioribus*, of Linnæus. Both the tops and berries of this indigenous plant have entered our pharmacopœias; the latter are usually preferred, and are brought chiefly from Holland and Italy. Of their efficacy as a stomachic, carminative, diaphoretic, and diuretic, there are several relations by physicians of great authority; and medical writers have also spoken of the utility of the juniper in nephritic cases, uterine obstructions, scorbutic affections, and some cutaneous diseases. Our pharmacopœias direct the essential oil, and a spirituous distillation of the berries, to be kept in the shops. From this tree is also obtained a concrete resin, which has been called sandarach, or gum-juniper. It exudes in white tears, more transparent than mastich. It is almost totally soluble in alkohol, with which it forms a white varnish that dries speedily. Reduced to powder it is called *pounce*, which prevents ink from sinking into paper from which the exterior coating of size has been scraped away.

JUNIPERUS LYCIA. The systematic name of the plant which affords the true frankincense, or *Olibanum*, and often called *Thus*. Frankincense has received different appellations, according to its different appearances: the single tears are called simply *olibanum*, or *thus*; when two are joined together, *thus masculum*; and when two are very large, *thus femininum*; if several adhere to the bark, *thus corticosum*; the fine powder which rubs off from the tears, *mica thuris*; and the coarser, *manna thuris*. The gum-resin that is so called, is the juice of the *Juniperus—foliis ternis undique imbricatis ovatis obtusis*, and is brought from Turkey and the East Indies; but that which comes from India is less esteemed. It is said to ooze spontaneously from the bark of the tree, appearing in drops, or tears, of a pale yellowish, and sometimes of a reddish colour. Olibanum has a moderately strong and not very agreeable smell, and a bitterish, somewhat pungent taste: in chewing, it sticks to the teeth, becomes white, and renders the saliva milky. Laid on a red-hot iron, it readily catches flame, and burns with a strong diffusive and not unpleasant smell. On trituration with water, the greatest part dissolves into a milky liquor, which, on standing, deposits a portion of resinous matter. The gummy and resinous parts are nearly in equal proportions; and though rectified spirit dissolves less of the olibanum than water, it extracts nearly all its active matter. In ancient times, olibanum seems to have been in great repute in affections of the head and breast, coughs, hæmoptysis, and in various fluxes, both uterine and intestinal; it was also much employed externally. Recourse is now seldom had to this medicine, which is superseded by myrrh, and other articles of the resinous kind. It is, however, esteemed by many as an astringent; and, though not in general use, is considered as a valuable medicine in fluor albus, and debilities of the stomach and intestines: applied externally in the form of plaster, it is said to be corroborant, &c., and with this intention it forms the basis of the *emplastrum thuris*.

JUNIPERUS SABINA. The systematic name of the common or barren savin-tree; called also, *Sabina, Savina, Sabina sterilis*, and *Brathu*. *Juniperus—foliis oppositis erectis decurrentibus, oppositionibus pyxidatis*, of Linnæus. Savin is a native of the south of Europe and the Levant; it has long been cultivated in our gardens, and from producing male and female flowers on separate plants, it was formerly distinguished into the barren and berry-bearing savin. The leaves and tops of this plant have a moderately strong smell of the disagreeable kind, and a hot, bitterish, acrid taste. They give out great part of their active

matter to watery liquors, and the whole to rectified spirit. Distilled with water, they yield a large quantity of essential oil. Decoctions of the leaves, freed from the volatile principle by inspissation to the consistence of an extract, retain a considerable share of their pungency and warmth along with their bitterness, and have some degree of smell, but not resembling that of the plant itself. On inspissating the spirituous tincture, there remains an extract consisting of two distinct substances, of which one is yellow, unctuous, or oily, bitterish, and very pungent; the other black, resinous, less pungent, and sub-astringent. Savin is a powerful and active medicine, and has been long reputed the most efficacious in the materia medica, for producing a determination to the uterus, and thereby proving emmenagogue; it heats and stimulates the whole system very considerably, and is said to promote the fluid secretions. The power which this plant possesses (observes Dr. Woodville) in opening uterine obstructions, is considered to be so great, that we are told it has been frequently employed, and with too much success, for purposes the most infamous and unnatural. It seems probable, however, that its effects in this way have been somewhat overrated, as it is found very frequently to fail as an emmenagogue, though this, in some measure, may be ascribed to the smallness of the dose in which it has been usually prescribed by physicians; for Dr. Cullen observes, "that savin is a very acrid and heating substance, and I have been often, on account of these qualities, prevented from employing it in the quantity necessary to render it emmenagogue. I must own, however, that it shows a more powerful determination to the uterus than any other plant I have employed; but I have been frequently disappointed in this, and its heating qualities always require a great deal of caution." Dr. Home appears to have had very great success with this medicine, for in five cases of amenorrhœa, which occurred at the Royal Infirmary at Edinburgh, four were cured by the sabina, which he gave in powder from a scruple to a drachm twice a day. He says it is well suited to the debile, but improper in plethoric habits, and therefore orders repeated bleedings before its exhibition. Country people give the juice from the leaves and young tops of savin mixed with milk to their children, in order to destroy the worms: it generally operates by stool, and brings them away with it. The leaves, cut small, and given to horses, mixed with their corn, destroy the bots. Externally, savin is recommended as an escharotic to foul ulcers, syphilitic warts, &c. A strong decoction of the plant in lard and wax forms an useful ointment to keep up a constant discharge from blisters, &c. See *Ceratum sabinæ.*

JU'PITER. The ancient chemical name of tin, because supposed under the government of that planet.

JURIN, James, was, during several years, an active member and secretary of the Royal Society, and, at his death in 1750, President of the College of Physicians. He wrote seventeen dissertations in the Philosophical Transactions, in which mathematical science was applied with considerable acuteness to physiological subjects.

JUSTI'CIA. (*a, æ.* f.; so named in honour of Mr. Justice, who published the British Gardener's Director.) The name of a genus of plants. Class, *Diandria;* Order, *Monogynia.*

JU'VANS. (From *juvo,* to assist.) Whatever assists in relieving a disease.

JUVENTUS. See *Age.*

Juxtangi'na. (From *juxta,* near, and *angina,* a quinsy.) A disease resembling a quinsy.

K.

KAATH. See *Acacia catechu.*

KÆMPFER, Engelbert, was born in 1651, in Westphalia. He published a great work, entitled *Amœnitates Exoticæ,* esteemed for its botanical information.

KÆMPFE'RIA. (*a, æ.* f.; named after Kæmpfer, the Westphalian naturalist.) The name of a genus of plants. Class, *Monandria;* Order, *Monogynia.*

Kæmpferia galanga. The plant which affords the greater galangal root.

Kæmpferia rotunda. The systematic name of the plant which affords the officinal zedoary. *Zedoaria. Kæmpferia—foliis lanceolatis petiolatis,* of Linnæus. The roots of this plant are brought to us in long pieces, *zedoaria longa,* about the thickness of the little finger, two or three inches in length, bent, rough, and angular; or in roundish pieces, *zedoaria rotunda,* about an inch in diameter, of an ash colour on the outside, and white within. They have an agreeable camphoraceous smell, and a bitterish aromatic taste. Though formerly much esteemed against rheumatic affections, they are at present thought to possess very little medicinal powers, although they had a place in the confectio aromatica of the London Pharmacopœia.

KA'JEPUT OLEUM. See *Melaleuca.*

KA'LI. (An Arabian word; indeclinable.) The vegetable alkali. See *Potash.*

KALI ACETATUM. See *Potassæ acetas.*

KALI AERATUM. See *Potassæ carbonas.*

KALI ARSENICATUM. See *Potassæ arsenias*, and *Arsenic.*

KALI CITRATUM. See *Potassæ citras.*

KALI PRÆPARATUM. See *Potassæ subcarbonas.*

KALI PURUM. See *Potassæ fusa.*

KALI SULPHURATUM. See *Sulphuretum potassæ.*

KALI TARTARIZATUM. See *Potassæ tartras.*

KALI VITRIOLATUM. See *Potassæ sulphas.*

KARPHOLITE. A yellow mineral which occurs in thin prismatic concretions.

KEEL. See *Carina.*

Keeled. See *Carinatus.*

KEILL, JAMES, was born in Scotland, 1673. In 1708, he published "An Account of Animal Secretion, the Quantity of Blood in the Human Body, and Muscular Motion:" to which, in a second edition, he added an Essay on the Force of the Heart. This engaged him in a controversy with Dr. Jurin, which was carried on in the Philosophical Transactions (Dr. Keill being then a member of the Royal Society) till the period of his death, in 1719.

KEI'RI. See *Cheiranthus cheiri.*

KELP. Incinerated sea-weed.

KENEANGEIA. (*a, æ.* f.; from κενος, empty, and αγγειον, a vessel.) *Ceneangea.* 1. A state of inaction of the blood or other vessels.

2. A deficiency of blood in the vessels.

KERATE. Horny.

KERATO-PHARYNGÆUS. (From κερας, a horn, and φαρυγξ, the pharynx.) A muscle so named from its shape, and insertion in the pharynx.

KE'RMES. (*Kermes. Chermah*, Arabian.) *Granum tinctorium. Coccus baphica.* Round reddish grains, about the size of peas, found in Spain, Italy, and the south of France, adhering to the branches of the scarlet oak. They are the nidus of a minute red animalcule, called *Coccus quercus ilicis.* The *confectio alkermes*, now obsolete, was prepared with these, which possess corroborant and astringent virtues.

KERMES MINERALIS. A preparation of antimony, so termed from its resemblance in colour to the insect of that name. It is now disused in medicine, and gives place to the other preparations of antimony. See *Hydrosulphuretum stibii rubrum.*

KERNEL WORT. See *Scrofularia.*

KE'RVA. See *Ricinus communis.*

KETCHUP. The prepared liquor of the mushroom, made by sprinkling salt on that vegetable, and collecting the fluid which escapes.

KEYSER'S PILLS. A once celebrated mercurial medicine, the method of preparing which was purchased by the French government, and has since been published by Richard. The hydrargyrus acetatus is considered as an adequate substitute for the more elaborate form of Keyser. Richard concludes his account of Keyser's pills with observing, that he considers it to be, without exception, the most effectual remedy for the venereal disease hitherto discovered. But further trials of this remedy do not justify the sanguine accounts of its properties; though it may sometimes succeed when some of the other mercurial preparations have failed.

KIBES. A name for chilblains.

KID. See *Capra hircus.*

KIDNEY. (*Ren, enis.* m.) An abdominal viscus, shaped like a kidney-bean, that secretes the urine. There are two kidneys: one is situated in each lumbar region, near the first lumbar vertebra, behind the peritonæum. This organ is composed of three substances: a cortical, which is external, and very vascular; a tubulous, which consists of small tubes; and a papillous substance, which is the innermost. The kidneys are generally surrounded with more or less adipose membrane, and they have also a proper membrane, *membrana propria*, which is closely accreted to the cortical substance. The renal arteries, called also emulgents, proceed from the aorta. The veins evacuate their blood into the ascending cava. The absorbents accompany the blood-vessels, and terminate in the thoracic duct. The nerves of the kidneys are branches of the eighth pair and great intercostal. The excretory duct of this viscus is called the *ureter.* At the middle of the kidney, where the blood-vessels enter it, is a large membraneous bag, called the pelvis, which diminishes like a funnel, and forms a long canal, the ureter, that conveys the urine from the kidney to the bladder, which it perforates obliquely.

Kidney, inflammation of. See *Nephritis.*

Kidney-shaped. See *Reniformis.*

KIDRIA TERRESTRIS. Barbadoes tar.

KIFFEKILL. See *Meerschaum.*

KIKEKUNEMALO. A pure resin, very similar to copal, but of a more beautiful whiteness and transparency. It is brought from America, where it is said to be used medicinally, in the cure of hysteria, tetanus, &c. It forms the most beautiful of all varnishes.

KI'KI. (*Kike*, Arabian.) See *Ricinus.*

KI'NA KINA. See *Cinchona.*

KINATE. *Kinas.* A compound of the kinic acid, with a salifiable base.

KINCOUGH. (This should be written *Kind-cough*, which is derived from the Saxon or German term *kind*, "a child," as being common to this age.) See *Pertussis.*

KINIC. (*Kinicus:* so named from *kinia*, a French name for cinchona.) The name of an acid obtained from the cinchona.

KINIC ACID. *Acidum kinicum.* A peculiar acid found in all the species of the genus cinchona, and therefore called also cinchonic acid. Let a watery extract from hot infusions of the bark powder be made. Alkohol removes the resinous part of this extract, and leaves a viscid

residue, of a brown colour, which has hardly any bitter taste, and which consists of kinate of lime and a mucilaginous matter. This residue is dissolved in water, the liquor is filtered, and left to spontaneous evaporation in a warm place. It becomes thick like syrup, and then deposits by degrees crystalline plates, sometimes hexaëdral, sometimes rhomboidal, sometimes square, and always coloured slightly of a reddish brown. These plates of kinate of lime must be purified by a second crystallisation. They are then dissolved in ten or twelve times their weight of water, and very dilute aqueous oxalic acid is poured into the solution, till no more precipitate is formed. By filtration, the oxalate of lime is separated, and the kinic acid, being concentrated by spontaneous evaporation, yields regular crystals. It is decomposed by heat. While it forms a soluble salt with lime, it does not precipitate lead or silver from their solutions. These are characters sufficiently distinctive. The kinates are scarcely known; that of lime constitutes seven per cent. of *cinchona*.

Kinki'na. See *Cinchona*.

KINO. (An Indian word.) *Gummi gambiense. Gummi rubrum adstringens gambiense.* The tree from which this resin is obtained, though not botanically ascertained, is known to grow on the banks of the river Gambia, in Africa. On wounding its bark, the fluid kino immediately issues drop by drop, and, by the heat of the sun, is formed into hard masses. It is in appearance very like the resin called *Sanguis draconis;* much redder, more firm, resinous, and astringent than catechu. It is now in common use, and is one of the most efficacious vegetable astringents or styptics in the materia medica. Its dose is from twenty to thirty grains.

KNEE-HOLLY. See *Ruscus*.

Knee-jointed. See *Geniculatus*.

KNEE-PAN. See *Patella*.

KNOT. See *Nodus*.

KOLLYRITE. A light greasy mineral of a white colour, which adheres to the tongue.

Kolto. (A Polonese word.) The plica polonica, or plaited hair.

KOUMIS. A vinous liquid which the Tartars make by fermenting mares' milk. Something similar is prepared in the Orkneys and Shetland.

KOUPHONE. (*Kouphonus;* from κουφος, *levis.*) Light.

KRAMERIA. (*a, æ.* f.; so named in commemoration of two German botanists, who flourished about the middle of the last century.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.*

Krameria triandria. The systematic name of the tree, the root of which is called *rhatania*, a substance which has been long known to the manufacturers of port wine; it is the production of Peru, and was long thought to be the root of the cinchona cordifolia. It is described as externally resembling the root of the rubia tinctorum to the taste, being aromatic, bitter, and very astringent; its infusion or decoction turns black with sulphate of iron, and precipitates tannin. The principal virtues appear to reside in the cortical part of the root, which is thick and resinous. An opinion prevails that the substance sold in the shops under the name of foreign extract of bark is made from this root.

It is well known that the medical virtues of this root are powerfully tonic. In debility of the digestive organs, in chronic rheumatism, fluor albus, and in intermittent fevers, it has been employed with good effect. While given in doses similar to cinchona, it has the advantage of being only one third the price of that substance.

KRAMERIC. (*Kramericus;* from *krameria*, the name of the plant from which it is obtained.) The name of an acid obtained by Peschier from the root of the *Krameria triandria.*

Kyanite. See *Cyanite*.

Kyna'nche. See *Cynanche*.

L.

LA'BDANUM. (*um, i.* n.; from *ladon*, Arabian.) See *Cistus creticus*.

LABELLUM. (*um, i.* n.; a diminutive of *labrum.*) A little lip. Applied, in *Botany*, to the barba, or inferior lip of ringent and personate plants. See *Corolla*.

LABIATUS. Labiate: lipped; having lips.

LA'BIUM. (*um, i.* n.; απο του λαβειν.)

1. In *Anatomy*, the lip of animals.
2. In *Botany*, applied to corols of plants, which are termed *unilabiate, bilabiate,* &c.; and from their position in certain flowers, *superior, inferior,* &c.

Labium leporinum. See *Hare-lip*.

LABORATO'RIUM. (*um, i.* n.; from *laboro*, to labour.) A place properly fitted up for the performance of chemical operations.

LABOUR. See *Parturitio*.

Labour, premature. See *Abortion*.

LABRADOR STONE. See *Felspar*.

LA'BYRINTH. (*Labyrinthus, i.* m.

Λάβυρινθος, ἀ λαβεῖν.) In *Anatomy*, that part of the internal ear which is behind the cavity of the tympanum; it is constituted by the cochlea vestibulum, and semicircular canals. See *Ear*.

LAC. (*Lac, tis.* n.) 1. Milk. See *Milk*.

2. The name of a vegetable substance. See *Lacca*.

Lac ammoniaci. See *Mistura ammoniaci*.

Lac amygdalæ. See *Mistura amygdalæ*.

Lac asininum. See *Milk, ass*.

Lac assafœtidæ. See *Mistura assafœtidæ*.

Lac bubulum. See *Milk, cow*.

Lac capræ. See *Milk, goat*.

Lac caprinum. See *Milk, goat*.

Lac equinum. See *Milk, mare*.

Lac humanum. See *Milk, human*.

Lac pressum. The curd of milk.

Lac sulphuris. Ses *Sulphur præcipitatum*.

Lac vaccinum. See *Milk, cow*.

Lac villum. See *Milk, ewe*.

LA'CCA. (*a, æ.* f. ; from *lakah,* Arabian.) A concrete brittle substance, of a dark red colour, brought from the East Indies, incrustated on the twigs of the *Croton lacciferum—foliis ovatis tomentosis serrulatis petiolatis, calycibus tomentosis*, of Linnæus, where it is deposited by a small insect, at present not scientifically known. In this state it is called *stick-lac*. It is found in very great quantities on the uncultivated mountains on both sides the Ganges: and is of great use to the natives in various works of art, as varnish, painting, dyeing, &c. When the resinous matter is broken off the branches or sticks into small pieces or grains, it is termed *seed-lac*, and when melted and formed into flat plates, *shell-lac*. This substance is chiefly employed for making sealing-wax. A tincture of it is recommended as an antiscorbutic to wash the gums.

LACCIC. (*Laccicus:* so named from *lacca*, the substance in which it exists.) The name of an acid.

Laccic acid. *Acidum laccicum*. A peculiar acid, of a wine yellow colour, obtained from stick-lac.

LACERUS. Rugged.

LA'CHRYMA. (*a, æ.* f. Δάκρυμα, a tear.) A tear. See *Tear*.

Lachryma abiegna. See *Terebinthina argentoratensis*.

LACHRYMAL. *Lachrymalis*. Of or belonging to the tears, or parts near where they are secreted; as lachrymal bone, duct, gland, &c.

Lachrymal bone. See *Unguis os*.

Lachrymal caruncle. See *Caruncula lachrymalis*.

Lachrymal duct. *Ductus lachrymalis*. The excretory duct of the lachrymal gland, which opens upon the internal substance of the upper eyelid.

Lachrymal gland. *Glandula lachrymalis*. A glomerate gland, situated above the exter nal angle of the orbit in a peculiar depression of the frontal bone. It secretes the tears, and conveys them to the eye by its excretory ducts, which are six or eight in number.

Lachrymal nerve. (*Nervus lachrymalis.*) A branch of the fifth pair of nerves, which is divided into several branches: the first is called the orbitary branch; this is divided into three more, the third of which is the *lachrymal branch;* it goes chiefly to the lachrymal gland.

LACINIA. The segment of a fringed leaf or petal.

LACINIATUS. (From *lacinia*, a fringe.) Laciniate: jagged, fringe-like; cut into numerous irregular portions: applied to leaves, petals, &c.; as the leaves of the *Ranunculus parviflorus*, and *Geranium columbinum*, the petals of the *Reseda*. See *Erosus*.

Laco'nicum. (Because they were much used by the people of Laconia.) A stove or sweating-room.

Lacquer. A solution of lac in alkohol.

LACTATE. (*Lactas, atis.* f.; so named from its acid base.) A definite compound, formed by the union of the acid of sour whey, or lactic acid, with salifiable bases; thus lactate of potash, &c.

LACTATION. (*Lactatio, onis.* f.; from *lacteo*, to suckle.) The giving suck.

LACTEAL. (*Lacteus;* from *lac*, milk: because the fluid they absorb looks like milk.)

1. In *Anatomy*, this term is applied to the absorbents of the mesentery, *vasa lactea*, which originate in the small intestines, and convey the chyle from thence to the thoracic duct. They are very tender and transparent vessels, possessed of an infinite number of valves, which, when distended with chyle, a milky or lacteal fluid, give them a knotty appearance. They arise from the internal surface of the villous coat of the small intestine, perforate the other coats, and form a kind of network, whilst the greater number unite one with another between the muscular and external coats. From thence they proceed between the laminæ of the mesentery to the conglobate glands. In their course they constitute the greater part of the gland through which they pass, being distributed through them several times, and curled in various directions. The lacteals having passed these glands, go to others, and at length seek those nearest the mesentery. From these glands, which are only four or five, or perhaps more, the lacteals pass out and ascend with the mesenteric artery, and unite with the lymphatics of the lower extremities, and those of the abdominal viscera, and then form a common trunk, the *thoracic duct*, which, in some subjects, is dilated at its origin, forming the *receptaculum chyli*. See *Nutrition*.

2. Milky.

3. Applied to designate a milk-white colour. See *Colour*.

LACTESCENS. (From *lac*, milk.) Lactescent: milky; abounding with milk, or a milk-like fluid.

LACTIC. (*Lacticus;* from *lac*, milk.) Of or belonging to milk.

Lactic acid. Acid of milk. By evaporating sour whey to one eighth, filtering, pre-

cipitating with lime-water, and separating the lime by oxalic acid, Scheele obtained an aqueous solution of what he supposed to be a peculiar acid, which has accordingly been termed the *lactic*. Purified, it has a brown-yellow colour, and a sharp sour taste, which is much weakened by diluting it with water. It is without smell in the cold, but emits, when heated, a sharp sour smell.

La'ctica. The Arabian name for the fever which the Greeks call *Typhus*.

LACTI'FUGA. (*a, æ.* f.; from *lac*, milk, and *fugo*, to drive away.) A medicine or other means which dispels milk.

LACTU'CA. (*a, æ.* f.; from *lac*, milk: named from the milky juice which exudes upon its being wounded.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*. The lettuce.

2. The pharmacopœial name of the garden-lettuce, the *Lactuca sativa*.

Lactuca graveolens. See *Lactuca virosa*.

Lactuca sativa. The systematic name of the lettuce. *Eunuchium*. It is esteemed as a wholesome aperient bitter anodyne, easy of digestion, but affording no nutriment. Lettuces appear to agree better with hot, bilious, melancholic temperaments, than the phlegmatic. The seeds possess a quantity of oily substance, which, triturated with water, forms an emulsion esteemed by some in ardor urinæ, and some diseases of the urinary passages. Lettuce was famous for the cure of the Emperor Augustus, and formed the opiate of Galen in his old age; a proof that, in the warmer climates, it must acquire an exaltation of its virtues above what is met with in this country.

Lactuca scariola. *Lactuca sylvestris. Scariola. Scariola gallorum*. This species possesses a stronger degree of bitterness than the *Lactuca sativa*, and is said to be more aperient and laxative. It is nearly similar, in virtue as in taste, to endive unblanched.

Lactuca sylvestris. See *Lactuca scariola*.

Lactuca virosa. The systematic name of the opium, or strong-scented lettuce. *Lactuca graveolens. Lactuca—foliis horizontalibus carino aculeatis dentatis*, of Linnæus. A common plant in our hedges and ditches. It has a strong ungrateful smell, resembling that of opium, and a bitterish acrid taste: it abounds with a milky juice, in which its sensible qualities seem to reside, and which appears to have been noticed by Dioscorides, who describes the odour and taste of the juice as nearly agreeing with that of the white poppy. Its effects are also said, according to Haller, to be powerfully narcotic. Dr. Collin, at Vienna, first brought the lactuca virosa into medical repute; and its character has lately induced the College of Physicians at Edinburgh to insert it in the catalogue of the materia medica. More than twenty-four cases of dropsy are said, by Collin, to have been successfully treated by employing an extract prepared from the expressed juice of this plant, which is stated not only to be powerfully diuretic, but, by attenuating the viscid humours, to promote all the secretions, and to remove visceral obstructions. In the more simple cases, proceeding from debility, the extract, in doses of eighteen to thirty grains a day, proved sufficient to accomplish a cure; but when the disease was inveterate, and accompanied with visceral obstructions, the quantity of extract was increased to three drachms; nor did larger doses, though they excited nausea, ever produce any other bad effect; and the patients continued so strong under the use of this remedy, that it was seldom necessary to employ any tonic medicines. Though Dr. Collin began his experiments with the lactuca at the Pazman hospital, at the time he was trying the arnica, 1771, yet very few physicians, even at Vienna, have since adopted the use of this plant. Plenciz, indeed, has published a solitary instance of its efficacy, while Quarin informs us that he never experienced any good effect from its use; alleging, that those who were desirous of supporting its character, mixed it with a quantity of extractum scillæ. Under these circumstances we shall only say, that the recommendation of this medicine by Dr. Collin will be scarcely thought sufficient to establish its use in England.

LACTUCE'LLA. (*a, æ.* f.; a diminutive of *lactuca*, the lettuce: so named from its milky juice.) The sow-thistle. The *Sonchus arvensis*.

Lactuci'mina. The thrush.

LACTU'MEN. (From *lac*, milk: so named because it is covered with a white crust.) 1. The achor, or scald head.

2. (From *lacteo*, to suckle: so called because they happen chiefly to children while at the breast.) A little crusty scab on the skin, affecting children at the breast.

LACU'NA. (*a, æ.* f.; from *lacus*, a channel.) 1. In *Anatomy*, the mouth or opening of the excretory duct of a muciparous gland, as those of the urethra, and other parts.

2. In *Botany*, the opening of a glandiform body; a puncture like an opening on surfaces of stems or leaves.

LACUNOSUS. Dotted; pitted. A puncture-like appearance: applied to a leaf when the surface lies in hollows between the veins.

LA'DANUM. (*um, i.* n.; from *ladon*, Arab.) See *Cistus creticus*.

Ladies' bedstraw. See *Galium*.

Ladies' mantle. See *Alchemilla*.

Ladies' smock. See *Cardamine*.

LAENNEC, René Theophile Hyacinthe, born in Quimper, in Lower Brittany, in 1781. He was for a short time an assistant in the army, and settled in Paris in 1800, where he soon distinguished himself, by his great assiduity at the hospitals, as a most attentive and talented physician. The *Journal de Médecine* contains several papers, as does the *Dictionnaire des Sciences Médicale*, on in-

flammation, encephaloid cancer, melanosis, and other subjects of morbid anatomy: but his accurate and multiplied researches on diseases of the chest are published in an octavo volume, in which he advocates, and seems to have profited very much by, *auscultation*, as the great assistant in distinguishing latent diseases in that part of the body. See *Auscultation*, and *Avenbrugger*. He fell a victim to his assiduity, by phthisis, in 1826.

LÆTI'FICANS. (From *lætifico*, to make glad.) This term hath been applied to many compositions under the intention of cordials; but both the medicines and distinction are now quite disused.

LÆVIS. Smooth and even; level. Applied, in *Anatomy*, *Pathology*, and *Natural History*, to membranes, bones, &c.; and is opposed to all roughness and inequality whatever. See *Even*.

LÆVITAS. (*as*, *atis*. f.; smoothness.) A looseness: applied to the bowels.

LÆVITAS INTESTINORUM. An old name of the lientery. See *Diarrhœa*.

LA'GAROS. (Λαγαρος, lax: so named from its comparative laxity.) The right ventricle of the heart.

LAGENÆFORMIS. (From λαγηνον, a flask or bottle, and ειδος, likeness.) Lageneform, or bottle-shaped. Applied to the gourd; as in *Cucurbita lagenaria*.

LAGNESIS. (From λαγνης, libidinous.) Lust.

LAGOCHEILUS. (*us*, *i*. m.; from λαγωος, a hare, and χειλος, a lip.) Hare-lip.

LAGOPHTHA'LMIA. (*a*, *æ*. f.; from λαγωος, a hare, and οφθαλμος, an eye: because it is believed that hares sleep with their eyes open.) *Lagophthalmos*. The hare's eye. A disease in which the eye cannot be shut. It is either connate or symptomatic of paralysis, or some disease causing a protrusion or enlargement of the eye.

LAGOPO'DIUM. (*um*, *ii*. n.; from λαγωος, a hare, and πους, a foot: so called because it has narrow hairy leaves, like the foot of a hare.) The herb hare's-foot trefoil; the *Plantago media* of Linnæus.

LAGOPUS. (*us*, *i*. m.; from λαγωος, a hare, and πυς, a foot.) Hare's foot. Applied, in *Botany*, to several plants, from the resemblance of the flower or leaves; in *Zoology*, to the fox and some species of dog; and, in *Ornithology*, to the grouse genus.

LAGOPUS ALPINUS. The ptarmigan. This is more rare than the grouse, and esteemed as a great delicacy.

LAGOPUS SCOTICUS. The grouse. The flesh of this bird, when in season and tender, is much esteemed, and is easy of digestion.

LAGO'STOMA. (*a*, *atis*. n.; from λαγωος, a hare, and ϛομα, the mouth: so called because the upper lip is divided in the middle like that of a hare.) See *Hare-lip*.

LAKEWEED. See *Polygonum*.

LALLANS. See *Lallatio*.

LALLATIO. That species of vicious pronunciation in which the letter *l* is rendered unduly liquid, or substituted for an *r*. The Greeks denominated it *lambdacismus*, from the letter λ, *lambda*. See *Psellismus*.

LA'MAC. Gum-arabic.

LAMB. See *Ovis aries*.

LAMBDACI'SMUS. A defect in speech, which consists in an inability to pronounce certain consonants; or that stammering or difficulty of speech when the letter *l* is pronounced too liquid, and often in the place of *r*. See *Psellismus lallans*.

LAMBDOIDAL. (*Lambdoidalis*; from Λ, and ειδος, resemblance, because it is shaped like the letter Λ.) Belonging to the suture so called.

LAMBDOIDAL SUTURE. *Sutura lambdoidalis*. The suture that unites the occipital bone to the two parietal bones.

LAMBITIVUM. (*um*, *i*. n.; from *lambo*, to lick up.) A linctus or medicine to be licked up.

LAME'LLA. (*a*, *æ*. f.; diminutive of *lamina*, a plate of metal.) 1. A thin plate of metal.

2. The parallel gill or plate in the inferior surface of the agaric family of plants only.

LA'MINA. (*a*, *æ*. f.; from ελαω, to beat off.) I. In *Anatomy*, 1. A bone, or membrane, or any substance resembling a thin plate of metal.

2. The lap of the ear.

II. In *Botany*, the border of the corol of a polypetalous flower, which is distinguished into, *unguis*, the claw, and *lamina*, the border.

LAMINABILITY. *Laminabilitas*. A property possessed by some bodies of being extended in dimensions by a gradually applied pressure. See *Ductility*.

LAMINATED. In general use, and applied to parts which are composed of thin laminæ that lie close and flat one upon another.

LA'MIUM. (*um*, *ii*. n.; from the name of a mountain of Ionia, where it grew; or from *lama*, a ditch, because it usually grows about ditches and neglected places.) The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*. The nettle.

LAMIUM ALBUM. *Urtica mortica*. *Archangelica*. *Galeobdolon*. *Stachys fœtida*. *Urtica iners magna fœtidissima*. Dead nettle. White archangel nettle. Uterine hæmorrhages and fluor albus are said to be relieved by infusions of this plant, from whose sensible qualities very little benefit can be expected.

LAMP-BLACK. See *Charcoal*.

LAMPERN. See *Petromyzon branchialis*.

LAMPIC. (*Lampicus*: from λαμπω, to shine.) Shining: applied to an acid obtained by burning æther.

LAMPIC ACID. *Acidum lampicum*. The name of an acid obtained from the slow combustion of æther.

LAMPREY. See *Petromyzon branchialis*.

LA'MPSANA. See *Lapsana*.

LANA. (*a*, *æ*. f.) Wool. In *Botany*, a species of hairy pubescence, consisting of

white, long, somewhat crisp hair, like wool. It is applied to stems, leaves, seeds, &c.

Lana philosophica. The snowy flakes of white oxide which rise and float in the air from the combustion of zinc.

LANATUS. Woolly: applied to the stems, leaves, seed, &c. of plants. The *Verbascum thapsus*, is a good example of the *caulis lanatus*; the *Stachys lanata* of the leaves; and the *Gossypium* of the seed.

LANCEOLATUS. Lanceolate: lance or spear shaped. Applied to leaves, petals, seeds, &c. of a narrow oblong form, tapering towards each end; as the *leaves* in *Plantago lanceolata*, and *petals* of *Narcissus minor*, and *seeds* of the *Fraxinus*.

LANCE'TTA. (*a, æ.* f.; diminutive of *lancea*, a spear.) A lancet. An instrument used for bleeding and other purposes.

LANCISI, John Maria, was born at Rome in 1654. His zeal for the advancement of medicine was extreme and unceasing. He collected a library of above 20,000 volumes, which he devoted to the use of the public, and particularly of medical students: it was opened four years before his death. He left a considerable number of works, several of which were printed; others remain in manuscript in that library. His more important publications are, a treatise *De Subitaneis Mortibus*, *The Anatomical Plates of Eustachius*, with a preface and notes, in folio; and a dissertation, *De Noxiis Paludum Effluviis*, referring intermittents to the marsh miasmata, printed in 1717. After his death, a treatise *De Motu Cordis et Aneurysmatibus*, and a collection of cases from his manuscript, were given to the public.

LANGRISH, Browne. He died in London in 1759. His publications are, *A New Essay on Muscular Motion, &c.*; *Modern Theory of Physic*; *Physical Experiments upon Brutes*; and *Croonian Lectures on Muscular Motion*.

LANGUOR. An indisposition to exertion, attended mostly with a weariness and fainting. A symptom of fevers, and many diseases at their commencement.

LANUGO. (*o, inis.* f.) Soft wool or down.

Lao'nica curatio. A method of curing the gout, by evaporating the morbid matter by topical applications.

Lapa'cticus. (From λαπαζω, to evacuate.) A purgative.

LA'PARA. (*a, æ.* f.; from λαπαζω, to empty: so named from its concave and empty appearance.) The flank.

LAPAROCE'LE. (*e, es.* f.; from λαπαρα, the flank, and κηλη, a rupture.) A rupture through the side of the belly.

LA'PATHUM. (*um, i.* n.; from λαπαζω, to evacuate: so named because it purges gently.) The dock. See *Rumex*.

Lapathum acetosum. See *Rumex*.

Lapathum acutum. See *Rumex acutus*.

Lapathum aquaticum. See *Rumex*.

LAPIDE'LLUM. (From *lapis*, a stone.) *Lapidellus*. The name of a kind of spoon, formerly used to take out small stones and fragments from the bladder.

LAPIDEUS. Stony: applied very generally in all departments of science.

La'pides cancrorum. See *Cancer*.

Lap'illi cancrorum. See *Cancer*.

LAPILLOUS. Stony.

LA'PIS. (*is, idis.* m.; of uncertain derivation.) A stone. See *Calculus*.

Lapis ageratus. See *Ageratus*.

Lapis bezoar. See *Bezoar*.

Lapis cæruleus. See *Lapis lazuli*.

Lapis calaminaris. See *Calamine*.

Lapis calcareus. A carbonate of lime.

Lapis cyanus. See *Lapis lazuli*.

Lapis hæmatites. See *Hæmatites*.

Lapis hibernicus. Irish slate; called also, *Tegula hibernica*, *Ardesia hibernica*, and *Hardesia*. A kind of slate, or very hard stone, found in different parts of Ireland, in a mass of a bluish black colour, which stains the hands. When dried and powdered, it is pale, or of a whitish blue, and, by keeping, grows black. In the fire it yields a sulphureous gas, and acquires a pale red colour, with additional hardness. It is occasionally powdered by the common people, and taken in spruce beer, against inward bruises.

Lapis hystricis. See *Bezoar hystricis*.

Lapis infernalis. See *Potassa fusa*.

Lapis lazuli. *Lapis cyanus*. Azure stone. It was formerly exhibited as a purgative and vomit, and given in epilepsy.

Lapis malacensis. See *Bezoar*.

Lapis ollaris. Potstone.

Lapis philosophorum. This stone, the greatest object of alchemy, is a long-sought-for preparation, which, when found, is to transmute or exalt impurer metals into gold and silver.

Lapis porcinus. See *Bezoar hystricis*.

Lapis simiæ. See *Bezoar simiæ*.

LAPPA. (*a, æ.* f.; απο τȣ λαβειν, from its seizing the garments of passengers.) A bur or clot-bur. See *Arctium lappa*.

Lappa major. See *Arctium lappa*.

LA'PSANA. (*a, æ.* f. λαψανη; from *Lampsacus*, the town near which it flourished; or from λαπαζω, to evacuate; because it was said to relax the bowels.) The name of a genus of plants. Class, *Syngenesia*; Order, *Polygamia æqualis*.

Lapsana communis. *Lampsana*. *Napium*. *Papillaris herba*. Dock-cresses. Nipple-wort. This plant is a lactescent bitter, and nearly similar in virtues to the cichory, dandelion, and endive. It has been employed chiefly for external purposes, against wounds and ulcerations, whence the name of nipple-wort and papillaris.

LA'QUEUS. (*us, i.* m.; *à laqueo.*) A noose or snare: applied to a disease. See *Laqueus gutturis*.

Laqueus gutturis. A malignant inflammation of the tonsils, in which the patient appears as if he were suffocated with a noose.

La'rbason. Antimony.

LARCH. See *Pinus larix*.

LARD. Hog's fat melted down. See *Adeps suilla*.

LARK. See *Alanda*.

LARVALIS. (From *larva*, a particular state of insects.) Larval: pertaining to larva, and applied to a disease of the skin; as *porrigo larvales*.

LARYNGISMUS. (*us, i.* m.; from *larynx*, the windpipe.) Appertaining to the windpipe.

LARYNGITIS. (*is, idis.* f.; from *larynx*, the part affected, and *itis*, which imports inflammation.) An inflammation of the larynx; that is, of the membrane which lines the larynx, or the cellular tissue connecting it to the parts beneath. It mostly forms a part of croup, or some other form of bronchitis, having all its characters; but occasionally the inflammation is confined to the larynx. The disease makes its approach with the common symptoms of inflammatory fever; the voice immediately becomes hoarse and indistinct, the breathing laborious, with a painful sense of constriction in the throat. The fauces are red and inflamed, swollen and turgid: the face and eyes partake of the swelling, as in cases of threatened strangulation. The symptomatic fever is strong; the heat great; the pulse frequent and hard; there is great difficulty in swallowing, and great distress is caused by it. An examination of the throat, externally, makes us acquainted with its seat: the larynx is very painful to the touch; and a little pressure here, like an attempt to swallow, is productive of spasms, threatening the patient with instant death from suffocation, and causing him to pant for air. This disease attacks adults. It is distinguished from croup by a perpetual and voluntary hawking, rather than a forcible and involuntary cough, as though to clear the passage by expectoration. It is also distinguished from it by the nature of the expuition, which is a viscid mucus rather than a coagulable and membrane-like exudation. The two diseases differ also in their proximate causes. Laryngitis consists in a suppurative inflammation of the membrane of the larynx, and the cellular tissue which connects it to the parts beneath; while croup or bronchitis is a peculiar inflammation of the trachea, and perhaps larynx, extending through the bronchia, and exciting on their internal surface a concrete membrane-like material. Laryngitis, as now described, is an extremely acute disease, and destroys by suffocation in a few hours, or a day or two, unless promptly and actively opposed, and even when the attempt to cure is so conducted under the most experienced practitioners. It killed the late Dr. Pitcairn in a short time. In Dr. Hooper's museum is the larynx of a soldier: under the membrane which covers the thyroid cartilage, and lines the larynx, is an abscess the size of a hazel-nut, which closed the passage. He was under arms at six of the evening, and dead the following night.

In the treatment of this disease, the most active remedies are to be promptly used:— blood-letting, generally and locally, and blistering, are to be immediately flown to; and blood must be taken from the arm, *usque ad deliquium*, and repeated as the judgment and experience of the practitioner may justify and direct. The submuriate of mercury, in full doses, should be followed by strong infusions of senna with salts whilst the patient can swallow.

If, notwithstanding the judicious enforcement of these means, the symptoms are still urgent, tracheotomy must be performed, and iced lotions kept about the larynx.

Laryngitis often exists in a chronic form. This is a disease that affords a very different state of things: the voice is hoarse, the swallowing always a little painful, and pressure on the larynx gives pain. It is common to coachmen, and those who drink drams. It requires demulcent gargles, mercurial alteratives, leeches, and blistering, with great attention to diet and the interdiction of spirits.

LARYNGOPHONISM. (*Laryngophonismus, i.* m.; from λαρυγξ, the larynx, and φωνη, the voice: so called because the voice is heard within the larynx.) The sound of the voice within the windpipe or larynx.

LARYNGOTOMY. (*Laryngotomia, æ.* f.; from λαρυγξ, the larynx, and τεμνω, to cut.) See *Bronchotomy*.

LARYNX. (*x, gis.* f.; a Greek primitive.) A cartilaginous cavity, situated behind the tongue, in the anterior part of the fauces, and lined with an exquisitely sensible membrane. It is composed of the annular or cricoid cartilage, the scutiform or thyroid, the epiglottis, and two arytænoid cartilages. The superior opening of the larynx is called the *glottis*. The *laryngeal arteries* are branches of the external carotids. The *laryngeal veins* evacuate their blood into the external jugulars. The nerves of the larynx are from the eighth pair. The use of the larynx is to constitute the organ of voice, and to serve also for respiration.

LASCI'VUS. (From *lacio*, to ensnare; upon account of its irregular motions.)

1. Lascivious.
2. Used by Paracelsus for chorea.

LA'SER. (*er, eris.* n.; a term used by the Cyrenians.) The herb laser-wort, or assafœtida.

LASERPI'TIUM. (*um, ii.* n.; *lac serpitium*, alluding to its milky juice.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

Laserpitium chironium. *Panax*. Hercules' all-heal, or wound-wort. The seeds and roots of this plant are warm, and similar in flavour and quality to those of the parsnip. The roots and stalks have a much stronger smell, which resembles that of opoponax; and Boerhaave relates that, on wounding the plant in the summer, he obtained a yellow juice, which, being inspissated a little in the sun, agreed perfectly in both respects with that exotic gum resin.

Laserpitium latifolium. The systematic name of the white gentian. *Gentiana alba*. The root of this plant, *Laserpitium—foliis cordatis, inciso-serratis*, of Linnæus, possesses stomachic, corroborant, aud deobstruent virtues. It is seldom used.

LASERPITIUM SILER. The systematic name of the heart-wort, or sermountain. *Seseli. Siler montanum.* The seeds and roots of this plant, which grows in the southern parts of Europe, are directed as officinals. They have an agreeable smell, and a warm, glowing, aromatic taste; and though neglected in this country, do not appear to be deservedly so.

LASSITU'DO. (*o, inis.* f.) A feeling of weakness and debility, independent of fatigue.

LATERAL. (*Lateralis;* from *latus*, the side.) On the side. A term in general use, applied to parts of animals, plants, and operations.

LATERAL FLOWER. That which grows on the side of the stem; as in *Erica vagans.*

LATERAL OPERATION. The name given to one mode of cutting for the stone, because it is performed on the side of the pelvis. See *Lithotomy.*

LATERAL SINUS. See *Sinus.*

LATERITIOUS. (*Lateritius;* from *later*, a brick.) Brick-like. A term applied to the brickdust-like sediment occasionally deposited in the urine.

LA'TEX. (*ex, icis.* m.; *quod in venis terræ lateat.*) Water, or juice: applied to the blood, as being the spring or source of all the humours.

LA'THYRIS. (From λαθω, to forget; because it was thought to affect the memory.) A term given by some authors to a species of tithymal or spurge, commonly known by the name of *Tithymalus latifolius*, the broad-leaved spurge, and called by some also *Cataputia.*

LA'THYRUS. (*us, i.* m.; a name adopted from Theophrastus, whose λαθυμος appears evidently to be like ours, something of the pea or vetch kind, though it is impossible precisely to determine what.) The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.* The vetch.

LATI'BULUM. (From *lateo*, to lie hid.) The fomes, or hidden matter of infectious diseases.

LATI'SSIMUS. The broadest: very broad. Applied very generally in *Natural History;* and in *Anatomy*, to a muscle, from its great breadth.

LATISSIMUS COLLI. See *Platysma myoides.*

LATISSIMUS DORSI. *Aniscalptor*, of Cowper. A muscle of the humerus, situated on the posterior part of the trunk. It is a very broad, thin, and, for the most part, fleshy muscle, which is placed immediately under the skin, except where it is covered by the lower extremity of the trapezius. It arises tendinous from the posterior half of the upper edge of the spine of the os ilium, from the spinous processes of the os sacrum and lumbar vertebræ, and from five or six, and sometimes from seven, and even eight, of the lowermost ones of the back; also tendinous and fleshy from the upper edges and external surface of the four inferior false ribs, near their cartilages, by as many distinct slips. From these different origins the fibres of the muscle run in different directions: those from the ilium and false ribs run almost perpendicularly upwards; those from the sacrum and lumbar vertebræ, obliquely upwards and forwards; and those from the vertebræ of the back, transversely outwards and forwards, over the inferior angle of the scapula, where they receive a small thin bundle of fleshy fibres, which arise tendinous from that angle, and are inserted with the rest of the muscle, by a strong, flat, and thin tendon, of about two inches in length, into the fore part of the posterior edge of the groove observed between the two tuberosities of the os humeri, for lodging the tendon of the long head of the biceps. In dissection, therefore, this muscle ought not to be followed to its insertion, till some of the other muscles of the os humeri have been first raised. Its use is to pull the os humeri downwards and backwards, and to turn it upon its axis. Riolanus, from its use on certain occasions, gave it the name of *ani tersor.* When we raise ourselves upon our hands, as in rising from off an arm-chair, we may easily perceive the contraction of this muscle. A *bursa mucosa* is found between the tendon of this muscle and the os humeri, into which it is inserted.

Lattice-leaf. See *Canaliculatus.*

Lattice-work. See *Cancellatus.*

LAUCA'NIA. (From λαυω, to receive: so called because it receives and conveys food.) The œsophagus.

LAU'DANUM. (*um, i.* n.; from *laus*, praise: so named from its valuable properties.) See *Tinctura opii.*

LAUMONITE. Diprismatic zeolite.

LAUREL. See *Laurus.*

Laurel, cherry. See *Prunus laurocerasus.*

Laurel, spurge. See *Daphne laureola.*

LAURE'OLA. (*a, æ.* f.; diminutive of *laurus*, the laurel: named from its resemblance to the laurel.) See *Daphne laureola.*

LAUROCERASUS. (From *laurus*, the laurel, and *cerasus*, the cherry-tree: so called because it has leaves like the laurel.) See *Prunus laurocerasus.*

LAURO'SIS. (So called from Mount Laurus, where there were silver mines.) The spodium of silver.

LAU'RUS. (*us, i.* and *ûs.* f.; from *laus*, praise: because it was usual to crown the heads of eminent men with branches of it.) 1. The name of a genus of plants in the Linnæan system. Class, *Enneandria;* Order, *Monogynia.* The laurel.

2. The pharmacopœial name of the sweet-bay. See *Laurus nobilis.*

LAURUS CAMPHORA. The systematic name of the camphire-tree. *Laurus—foliis triplinerviis lanceolato-ovatis.* It affords the substance called *Camphora, Camphura, Caf, Cafar, Ligatura veneris, Caphora, Capur, Alkosor*, and *Altesor.* Camphire, or camphor, is a peculiar concrete substance prepared by distillation. The tree is indigenous to the east-

ern islands of China, and grows abundantly. The camphire is found to lodge every where in the interstices of the fibres of the wood, pith, and knots of the tree. The crude camphire, exported from Japan, appears in small greyish pieces, and is intermixed with various extraneous matters: in this state it is received by the Dutch, and purified by a second sublimation: it is then formed into loaves, in which state it is sent to England.

Purified camphire is a white concrete crystalline substance, not brittle, but easily crumbled, having a peculiar consistence resembling that of spermaceti, but harder. It has a strong lively smell, and an acrid taste; is so volatile as totally to exhale when left exposed in a warm air; is light enough to swim on water; and is very inflammable, burning with a very white flame and smoke, without any residue.

The roots of zedoary, thyme, rosemary, sage, the inula helleniun, the anemone, the pasque flower or pulsatilla, and other vegetables, afford camphire by distillation. It is observable that all these plants afford a much larger quantity of camphire, when the sap has been suffered to pass to the concrete state by several months' drying. Thyme and peppermint, slowly dried, afford much camphire; and Achard has observed, that a smell of camphire is disengaged when volatile oil of fennel is treated with acids.

Camphire is not soluble in water in any perceptible degrees, though it communicates its smell to that fluid, and may be burned as it floats on its surface. It is said, however, that a surgeon at Madrid has effected its solution in water by means of the carbonic acid.

It may be powdered by moistening it with alkohol, and triturating it till dry. It may be formed into an emulsion by previous grinding with near three times its weight of almonds, and afterwards gradually adding the water. Yolk of egg and mucilages are also effectual for this purpose; but sugar does not answer well.

Alkohol, æthers, and oils dissolve camphire.

The addition of water to the spirituous or acid solutions of camphire instantly separates it.

Hatchett has particularly examined the action of sulphuric acid on camphire. A hundred grains of camphire were digested in an ounce of concentrated sulphuric acid for two days. A gentle heat was then applied, and the digestion continued for two days longer. Six ounces of water were then added, and the whole distilled to dryness. Three grains of an essential oil, having a mixed odour of lavender and peppermint, came over with the water. The residuum being treated twice with two ounces of alkohol each time, fifty-three grains of a compact coal in small fragments remained undissolved. The alkohol, being evaporated in a water bath, yielded forty-nine grains of a blackish brown substance, which was bitter, astringent, had the smell of caromel, and formed a dark brown solution with water. This solution threw down very dark brown precipitates, with sulphate of iron, acetate of lead, muriate of tin, and nitrate of lime. It precipitated gold in the metallic state. Isinglass threw down the whole of what was dissolved in a nearly black precipitate.

When nitric acid is distilled repeatedly in large quantities from camphire, it converts it into a peculiar acid. See *Camphoric acid.*

The use of this important medicine, in different diseases, is very considerable. It has been much employed, with great advantage, in fevers of all kinds, particularly in nervous fevers, attended with delirium and much watchfulness. The experienced Werlhoff has witnessed its utility in several inflammatory diseases, and speaks highly in favour of its refrigerant qualities. The benefit derived from it in putrid fevers, where bark and acids are contra-indicated, is remarkable. In spasmodic and convulsive affections it is also of much service, and even in epilepsy. In chronic diseases this medicine is likewise employed; and against rheumatism, arthritis, and mania, we have several accounts of its efficacy. Nor is it less efficacious when applied externally in certain diseases: it dissipates inflammatory tumours in a short time; and its antiseptic quality, in resisting and curing gangrene, is very considerable. Another property peculiar to this medicine must not, however, be omitted—the power it possesses of obviating the strangury that is produced by cantharides, when sprinkled over a blister. The preparations of camphire are, *spiritus camphoræ, linimentum camphoræ, tinctura camphoræ composita,* and the *mistura camphoræ.* Camphire, dissolved in acetic acid with some essential oils, forms the aromatic vinegar.

Laurus cassia. Wild cinnamon-tree; Malabar cinnamon-tree, or cassia lignea tree. Cassia lignea is the bark of this tree, *Laurus—foliis triplinerviis lanceolatis,* of Linnæus. The leaves are called *folia malabathri* in the shops. The bark, called also, *Cassia lignea, Canella malabarica, Cassia lignea malabarica, Xylocassia, Canella malabarica et javensis, Karva, Canella cubana, Arbor judaica, Cassia canella, Canellifera malabarica, Cinnamomum malabaricum, Calihacha canella,* abounds with the flavour of cinnamon, for which they may be substituted, but in much larger doses, as they are considerably weaker.

Laurus cinnamomum. The systematic name of the cinnamon tree. This tree affords the true cinnamon, *cinnamomum,* which is its inner bark. Jacquin describes the tree thus: *Laurus cinnamomum —foliis trinerviis ovalo-oblongis; nervis versus apicem evanescentibus.* Cinnamon bark is one of the most grateful of the aromatics; of a fragrant smell, and a moderately pungent, glowing, but not fiery taste, accompanied with considerable sweetness, and some degree of astringency. It is one of the best cordial, carminative, and restorative spices we are in possession of, and is

generally mixed with the diet of the sick. The essential oil, on account of its high price, is seldom used: a tincture, and a simple and spirituous water, are kept in the shops. The watery infusion of cinnamon is given with advantage to relieve nausea and check vomiting. The cassia flowers of the shops are the flowers of this tree.

Laurus culilawan. The systematic name of the plant, the bark of which is called *cortex culilawan* in the shops. *Cortex caryophylloides. Laurus —foliis triplinerviis oppositis,* of Linnæus. This bark very much resembles cinnamon in appearance and properties.

Laurus nobilis. The systematic name of the sweet bay tree. *Laurus —foliis venosis lanceolatis perennantibus, floribus quadrifidis,* of Linnæus. This tree is a native of Italy, but cultivated in our gardens and shrubberies as a handsome evergreen. The leaves and berries possess the same medicinal qualities, both having a sweet fragrant smell, and an aromatic astringent taste. The laurus of honorary memory, the distinguished favourite of Apollo, may be naturally supposed to have had no inconsiderable fame as a medicine; but its pharmaceutical uses are so limited in the practice of the present day, that this dignified plant is now rarely employed, except in the way of enema, or as an external application: thus the leaves are directed in the *decoctum pro fomento,* and the berries in the *emplastrum cumini.*

Laurus persea. This species of laurel affords the *Avigato pear,* which, when ripe, melts in the mouth like marrow, which it greatly resembles in flavour. It is supposed to be the most nutritious of all the tropical fruits, and grows in vast abundance in the West Indies and New Spain. The unripe fruit have but little taste; yet, being very salubrious, are often eaten with salt and pepper. The sailors, when they arrive at the Havannah, and those parts, purchase them in great quantities; and, chopping them into small pieces, with green capsicums, and a little salt, regale themselves heartily with them. They are esteemed, also, for their antidysenteric qualities, and are prepared in a variety of ways for the tables of the rich.

Laurus sassafras. The systematic name of the sassafras tree. *Sassafras. Cornus mas odorata. Lignum pavanum. Anhuiba.* The wood of this tree, *Laurus—foliis trilobis integrisque,* of Linnæus, is imported from North America, in long straight pieces, very light, and of a spongy texture, and covered with a rough, fungous bark. It has a fragrant smell, and a sweetish, aromatic subacrid taste; the root, wood, and bark agree in their medicinal qualities, and are all mentioned in the pharmacopœias; but the bark is the most fragrant, and thought to be more efficacious than the woody part; and the branches are preferred to the large pieces. The medical character of this drug was formerly held in great estimation, and publications were professedly written on the subject. It is now, however, thought to be of little importance, and seldom used but in conjunction with other medicines, as a corrector of the fluids. It is an ingredient in the *decoctum sarsaparillæ compositum,* or *decoctum lignorum;* but the only officinal preparation of it is the essential oil, which is carminative and stimulant, and which may be given in the dose of two drops to ten.

LAVA. The cinders or product of volcanic eruptions.

Lava'ndula. See *Lavendula.*

LAVENDER. See *Lavendula.*

Lavender, French. See *Lavendula stœchas.*

LAVE'NDULA. (*a, æ.* f.; from *lavo,* to wash: so called, because, on account of its fragrancy, it was used in baths.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.* Lavender.

2. The pharmacopœial name of the common lavender. See *Lavendula spica.*

Lavendula spica. The systematic name of the common lavender. *Nardus italica. Lavendula —foliis sessilibus lanceolato-linearibus margine revolutis, spica interrupta nuda,* of Linnæus. A native of the southern parts of Europe, but cultivated in our gardens on account of the fragrance of its flowers. Their taste is bitter, warm, and somewhat pungent; the leaves are weaker and less grateful. The essential oil, obtained by distillation, is of a bright yellow colour, of a very pungent taste, and possesses, if carefully distilled, the fragrance of the lavender in perfection. Lavender has been long recommended in nervous debilities, and various affections proceeding from a want of energy in the animal functions. The College directs an essential oil, a simple spirit, and a compound tincture to be kept in the shops.

Lavendula stœchas. The systematic name of the French lavender. *Stœchas. Stœchas arabica. Spica hortulana. Stucadore.* This plant is much less grateful in smell and flavour than the common lavender, to which it is allied in its properties.

LA'VER. (From *lavo,* to wash: so named because it is found in brooks, where it is constantly washed by the stream.) 1. The brook-lime.

2. The English name of a species of ulva, which is eaten as a delicacy.

Laver, shield. See *Ulva lactuca.*

LAVIPE'DIUM. (*um, ii.* n.; from *lavo,* to wash, and *pes,* the foot.) A bath for the feet.

LAWSONIA. (*a, æ.* f.; named after Mr. Lawson, a Scotchman, who published an excellent account of his voyage to Carolina, containing much information concerning the plants of that country.) The name of a genus of plants in the Linnæan system. Class, *Octandria;* Order, *Monogynia.*

Lawsonia inermis. The systematic name of the true alkanna: called also, *Alkanna vera,* and *Alkanna orientalis.* An oriental plant; the *Lawsonia — ramis inermibus,* of

Linnæus; principally employed, in its native place, as a dye. The root is the officinal part, which, however, is rarely met with in the shops. It possesses astringent properties, and may be used as a substitute for the *anchusa*.

LAXATIVE. (*Laxativus;* from *laxo*, to loosen.) A gentle purgative.

LAXA'TOR. (*or, oris.* m.; from *laxo*, to loosen: so called from its office to relax.) A name applied to muscles, &c. the office of which is to relax parts into which they are inserted.

LAXATOR TYMPANI. *Externus mallei*, of Albinus. *Anterior mallei*, of Winslow. *Obliquus auris*, of Douglas. *Externus auris vel laxator internus*, of Cowper. A muscle of the internal ear, that draws the malleus obliquely forwards towards its origin; consequently, the membrana tympani is made less concave, or is relaxed.

LAXUS. Lax: loose. 1. In *Physiology* and *Pathology*, applied to the state of the animal fibre.

2. In *Botany*, diffused: in opposition to crowded or compact; as in the stem of the *Bunias cakile*, or sea-rocket, the stem of which is described as *caulis laxus*.

LAZULITE. See *Azurite*.

LA'ZULUS. (From *azul*, Arabian.) A precious stone, of a blue colour. See *Lapis lazuli*.

LEAD. *Plumbum*. A metal found in considerable quantity in many parts of the earth, in different states, seldom, if at all, in the metallic state. It is found in that of oxide, *red lead ore*, mixed with a portion of iron, clay, and other earths. The colour of this ore is aurora red, resembling red arsenic. It is found in small lumps, of an indeterminate figure, and also crystallised in four-sided rhomboidal prisms.

Combined with carbonic acid, it forms the *sparry lead ore*, so called because it has the texture and crystallisation of certain spars. There are a great many varieties of this kind. It is found also united with sulphuric, phosphoric, arsenic, molybdic, and chromic acids. Lastly, lead is found mineralised by sulphur, forming what is called *galena* (*sulphuret of lead*), which is by far its most abundant ore. This ore, which is very common, is found both in masses and crystals. The primitive form of its crystals is a cube. Its colour is of a bluish-lead grey. It has a considerable metallic lustre; its texture is foliated; it stains the fingers, and often feels greasy. It contains, in general, a minute quantity of silver.

Properties.—Lead is of a bluish white colour, and very brilliant when fresh cut. It is malleable. It soon tarnishes in the atmosphere. It may easily be cut with a knife, and stains the fingers bluish grey when rubbed. It fuses at 612° Fahr., and renders other more refractory metals fusible. It becomes vitrified in a strong and continued heat, and vitrifies various other metals. It is the least elastic of all the metals. It is very laminable, but it possesses very little ductility. Its specific gravity is 11·435. It crystallises by cooling in small octahedra. When fused in contact with air, its surface first becomes yellow, and then red. It unites by fusion with phosphorus and sulphur. The greater part of the acids act upon it. The sulphuric acid requires the assistance of a boiling heat. Nitric acid is decomposed by it. Muriatic acid acts very weakly on it. Acetic acid dissolves it. Fluoric acid attacks it by heat, and slightly in the cold. It combines with other metals, but few of its alloys are applied to any use. When combined with mercury, it forms a crystallisable alloy which becomes fluid when triturated with that of bismuth.

Method of obtaining Lead.—In order to obtain lead in a great way, the ore is picked from among the extraneous matter with which it was naturally mixed. It is then pulverised and washed. It is next roasted in a reverberatory furnace, in which it is to be agitated, in order to bring the whole in contact with the air. When the external parts begin to soften, or assume the form of a paste, it is covered with charcoal, the mixture is stirred, and the heat increased gradually: the lead then runs on all sides, and is collected at the bottom of the furnace, which is perforated so as to permit the metal to flow into a receptacle defended by a lining of charcoal.

There are certainly two, perhaps three oxides of lead:—

1. The powder precipitated by potash from the solution of the nitrate of lead, being dried, forms the yellow *protoxide*. When somewhat vitrified, it constitutes *litharge*, and combined with carbonic acid, *white lead*, or *cerusse*.

2. When massicot has been exposed for about 48 hours to the flame of a reverberatory furnace, it becomes red lead, or *minium*.

3. If upon 100 parts of red lead we digest nitric acid of the sp. gr. 1·26, 92·5 parts will be dissolved, but 7·5 of a dark brown powder will remain insoluble. This is the *peroxide* of lead.

Lead combined with chlorine forms a semi-transparent greyish white mass, somewhat like horn, whence the old name of *plumbum corneum*.

The *iodide* is easily formed by heating the two constituents.

The salts of lead have the protoxide for their base, and are distinguishable by the following general characters:—

1. The salts, which dissolve in water, usually give colourless solutions, which have an astringent sweetish taste.

2. Placed on charcoal they all yield, by the blowpipe, a button of lead.

3. Ferroprussiate of potash occasions in their solutions a white precipitate.

4. Hydrosulphuret of potash, a black precipitate.

5. Sulphuretted hydrogene a black precipitate.

6. Gallic acid, and infusion of galls, a white precipitate.

7. A plate of zinc a white precipitate, or metallic lead.

Most of the acids act upon lead.

The *acetic* dissolves it and its oxides; though probably the access of air may be necessary to the solution of the metal itself in this acid. *White lead,* or *cerusse,* is made by rolling leaden plates spirally up, so as to leave the space of about an inch between each coil, and placing them vertically in earthen pots, at the bottom of which is some good vinegar. The pots are to be covered, and exposed for a length of time to a gentle heat in a sand-bath, or by bedding them in dung. The vapour of the vinegar, assisted by the tendency of the lead to combine with the oxygene which is present, corrodes the lead, and converts the external portion into a white substance which comes off in flakes when the lead is uncoiled. The plates are thus treated repeatedly, until they are corroded through. Cerusse is the only white used in oil paintings. Commonly it is adulterated with a mixture of chalk in the shops. It may be dissolved without difficulty in the acetic acid, and affords a crystallisable salt, called *sugar of lead,* from its sweet taste. This, like all the preparations of lead, is a deadly poison. The common sugar of lead is an acetate; and Goulard's extract, made by boiling litharge in vinegar, a subacetate. The power of this salt, as a coagulator of mucus, is superior to the other. If a bit of zinc be suspended by brass or iron wire, or a thread, in a mixture of water and the acetate of lead, the lead will be revived, and form an arbor Saturni.

The acetate, or sugar of lead, is usually crystallised in needles, which have a silky appearance. See *Plumbi acetas,* and *Plumbi acetatis liquor.* This salt, in solution, has been used as an external application to inflamed surfaces, scrofulous sores, &c. In some extreme cases of hæmorrhage from the lungs, and bowels, and uterus, this salt has been prescribed, but in minute doses, as an astringent.

The colic of the painters, and that formerly prevalent in certain counties of England, from the lead used in the cider presses, show the very deleterious operation of the oxide, or salts of this metal, when habitually introduced into the system in the minutest quantities at a time. Contraction of the thumbs, paralysis of the hand, or even of the extremities, have not unfrequently supervened. A course of sulphuretted hydrogene waters, laxatives, of which sulphur, castor oil, sulphate of magnesia, or calomel should be preferred, a mercurial course, the hot sea-bath, and electricity, are the appropriate remedies.

Dealers in wines have occasionally sweetened them, when accescent, with litharge or its salts. This deleterious adulteration may be detected by sulphuretted hydrogene water, which will throw down the lead in the state of a dark brown sulphuret. Or, subcarbonate of ammonia, which is a very delicate test, may be employed to precipitate the lead in the state of a white carbonate; which, on being washed and digested with sulphuretted hydrogene water, will instantly become black. If the white precipitate be gently heated, it will become yellow, and, on charcoal before the blow-pipe, it will yield a globule of lead. Chromate of potash will throw down from saturnine solutions a beautiful orange-yellow powder.

The proper counter-poison for a dangerous dose of sugar of lead, is a solution of Epsom or Glauber salt, liberally swallowed; either of which medicines instantly converts the poisonous acetate of lead into the inert and innoxious sulphate.

The sulphuret, sulphate, carbonate, phosphate, arseniate, and chromate of lead are found native.

Oils dissolve the oxide of lead, and become thick and consistent; in which state they are used as the basis of plasters.

Sulphur readily dissolves lead.

The *phosphoric acid,* exposed to heat, combines with the metal.

Litharge fused with common salt decomposes it: the lead unites with the muriatic acid, and forms a yellow compound, used as a pigment.

Lead unites with most of the *metals.*

The preparations of lead used in medicine are,—

1. The subcarbonate. See *Plumbi subcarbonas.*
2. The red oxide. See *Minium.*
3. The semivitreous oxide. See *Lythargyrus.*
4. The acetate. See *Plumbi acetas.*
5. The liquor of the acetate. See *Plumbi acetatis liquor.*
6. The dilute liquor of the acetate. See *Plumbi acetatis liquor dilutus.*

Lead, white. See *Plumbi subcarbonas.*

LEAF. *Folium.* A laminar expansion of a plant, generally of a green colour.

It is difficult, however, to define this universal and important organ of vegetables.

Leaves are, for the most part, remarkable for their expanded form; their colour is almost universally green, their internal substance pulpy and vascular, sometimes very succulent, and their upper and under surfaces differ commonly in hue, as well as in kind or degree of roughness. They are considered as the respiratory organs of plants.

In discriminating the species of plants, a knowledge of the various forms of leaves is of the utmost importance. Botanists, therefore, have paid particular attention to their names, which are derived either from their origin, distribution, situation, direction, insertion, form, base, point, margin, surface, distribution of its vessels, nerves, expansion, substance, duration, composition, &c.

A leaf consists of a thin and expanded part, which in common language is named the *folium* or leaf, and a stalk, called the *petiolus* or petiole. The surface of a leaf, *superficies* or *pagina*, is distinguished into the upper part, or face, and the under part, or back of the leaf. The *base*, or *origin* of a leaf, is that part next the stem or branch; the *apex* is the termination of the leaf; the *margin*, or edge, the circumference; the disk, *discum*, is the middle part of the surfaces within the margin.

From their *origin*, we have the following terms:—

1. *Seminal; folia seminalia*, which are the first leaves of the majority of plants, proceeding from seeds that have more than one seed-lobe: they are seen in *Raphanus sativus*, and *Cannabis sativa*.

2. *Radical*, which spring directly from the root; as in *Leontodon taraxacum*, and *Viola odorata*.

3. *Cauline*, or stem-leaf. The *Valeriana phu* has its radical leaves undivided, and the cauline leaves pinnate.

4. *Ramial*, or branch-leaf, which are only described when they differ from those of the stem. The *Sison ammi* has its radical leaves linear; its cauline, setous; and its branch leaves, tripinnate.

5. *Axillary*, when seated on joints or axillæ; as in *Parthenium integrifolium*.

6. *Floral*, when next the flower, and like the other leaves; as in *Lonicera caprifolium*.

From their *distribution* on the stem and branches, leaves are named,—

7. *Alternate*, when not in pairs, and are given off in various directions, one after another; as in *Malva rotundifolia*.

8. *Opposite*, when they appear directly on opposite sides of the stem, in pairs; as in *Lamium album*, and *Urtica dioica*.

9. *Two-ranked; folia disticha*, which implies that they spread in two directions, and yet are not regularly opposite at their insertion; as in *Cupressus disticha*, *Taxus baccata*, *Pinus picea*, and *Lonicera symphoricarpos*.

10. *Bifarial*, that is, two-ranked, but given off from the side only of the branch; as in *Carpinus betulus*, and *Fagus sylvatica*.

11. *Unilateral*, looking to one side only; as in *Convallaria multiflora*.

12. *Scattered*, irregular, or without any order; as in *Reseda luteola*, and *Sedum reflexum*.

13. *Decussate*, crossing each other in pairs, cross-like; as in *Euphorbia lathyris*, and *Crassula tetragona*.

14. *Imbricate*, like tiles upon a house; as in *Cupressus sempervirens*, and *Aloë spiralis*.

15. *Fasciculate*, or tufted, when several spring from the same point; as in *Pinus larix*, and *Berberis vulgaris*.

16. *Stellate*, star-leaved, whorled; several leaves growing in a circle round the stem, without any reference to the precise number; as in *Rubia tinctorum*, *Lilium martagon*, *Asperula odorata*. In large natural genera it is necessary to mention the number; as in *Galium*.

17. *Remote*, when at an unusual distance from each other.

18. *Clustered;* crowded together, as in *Antirrhinum linaria*, and *Trientalis europea*.

19. *Binal*, when there is only two on a plant; as in *Galanthus nivalis*, *Scilla bifolia*, and *Convallaria magalis*.

20. *Ternal*, three together; as in *Verbena triphylla*.

21. *Quaternal, Quinal*, &c., when four, five, or more are situated together; as in various species of *Erica*.

From their determinate *direction*, leaves are distinguished into,—

22. *Close-pressed; adpressa*, when their upper surface is close to the stem; as in *Thlaspi campestris*, and *Xeranthemum sesamoides*.

23. *Erect*, when nearly perpendicular, or forming a very acute angle with the stem; as in *Juncus articulatus*, and *Bryum ventricosum*.

24. *Spreading*, forming a moderately acute angle with the stem; as in *Atriplex portulacoides*, *Nerium oleander*, and *Veronica beccacobunga*.

25. *Horizontal*, spreading in the greatest possible degree; as in *Gentiana campestris*, and *Pelargonium patulum*.

26. *Ascending*, rising gently, so as to be somewhat arched; as in *Geranium nitifolium*.

27. *Recurved*, reflected, curved backward; as in *Erica retorta*, and *Bryum pellucidum*.

28. *Reclined*, depending, hanging downward towards the earth; as in *Cichorium intybus*, and *Leonurus cardiaca*.

29. *Oblique*, twisted, so that one part is vertical, the other horizontal; as *Allium obliquum*, and *Fritillaria obliqua*.

30. *Adverse*, the upper surface turned to the meridian, not the sky; as in *Lactuca scariola*.

31. *Resupinate*, or reversed, when the upper surface is turned downward; as in *Alstroemeria pelegrina*, and *Stæbe prostrata*.

32. *Revolute*, having a spiral apex; as *Dianthus carthusianorum*, and *barbatus*.

33. *Rooting*, sending rootlets into the earth; as *Asplenium rhizophylla*.

34. *Floating* on the surface of the water; as in *Potamogeton natans*, and *Nymphæa alba*.

35. *Submersed*, demersed, immersed under water; as *Hottonia palustris*, and *Ranunculus aquatilis*.

From their *insertion* into,—

36. *Petiolate*, leaves on footstalks; as *Prunus cerasus*, and *Verbascum nigrum*.

37. *Sessile*, without footstalk, lying immediately on the stem; as in *Saponaria officinalis*, and *Pinguicula vulgaris*.

38. *Adnate*, the upper surface adhering a little way to the branch; as in *Xeranthemum vestitum*.

39. *Decurrent*, when a lamellar part of the leaf runs down the stem, or branch; as in *Carduus spinosus*, and *Verbascum thapsus*.

40. *Connate*, when two opposite leaves em-

brace, and are united at their bases; as in *Cerastium perfoliatum*, and *Dipsacus laciniatus*.

41. *Connato-perfoliate*, when the union is in the whole, or nearly the whole breadth of the leaves, so as to give the two leaves the appearance of being united into but one leaf; as in *Eupatorium perfoliatum*, and *Lonicera dioica*. Connate leaves are, in some instances, united by a membrane, which, stretching from the margins of the opposed leaves, near the base, forms a kind of pitcher around the stem, in which the rain is retained; as in *Dipsacus fullonum*.

42. *Embracing*, clasping the stem with their bases; as in *Carduus marianus*, and *Papaver somniferum*.

43. *Vaginate*, sheathing the stem at their bases; as in *Canna indica*, and *Polygonum bistorta*.

44. *Peltate*, when the footstalk is inserted not into the basis, but into the disk of the leaf; as in *Drosera peltata*, and *Tropæolum majus*.

45. *Perfoliate*, when the stem runs through the leaf; as in *Bupleurum rotundifolium*, and *Uvularia perfoliata*.

46. *Articulate*, one leaf growing out of the apex of another; as *Cactus opuntia*, and *Cactus ficus indica*.

From the *basis* of the leaf, it is called,—

47. *Cordate*, heart-shaped or ovate, hollowed out at the base; as in *Arctium lappa*, and *Tamus communis*.

48. *Arrow-shaped*, triangular, hollowed out very much at the base; as *Rumex acetosa*, and *Sagittaria sagittifolia*.

49. *Hastate*, halberd-shaped, triangular, hollowed out at the base and sides, but with spreading lobes; as in *Arum maculatum*, and *Rumex acetosella*.

50. *Reniform*, kidney-shaped, a short, broad, roundish leaf, the base of which is hollowed out; as *Asarum europeum*, and *Glecoma hederacia*.

51. *Auricled*, furnished at its base with a pair of leaflets, properly distinct, but occasionally joined with it; as in *Citrus aurantium*.

Linnæus uses the term *appendiculatum*, which is correct.

52. *Unequal*, the basis larger on one side than the other; as in *Tilia europea*, and *Piper tuberculatum*.

The form of the *apex* of a leaf gives rise to the following names:—

53. *Acute*, sharp, ending in an acute angle, which is common to a great number of plants; example in *Linum angustifolium*, and *Campanula trachelium*.

54. *Acuminate*, pointed, having a taper, or awl-shawled point; as *Arundo phragmitis*, and *Syringa vulgaris*.

55. *Cuspidate*, or *mucronate*, sharp pointed, tipped with a rigid spine; as in the thistles, and *Ficus religiosa*.

56. *Obtuse*, blunt, terminating in a segment of a circle; as *Rumex obtusifolius*, and *Hypericum quadrangulum*.

57. *Retuse*, ending in a broad shallow notch; as in *Ervum ervilia*, and *Rumex digynus*.

58. *Præmorse*, jagged pointed, as if bitten off; very blunt, with various irregular notches; as in *Hibiscus præmorsus*, and Swartz's genus *Aëride*.

59. *Truncate*, an abrupt leaf, with the extremity cut off, as it were, by a transverse line; as in *Liriodendrum tulipifera*.

60. *Dedaleous*, with a broad, incised, and crisp apex; as in *Asplenium scolopendrum*.

61. *Emarginate*, nicked, having a small notch at the summit; as *Hydrocotile vulgaris*, and *Euphorbia tuberosa*.

62. *Summit-cut*,—*folia apice incisa*; as in *Glinko biloba*.

63. *Cirrhose*, tipped with a tendril; as in *Lathyrus articulatus*, and *Gloriosa superba*.

64. *Tridentate*, three-toothed; an obtuse point, beset with three teeth; as in *Buchera æthiopica*, and *Genista tridentata*.

65. *Ascidiate*, or pitcher-leaf, a cylindrical tube, filled with water; as in *Nepenthes distillatoria*, and *Saracenia*.

The names derived from the *margin* of the leaf, are,—

66. *Entire*, not divided; as in *Tragopogon pratense*, and *Porrifolium*.

67. *Very entire*, *integerrima*, the margin void of irregularity; as *Citrus aurantium*.

68. *Undulate*, when the disk near the margin is waved obtusely up and down; as in *Panicum hirtellum*, and *Reseda lutea*.

69. *Crenate*, notched, when the teeth are rounded, and not directed towards either end of the leaf; as in *Betonica officinalis*, and *Scutellaria galericulata*.

70. *Doubly crenate*, the greater teeth notched with smaller ones; as in *Salvia sclara*, and *Ranunculus auricomus*.

71. *Serrate*, when the teeth are sharp, and resemble those of a saw, pointing towards the extremity of the leaf; as in *Sedum telephium*.

72. *Acutely serrate*; as in *Thymus acinos*.

73. *Obtusely serrate*; as in *Ballota nigra*.

74. *Doubly serrate*, having a series of smaller serratures intermixed with the larger; as in *Rubus fruticosus*, and *Campanula trachelium*.

75. *Dentate*, toothed, beset with projecting, horizontal, rather distant teeth of its own substance; as the lower leaves of the *Centaurea cyanus*, and *Campanula trachelium*.

76. *Jagged*, irregularly cut or notched, especially when otherwise also divided; as in *Salvia ægyptica*, and *Senecio squalidus*.

77. *Cartilaginous-edged*, hard, and hoary; as in *Saxifraga callosa*, and *Yucca gloriosa*.

78. *Prickle-edged*, beset with prickles; as in *Carduus lanceolatus*, and *Ilex aquifolium*.

79. *Fringed*, bordered with soft parallel hairs; as in *Sempervivum tectorum*, and *Galium cruciatum*.

From the *openings* or *sinuses* in the margin,—

80. *Sinuated*, cut as it were into rounded or wide openings; as in *Quercus robur*, and *Alcea rosea*.

81. *Repand*, wavy, bordered with numerous angles and segments of circles, alternately; as in *Menyanthes nymphoides*, and *Erysimum alliaria*.

82. *Pinnatifid*, cut transversely into several oblong parallel segments; as in *Centaurea calcitrapa*, and *Scabiosa arvensis*.

83. *Bipinnatifid*, doubly pinnatifid; as in *Papaver argemone*.

84. *Lyrate*, lyre-shaped, cut into several transverse segments, gradually larger towards the extremity of the leaf, which is rounded; as in *Geum urbanum*, and *Erysimum barbarea*.

85. *Panduriform*, fiddle-shaped, oblong, broad at the two extremities, and contracted in the middle; as in *Rumex pulcher*, and *Convolvulus panduratus*.

86. *Runcinate*, lion-toothed, cut into several transverse, acute segments, pointing backwards; as in *Leontodon taraxacum*, and *Erysimum officinale*.

87. *Laciniate*, cut into numerous irregular portions; as in *Ranunculus parviflorus*, and *Geranium columbinum*, and *Cotyledon laciniata*.

88. *Squarrose*, the margin beset with a rough fringe; as in *Centaurea calcitrapa*, and *Carduus marianus*.

89. *Partite*, deeply divided nearly to the basis; as in *Helleborus viridis*.

Bipartite, *tripartite*, and *multipartite*, according to the number of the divisions.

90. *Trifid*, divided into three; as in *Bidens tripartita*.

91. *Quinquifid*, divided into five; as in *Geranium maculatum*.

92. *Multifid*, the margin of round leaves cut from the apex almost to the base, without leaving any great intermediate sinuses; as in *Aconitum napellus*, and *Cucumis colocynthis*.

From the *angles* in the margin of the leaf,—

93. *Rounded*, the margin not having any angle.

94. *Angulate*, the margin having acute angles.

a. *Triangular*; as in *Chenopodium bonus henricus*, and *Atriplex hortensis*.

b. *Quinqueangular*; as in *Geranium peltatum*.

c. *Septangular*; as in *Hibiscus abelmoschus*.

95. *Rhomboid*, *trapeziform*, or approaching to a square; as in *Chenopodium vulvaria*, and *Trapa natans*.

96. *Quadrangular*, with four angles; as in *Liriodendrum tulipifera*.

97. *Deltoid*, trowel-shaped, having three angles, of which the terminal one is much further from the base than the lateral ones; as in *Mesembryanthemum deltoideum*, and *Populus nigra*.

98. *Lobate*, when the margins of deep segments are rounded, hence:

a. *Two-lobed*; as in *Bauhinia porrecta*.

b. *Three-lobed*; as in *Anemone hepatica*.

c. *Five-lobed*; as in *Humulus lupulus*, and *Acer pseudo-platanus*.

99. *Palmate*, cut into several oblong, nearly equal segments, about halfway, or rather more, towards the base, leaving an entire space, like the palm of the hand; as in *Passiflora cærulea*, and *Alcea ficifolia*.

From the *figure of the circumference*, are derived the following names:—

100. *Orbiculate*, circular, the length and breadth of which are equal, and the circumference in an even circular line; as in *Cotyledon orbiculata*, and *Hydrocotile vulgaris*.

101. *Subrotund*, roundish; as in *Pyrola*, and *Malva rotundifolia*.

102. *Oblong*, three or four times longer than broad; as in *Musa sapientum*, and *Elæagnus orientalis*.

103. *Ovate*, of the shape of an egg, cut lengthwise, the base being rounded, and broader than the extremity; as in *Origanum vulgare*, and *Inula helenium*.

104. *Obovate*, of the same figure, with the broader end uppermost; as in *Primula veris*, and *Samulus valerandi*.

104*. *Oval*, ovate, but each end has the same roundness; as in *Rhus catinus*, and *Mammea americana*.

105. *Elliptical*, oval, the longitudinal diameter being greater that the transverse.

106. *Parabolic*, oblong, the summit narrow and round; as in *Marrubium pseudo-dictamnus*.

107. *Cuneiform*, wedge-shaped, broad and abrupt at the summit, and tapering down to the base; as *Saxifraga cuneifolia*, and *Iberis semperflorens*.

108. *Spatulate*, of a roundish figure, tapering to an oblong base; as in *Cotyledon spu* and *Cucubalus otites*.

109. *Lanceolate*, of a narrow oblong form, tapering towards each end; as in *Plantago lanceolata*.

110. *Linear*, narrow, with parallel sides; as in *Senecio linifolius*.

111. *Capillary*, long, fine, and flexible, resembling a hair; as in *Anethum fœniculum*, and *Graveolens*.

112. *Setaceous*, bristly; as in *Asparagus officinalis*, and *Scirpus setaceus*.

113. *Acerose*, needle-shaped, linear and evergreen, generally acute and rigid; as in *Pinus sylvestris*, and *Juniperus communis*.

From the difference of the *surface* of leaves,—

114. *Glabrous*, smooth, without roughness; as the leaves of most plants.

115. *Nitid*, smooth and shining; as in *Laurus nobilis*, and *Canna indica*.

116. *Lucid*, as if covered with a varnish; as in *Angelica lucida*, and *Royena lucida*.

117. *Viscid*, covered with a clammy juice; as in *Senecio viscosus*, and *Erygeron viscosum*.

118. *Naked*, without bristles or hairs; as the leaves of many plants.

119. *Scabrous*, or *asperous*, with little roughness visible, as well as tangible; as in *Morus nigra*, and *Humulus lupulus*.

120. *Punctate*, dotted, perforated with little holes; as in *Hypericum perforatum*.

121. *Pertuse*, bored, naturally having large perforations; as in *Dracontium pertusum*.

122. *Maculate*, spotted; as in *Orchis maculata*, and *Pulmonaria officinalis*.

123. *Coloured*, being of any other than a

green colour; as in *Amaranthus tricolor*, and *Atriplex hortensis rubra*.

124. *Hoary*, having a whitish mealy surface; as in *Populus alba*.

125. *Lineate*, having superficial lines; as in *Scirpus maritimus*.

126. *Striate*, marked with coloured lines; as in *Phalaris arundinacea*.

127. *Sulcate*, furrowed, having broad and deep furrows; as in *Digitalis ferruginea*.

128. *Rugose*, rugged; as in *Salvia sclara*.

129. *Bullate*, blistered, a greater degree of the last; as in *Brassica oleracea*.

130. *Papulous*, or *vesiculous*, covered with hollow vesicles; as in *Mesembryanthemum crystallinum*.

131. *Papillose*, or *varicose*, covered with solid wart-like tubercles; as in *Aloë margaritifera*.

132. *Glandular*, covered with small glandiform bodies; as in *Salix alba*, and *Prunus padus*.

From the *distribution of the vessels on the surface* of the leaf,

Nerves are white elevated chords, which originate from the base of the leaf.

A *rib* is the middle nerve, thick, and extending from the basis to the apex of the leaf.

Veins are anastomosing vessels which are given off from the costa or rib.

The greater clusters of vessels are generally called *nervi* or *costæ*, nerves or ribs, and the smaller *venæ*, whether they are branched or reticulate, simple or otherwise.

133. A *nervous* or *ribbed* leaf is where they extend in simple lines from the base to the point; as in the *Convallariæ*, and *Helianthus annuus*. The *Laurus camphora* is an example of a trinerve; the *Smilax tetragona* has five nerves; the *Dioscorea septemloba*, seven.

134. When a pair of large ribs branch off from the main one above the base, and run in a straight line towards the apex, as in *Helianthus tuberosus*, the leaf is said to be *triple nerved*.

135. When two go from the base and four from the costa in a straight line, it is termed *folium quintuplinervum*.

136. *Venous*, veiny, when the vessels by which the leaf is nourished are branched, subdivided, and more or less prominent, forming a network over either or both its surfaces; as in *Clusia venosa*, and *Verbascum lychnitis*.

137. *Avenial*, or veinless, when without veins; as in *Clusia alba*, and *Rosea*.

138. *Enervous*, ribless, when no nerve is given off from the base; as in *Asperula levigata*.

The terms from the *expansion* of the leaves are,—

139. *Flat*, as most leaves are.

140. *Concave*, hollow, depressed in the middle; as in *Saxifraga stolonifera*.

141. *Convex*, the reverse of the former; as in *Ocymum basilicum majus*.

142. *Canaliculate*, channelled, having a longitudinal furrow; as in *Plantago maritima*.

143. *Cucullate*, hooded, when the edges meet in the lower parts, and expand in the upper; as in *Geranium cucullatum*, and that curious genus *Saracenia*.

144. *Plicate*, plaited, when the disk of the leaf, especially towards the margin, is acutely folded up and down; as in the *Malvas*, and *Alchemilla vulgaris*.

145. *Undulate*, waved, when the disk near the margin is waved obtusely up and down; as in *Reseda lutea*, and *Ixia undulata*.

146. *Crisp*, curled, when the border of the leaf becomes more expanded than the disk, so as to grow elegantly, curled, and twisted; as in *Malva crispa*.

From the *internal substance*,—

147. *Membranaceous*, when there is scarcely any pulp between the external membranes of the leaf; as in *Citrus aurantium*, and the leaves of many plants.

148. *Thick*, the membranes being rather more than usually firm; as in *Sedum telephium*.

149. *Carneous*, fleshy, of a thick substance, as in all those called succulent plants; as *Crassula lactea*, and *Sempervivum tectorum*.

150. *Pulpy*, very thick, and of the consistence of a plum; as in *Mesembryanthemum verruculatum*.

151. *Tubular*, hollow within; as in *Allium cepa*. The leaf of the *Lobelia dortmanna* is very peculiar, in consisting of a double tube.

152. *Compact*, not hollow.

153. *Rigid*, easily broken on being bent; as in *Stapelia*.

The thick leaves, *folia crassa*, afford the following distinctions:—

154. *Gibbous*, swelling on one side, or both, from excessive abundance of pulp; as in *Crassula cotyledon*, and *Aloë retusa*.

155. *Round*, cylindrical; as in *Allium schœnoprasum*, and *Salsola sativa*.

156. *Subulate*, awl-shaped, tapering from a thickish base to a point; as in *Allium ascalonicum*, and *Narcissus jonquilla*.

157. *Compressed*, flattened laterally; as in *Cacalia ficoides*.

158. *Depressed*, flattened vertically; as in *Crassula tetragona*.

159. *Triquetral*, thick and triangular; as in *Butomus umbellatus*.

160. *Tetragonal*, quadrangular and awl-shaped; as in *Gladiolus tristis*.

161. *Lingulate*, tongue-shaped, a thick oblong blunt figure, and a little convex on its inferior surface; as in *Mesembryanthemum linguiforme*.

162. *Ancipital*, two-edged; as in *Typha latifolia*.

163. *Ensiform*, sword-shaped, two edges tapering to a point, slightly convex on both surfaces, neither of which can properly be called upper or under; as in *Iris germanica*, and *Gladiolus communis*.

164. *Carinate*, keeled, when the bark is longitudinally prominent; as in *Allium carinatum*, and *Narcissus biflorus*.

165. *Acinaciform*, cimeter-shaped, compressed with one thick and straight edge, the

other thin and curved; as in *Mesembryanthemum acinaciforme.*

166. *Dolabriform,* hatchet-shaped, compressed with a very prominent dilated keel, and a cylindrical base; as in *Mesembryanthemum dolabriforme.*

167. *Uncinate,* hooked, flat above, compressed at its sides, and turned back at the apex, forming a hook.

When the shape of membranaceous leaves is *imperfect,* the particle *sub* is attached, as *sub*-sessile, *sub*-ovate, *sub*-pilous, &c.

When the shape is *reversed,* by the prefixing the preposition *ob,* as *ob*-cordate, when the point is inserted into the petiole, *ob*-ovate, &c.

From the *coadunation,* leaves are designated by prefixing the prominent shape, as *lanceolato-ovate;* as in *Nicotiana tabacum:* and ovato-lanceolate, lanceolate, but swelling out in the middle; as in *Saponaria officinalis.*

From their *duration,* leaves are termed,—

168. *Deciduous,* falling off at the approach of winter, as in most European trees and shrubs.

169. *Caducous,* falling off in the middle of summer.

170. *Perennial,* green the whole year, and falling off as the new ones appear.

171. *Persistant,* lasting many years, and always green; as in *Pinus,* and *Taxus.*

All the foregoing terms belong to *simple leaves,* or those which have one leaf only on the petiole or footstalk.

The following regard *compound leaves,* or such as consist of two or any greater number of *foliola,* or leaflets, connected by a common footstalk:—

172. *Digitate,* fingered, when several leaflets proceed from the summit of a common footstalk; as in *Trifolium pratense.*

173. *Pinnate,* when several leaflets proceed laterally from one footstalk, instead of being supported at the top; as in *Acacia pseudacacia.*

A digitate leaf is called after its *mode of digitation,*—

174. *Conjugate,* or yoked, when there is one pair of leaflets, or *pinnæ;* as in *Zygophillum fabago.*

175. *Binate,* when the pair of leaflets unite somewhat at their base; as in *Lathyrus sylvestris.*

176. *Ternate,* where there are three leaflets; as in *Trifolium pratensis,* and *Oxalis acetocella.*

177. *Quinate,* there being five leaflets; as in *Potentilla reptans,* and *Lupinus albus.*

178. *Septenate,* with seven; as in *Æsculus hippocastanum.*

179. *Novenate,* nine; as in *Sterculia fœtida.*

180. *Pedate,* a peculiar kind of leaf, being ternate, with its lateral leaflets compounded in their fore-part; or a leaf with a bifid footstalk divided into two diverging branches, with an intermediate leaflet, and each supporting two or more lateral leaflets on their anterior edge; as in *Helleborus niger.*

181. *Articulate,* jointed, when one, or a pair of leaflets, grows out of the summit of another, with a sort of joint; as in *Cactus ficus indica,* and *Fagara tragodes.*

Pinnate leaves are called from their number of *pinnæ,*—

182. *Bipinnate,* or *duplicato-pinnate,* doubly pinnate; as in *Tanacetum vulgare.*

183. *Tripinnate,* or *triplicato-pinnate,* three pinnate; as in *Scandix odorata.*

From the *number of pairs,* pinnate leaves are termed,—

184. *Biguga;* as in *Mimosa nodosa.*

185. *Triguga;* as in *Cassia emarginata.*

186. *Quadriguga;* as in *Cassia longisiliqua.*

187. *Quinquiguga;* as in *Cassia occidentalis.*

188. *Multiguga;* as in *Cassia javanica.*

The difference in the *termination* of a pinnate leaf,—

189. *Impari-pinnate,* with an odd or terminal leaflet; as *Rosa centifolia.*

190. *Abrupti-pinnate,* with a terminal leaflet; as in *Orobus tuberosus.*

191. *Cirrhosi-pinnate,* when furnished with a tendril in place of an odd leaflet; as in the pea and vetch tribe.

From the mode of *adhesion of the leaflets* arise,—

192. *Oppositely-pinnate,* when the leaflets are opposite, or in pairs; as in *Sium angustifolium.*

193. *Alternately-pinnate,* when alternate; as in *Vicia sativa.*

194. *Interruptedly-pinnate,* when the principal leaflets are arranged alternately with an intermediate series of smaller ones; as in *Spiræa ulmaria.*

195. *Decurrently-pinnate,* when the leaflets are decurrent; as in *Eryngium campestre.*

196. *Jointedly-pinnate,* with apparent joints in the common footstalk; as in *Fagara tragodes.*

197. *Petiolato-pinnate,* the leaflets on footstalks; as in *Robinia pseudacacia.*

198. *Alate-pinnate,* when the footstalk has little wings between the leaflets.

199. *Sessile-pinnate,* with leaflets within any petiole.

200. *Conjugate-pinnate,* confluent; the leaflets growing somewhat together at their margins.

From their *bipinnation,* pinnates leaves are,—

201. *Bigeminate,* two-paired; as in *Mimosa unguis cate.*

202. *Trigeminate,* or *triplicato-geminate,* thrice paired; as in *Mimosa tergemina.*

From the *tripinnation,*—

203. *Doubly-ternate,* or *duplicato-ternate,* when the common footstalk supports these secondary petioles on its apex, and each of these support three leaflets; as in *Epimedium alpinum.*

204. *Triternate,* or *triplicato-ternate,* when the common petiole supports on its apex three secondary footstalks, each of which supports three ternary ones, and every one of these three leaflets; as in *Aquilegia vulgaris,* and *Fumaria enneaphylla.*

205. *Multiplicato pinnate,* there being more than three orders; as in *Ruta hortensis.*

Pinnæ, are the leaflets of pinnate leaves.

206. *Pinullæ*, the leaflets of the double and triple range of pinnate leaves.

LEÆ'NA. (From λεαινα, a lioness.)

1. The lioness.

2. The name of a plaster, so called from its great power.

LEAFLET. See *Foliolum.*

LEAFSTALK. See *Petiolus.*

LEAFY. See *Foliaceus.*

LEAKE, John, was born in Cumberland. He published a *Dissertation on the Lisbon Diet Drink.* In 1765, he originated the plan for the Westminster Lying-in Hospital, and purchased a piece of ground for the purpose. He published a volume of *Practical Observations on Child-bed Fever; Medical Instructions*, concerning the diseases of women; in two volumes, which passed through several editions; and some other works.

LEANNESS. *Extenuatio corporis.* A symptom of many organic diseases, but particularly of the genera called tabes and atrophia.

Leather-like. See *Coriaceus.*

LE CLERC, Daniel, was born at Geneva in 1652. He published, in conjunction with Mangets, a *Bibliotheca Anatomica*, in two volumes, 1685; but his most celebrated work is the *Histoire de la Médecine*, from the earliest times to that of Galen, which evinces immense erudition. He afterwards added a plan for continuing it to the middle of the 17th century: but Dr. Friend has completed this part of the task on a much better method. Le Clerc also published an account of certain worms occurring in men and animals.

LE DRAN, Henry Francis, was born at Paris in 1685. In 1730, he published on lithotomy, and gave many valuable improvements on former methods of performing the lateral operation. His surgical observations contain also much valuable practical matter; and his *Treatise on Gun-shot Wounds* is remarkable for the bold and successful measures which he adopted. He published likewise a *Treatise on Operations;* another called *Surgical Consultations;* and sent several papers of considerable merit to the academy of surgeons, which appear in their Memoirs.

LE'DUM. (*um, i.* n.; a name adopted from the Greeks, whose ληδον is generally believed to be a species of *Cistus.*) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

Ledum palustre. The systematic name of the *Rosmarinus sylvestris*, and *Cistus ledon* of the shops. The plant has a bitter sub-astringent taste, and was formerly used in Switzerland in the place of hops. Its medicinal use is confined to the Continent, where it is occasionally given in the cure of hooping-cough, sore throat, dysentery, and exanthematous diseases.

LEECH. *Hirudo. Bdella.* A genus of insects of the order *Vermes.* The body moves either forward or backward. There are several species, principally distinguished by their colour; but that most known to medical men is the *hirudo medicinalis*, or medicinal leech, which grows to the length of two or three inches. The body is of a blackish brown colour, marked on the back with six yellow spots, and edged with a yellow line on each side; but both the spots and lines grow faint, and almost disappear, at some seasons. The head is smaller than the tail, which fixes itself very firmly to any thing the creature pleases. It is viviparous, and produces but one young one at a time, which is in the month of July. It is an inhabitant of clear running waters, and is well known for its use in bleeding. The species most nearly approaching this, and which it is necessary to distinguish, is the *hirudo sanguisuga*, or horse-leech. This is larger than the former; its skin is smooth and glossy; the body is depressed, the back is dusky; and the belly is of a yellowish green, having a yellow lateral margin. It inhabits stagnant waters.

The leech's head is armed with a sharp instrument that makes three wounds at once. They are three sharp tubercles, strong enough to cut through the skin of a man, or even of an ox, or horse. The mouth is, as it were, the body of the pump, and the tongue, or fleshy nipple, the sucker. By the working of this piece of mechanism, the blood is made to rise up to the conduit which conveys it to the animal's stomach, which is a membranaceous skin, divided into twenty-four small cells. The blood which is sucked out is there preserved for several months, almost without coagulating, and proves a store of provision to the animal.

The *hirudo medicinalis* is the only species used in medicine; being applied to the skin, in order to draw off blood. With this view they are employed to bleed young children, and for the purposes of topical bleeding, in cases of inflammation, fulness, or pain. They may be employed in every case where topical bleedings are thought necessary, or where venesection cannot be performed. If the leech does not fasten, a drop of sugared milk is put on the spot it is wished to fix on, or a little blood is drawn by means of a slight puncture: after which it immediately settles. The leech, when fixed, should be watched, lest it should find its way into the anus, when used for the hæmorrhoids, or penetrate into the œsophagus, if employed to draw the gums; otherwise it might fix upon the stomach or intestines. In such a case, the best and quickest remedy is to swallow some salt; which is the method practised to make it loose its hold when it sucks longer than is intended. The discharge occasioned by the puncture of a leech after the animal falls off, is usually of more service than the process itself. When too abundant, it is easily stopped with brandy, vinegar, or other styptics, or with a compress of dry linen rags, bound strongly on the bleeding orifice. They are said to be very restless before a change of weather, if confined in glasses, and to fix themselves above the water on the approach of a fine day.

. As these little animals are depended on for the removal of very dangerous diseases, and as they often seem capriciously determined to resist the endeavours made to cause them to adhere, the following directions are added, by which their assistance may, with more certainty, be obtained.

The introducing a hand, to which any ill-flavoured medicine adheres, into the water in which they are kept, will be often sufficient to deprive them of life; the application of a small quantity of any saline matter to their skin, immediately occasions the expulsion of the contents of their stomach; and what is most to our purpose, the least flavour of any medicament that has been applied, remaining on the skin, or even the accumulation of the matter of perspiration, will prevent them from fastening. The skin should therefore, previous to their application, be very carefully cleansed from any foulness, and moistened with a little milk. The method of applying them is by retaining them to the skin by a small wine-glass, or the bottom of a large pill-box, when they will in general, in a little time, fasten themselves to the skin. On their removal, the rejection of the blood they have drawn may be obtained by the application of salt externally: but it is to be remarked, that a few grains of salt are sufficient for this purpose; and that covering them with it, as is sometimes done, generally destroys them.

LEEK. See *Allium porrum.*

Le'gna. (From λεγνον, a fringed edge.) The extremities of the pudenda muliebria.

LEGU'MEN. (*en, inis.* n.; from *lego*, to gather: so called because they are usually gathered by the hand.) A legume, or shell of a seed. A peculiar solitary fruit of the pea kind, formed of two oblong valves, without any longitudinal partition, and bearing the seeds along one of its margins only.

From the figure it is called,—

1. *Teres,* round; as in *Phaseolus radiatus.*
2. *Lineare;* as in *Phaseolus vexillatus.*
3. *Compressum;* as in *Pisum sativum.*
4. *Capitatum;* as in *Phaseolus mungo.*
5. *Aciniforme;* as in *Phaseolus lunatus.*
6. *Ovatum;* as in *Lotus hirsutus,* and *græcus.*
7. *Inflatum,* a cavity filled with air; as in *Astragalus vesicarius,* and *exscapus.*
8. *Cochleatum,* spiral; as in *Medicago polymorpha,* and *marina.*
9. *Lunatum;* as in *Medicago falcata.*
10. *Obcordatum;* as in *Polygala.*
11. *Contortum;* as in *Medicago sativa.*
12. *Quadrangulatum;* as in *Dolychos tetragonolobus.*
13. *Canaliculatum,* the upper suture deeply hollowed; as in *Lathyrus sativus.*
14. *Isthmis interceptum;* as in *Coronilla.*
15. *Echinatum;* as in *Glycyrrhiza echinata.*
16. *Rhombeum;* as in *Cicer aristinum.*

From its insertion,—

1. *Pendulum;* as in *Phaseolus vulgaris.*
2. *Pedicellatum;* as in *Viscia sepium.*

From its substance,—

1. *Membranaceum;* as in *Phaseolus vulgaris.*
2. *Carnosum;* as in *Cynometra cauliflora.*
3. *Coriaceum,* dry and fleshy; as in *Ceratonia siliqua,* and *Lupinus.*

From the number of seeds,—

1. *Monospermum;* as in *Medicago lupulina.*
2. *Dispermum;* as in *Glycine tomentosa.*
3. *Trispermum;* as in *Trifolium reflexum.*
4. *Tetraspermum;* as in *Trifolium repens.*
5. *Polyspermum;* as in *Trifolium lupinaster.*

LEGUMINOUS. (*Leguminosus;* from *legumen.*) Appertaining to a legume.

Lei'chen. See *Lichen.*

LEIENTE'RIA. See *Lienteria.*

LEIPOPSY'CHIA. (*a, æ.* f.; from λειπω, to leave, and ψυχη, life.) A swoon. See *Syncope.*

Leipopy'ria. (From λειπω, to leave, and πυρ, heat.) An ardent fever, in which the internal parts are much heated, while the external parts are cold.

LEIPOTHY'MIA. (*a, æ.* f.; from λειπω, to leave, and θυμος, the mind.) See *Lipothymia.*

Le'me. (From λα, much, and μυω, to wink.) A constant winking of the eyes.

LEMERY, Nicholas, was born at Rouen in 1645. In 1675 he published his *Cours de Chymie,* which passed rapidly through numerous editions; and so great was his reputation, that he acquired a fortune by the sale of his preparations, some of which he kept secret. In 1697 he published his *Pharmacopée Universelle,* followed the year after by his *Dictionnaire Universel des Drogues simples,* which, though with many imperfections, proved of considerable utility. On the re-establishment of the Academy of Sciences, he was made associate chemist, and read before that body his papers on antimony, which were printed in 1707.

LEMERY, Louis, son of the preceding, was born at Paris in 1677. He sent several papers to the Academy of Sciences, which appeared in their Memoirs. He published also *Traité des Aliments,* which was frequently reprinted; *A Dissertation on the Nourishment of Bones,* refuting the idea of its being effected by the marrow; and *Three Letters on the Generation of Worms.*

Lemithocho'rton. See *Fucus.*

Le'mma. (From λεπω, to decorticate.)
1. The bark of a tree.
2. The skin.

Le'mnius. (From *Lemnos,* whence it is brought.) See *Bole.*

LEMON. See *Citrus.*

Lemon, acid of. See *Citric* and *Oxalic acid.*

Lemon scurvy-grass. See *Cochlearia.*

LENIENS. (From *lenio,* to assuage.) Lenient. A medicine which abates irritation.

LENITIVE. (*Lenitivus;* from *lenis,* gentle.) Medicines which gently palliate diseases. Gentle: applied to a purgative.

Lenitive electuary. A preparation com-

posed chiefly of senna and some aromatics, with the pulp of tamarinds. See *Confectio sennæ*.

LENS. (*Lens, tis.* f.; *à lentore*, from its glutinous quality.) 1. The lentil. See *Ervum lens*.

2. See *Crystalline lens*.

LENTICULA. (*a, æ.* f.; dim. of *lens*, a lentil.) 1. A smaller sort of lentil.

2. A freckle, or small pustule, resembling the seeds of lentil.

3. A surgical instrument employed for removing the jagged particles of bone from the edge of the perforation made in the cranium with the trephine.

Lenticula marina. See *Fucus natans*.

LENTICULAR. *Lenticularis.* Spherical, or convex on both sides, resembling the seed called a lentil: applied to some plants, ganglia, &c.

LENTICULA'RIA. (From *lenticula*.) A species of lentil.

LENTI'GO. (*o, inis.* f.; from *lens*, a lentil: so named from its likeness to lentil-seeds.) A freckle on the skin.

LENTIL. See *Ervum lens*.

Lentil, sea. See *Fucus natans*.

LENTI'SCUS. (*us, i.* f.; from *lentesco*, to become clammy: so called from the gumminess of its juice.) The mastich-tree.

LE'NTOR. (*or, oris.* m.; from *lentus*, clammy.) A viscidity or siziness of any fluid.

LEONI'NUS. (From *leo*, the lion.) A sort of leprosy.

LEONTI'ASIS. (*is, is.* f.; from λεων, a lion: so called because it is said lions are subject to it.) An obsolete name for a species of leprosy.

LEO'NTODON. (*on, ontis.* m.; from λεων, the lion, and οδους, a tooth: so called from its supposed resemblance.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*. The dandelion.

Leontodon taraxacum. The dandelion or pissabed. Called also, *Dens leonis*. *Leontodon—caule squamis inferne reflexis, foliis runcinatis, denticulatis, lævibus*, of Linnæus. The young leaves of this plant, in a blanched state, have the taste of endive, and make an excellent addition to those plants eaten early in the spring as salads; and Murray informs us that, at Goëttingen, the roots are roasted and substituted for coffee by the poorer inhabitants, who find that an infusion prepared in this way can hardly be distinguished from that of the coffee-berry. The expressed juice of dandelion is bitter and somewhat acrid; but that of the root is bitterer, and possesses more medicinal power than any other part of the plant. It has been long in repute as a detergent and aperient, and its diuretic effects may be inferred from the vulgar name it bears in most of the European languages, *quasi lecti minga et urinaria herba dicitur*; and there are various proofs of its efficacy in jaundice, dropsy, consumption, and some cutaneous disorders. The leaves, roots, flowers, stalks, and juice of dandelion, have all been separately employed for medical purposes, and seem to differ rather in degree of strength than in any essential property; therefore the expressed juice, or a strong decoction of the roots, have most commonly been prescribed, from one ounce to four, two or three times a day. The plant should be always used fresh: even extracts prepared from it appear to lose much of their power by keeping.

LEONTOPO'DIUM. (*um, ii.* n.; from λεων, a lion, and πους, a foot: so named from its supposed resemblance.) The herb lion's foot, or *Filago leontopodium*.

LEONU'RUS. (*us, i.* f.; from λεων, a lion, and ουρα, a tail: so named from its likeness.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*. Lion's tail.

2. The name, in some pharmacopœias, for the lion's tail. See *Leonurus cardiaca*.

Leonurus cardiaca. The mother-wort: called also, *Agripalma gallis*, *Marrubium*, and *Cardiaca crispa*.

Leonurus—foliis caulinis lanceolatis, trilobis, of Linnæus. The leaves of this plant have a disagreeable smell and a bitter taste, and are said to be serviceable in disorders of the stomachs of children, to promote the uterine discharge, and to allay palpitation of the heart.

Leopard's bane. See *Arnica montana*.

LEPI'DIUM. (*um, ii.* n.; from λεπις, a scale: so named from its supposed usefulness in cleansing the skin from scales and impurities.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliculosa*.

Lepidium iberis. *Iberis. Cardamantica.* Sciatica cresses. This plant possesses a warm, penetrating, pungent taste, like unto other cresses, and is recommended as an antiscorbutic, antiseptic, and stomachic.

Lepidium sativum. *Nasturtium hortense.* Dittander. This plant possesses warm, nervine, and stimulating qualities, and is given as an antiscorbutic, antiseptic, and stomachic, especially by the lower orders.

Lepidosarco'ma. (From λεπις, a scale, and σαρξ, flesh.) A scaly tumour.

LEPIDOSIS. (*is, is.* m.; from λεπις-δος, *squamma*, a scale.) Scale-skin.

LE'IPSMA. (From λεπιζω, to decorticate.) Decortication. A peeling off of the skin.

LEPORINUS. (From *lepus*, a hare.) Leporine, or hare-like. Applied to some malformations, diseases, and parts, from their resemblance to *labium leporinum*, &c.

LE'PRA. (*a, æ.* f.; from λεπρος, *scaber, vel asper ex squammatis decedentibus*: named from its appearance.) The leprosy. Dr. Willan describes this disease as characterised by scaly patches, of different sizes, but having always nearly a circular form. In this country, three varieties of the disease are observed, which he has described under the names of *Lepra vulgaris*, *Lepra alphos*, and *Lepra nigricans*.

1. The *Lepra vulgaris* exhibits first small

distinct elevations of the cuticle, which are reddish and shining, but never contain any fluid; these patches continue to enlarge gradually, till they nearly equal the dimensions of a crown-piece. They have always an orbicular, or oval form; are covered with dry scales, and surrounded by a red border. The scales accumulate on them, so as to form a thick prominent crust, which is quickly reproduced, whether it fall off spontaneously, or may have been forcibly detached. This species of lepra sometimes appears first at the elbow, or on the fore-arm; but more generally about the knee. In the latter case, the primary patch forms immediately below the patella; within a few weeks, several other scaly circles appear along the fore part of the leg and thigh, increasing by degrees till they come nearly into contact. The disease is then often stationary for a considerable length of time. If it advance further, the progress is towards the hip and loins; afterwards to the sides, back, shoulders, and, about the same time, to the arms and hands. In the greater number of cases, the hairy scalp is the part last affected; although the circles formed on it remain for some time distinct, yet they finally unite, and cover the whole surface on which the hair grows with a white scaly incrustation. This appearance is attended, more especially in hot weather, with a troublesome itching, and with a watery discharge for several hours, when any portion of the crust is detached, which takes place from very slight impressions. The pubes in adults is sometimes affected in the same manner as the head: and if the subject be a female, there is usually an internal *pruritus pudendi*. In some cases of the disorder, the nails, both of the fingers and toes, are thickened, and deeply indented longitudinally. When the lepra extends universally, it becomes highly disgusting in its appearance, and inconvenient from the stiffness and torpor occasioned by it in the limbs. The disease, however, even in this advanced stage, is seldom disposed to terminate spontaneously. It continues nearly in the same state for several years, or sometimes during the whole life of the person affected, not being apparently connected with any disorder of the constitution.

2. *Lepra alphos*. The scaly patches in the alphos are smaller than those of the lepra vulgaris, and also differ from them in having their central parts depressed or indented. This disorder usually begins about the elbow, with distinct, eminent asperities, of a dull red colour, and not much longer than papillæ. These, in a short time, dilate to nearly the size of a silver penny. Two or three days afterwards, the central part of them suffers a depression, within which small white powdery scales may be observed. The surrounding border, however, still continues to be raised, but retains the same size and the same red colour as at first. The whole of the fore-arm, and sometimes the back of the hand, is spotted with similar patches; they seldom become confluent, excepting round the elbow, which, in that case, is covered with an uniform crust. This affection appears in the same manner upon the joint of the knee, but without spreading far along the thigh or leg. Dr. Willan has seldom seen it on the trunk of the body, and never on the face. It is a disease of long duration, and not less difficult to cure than the foregoing species of lepra: even when the scaly patches have been removed by persevering in the use of suitable applications, the cuticle still remains red, tender, and brittle, very slowly recovering its usual texture. The alphos, as above described, frequently occurs in this country.

3. The *Lepra nigricans* differs little from the lepra vulgaris, as to its form and distribution. The most striking difference is in the colour of the patches, which are dark and livid. They appear first on the legs and fore-arms, extending afterwards to the thighs, loins, neck, and hands. Their central part is not depressed, as in the alphos. They are somewhat smaller in size than the patches of the lepra vulgaris, and not only is the border livid or purplish, but the livid colour of the base likewise appears through the scaly incrustation, which is seldom very thick. It is further to be observed, that the scales are more easily detached than in the other forms of lepra, and that the surface remains longer excoriated, discharging lymph, often with an intermixture of blood, till a new incrustation forms, which is usually hard, brittle, and irregular. The lepra nigricans affects persons whose occupation is attended with much fatigue, and exposes them to cold or damp, and to a precarious or improper mode of diet, as soldiers, brewers, labourers, butchers, stage-coachmen, scullermen, &c.; some women are also liable to it, who are habituated to poor living and constant hard labour.

It would be superfluous to enumerate the catalogue of useless medicines which have been recommended from ancient times for the cure of lepra. There is no one remedy, nor any invariable plan of treatment, which will succeed in lepra, under all the circumstances of its appearance in different instances; and great errors are committed by prescribing for the name of the disease.

In the less irritable conditions of the leprous eruption, such as the alphos usually exhibits, as well as a few cases of the vulgaris, a gently stimulant mode of treatment, at least externally, is requisite; though in all cases of lepra the diet should be light and moderate, and heating liquors should be avoided, especially malt liquors and spirits: for every indulgence in these points will be felt in the aggravation of the symptoms. A frequent use of the warm bath, with which a moderate degree of friction may be combined, contributes to remove the scales, and to soften the skin; or, if the eruption be confined to the extremities, local ablution and friction may be sufficient. These cases are benefited by the use of the sulphur waters of Harrowgate, Leam-

ington, Crofton, and other well-known springs, both internally and externally, and by the warm sea-water bath. In fact, these gently stimulant ablutions are often sufficient, if persevered in during several weeks, to remove the complaint.

But if the scales adhere tenaciously, or are accumulated into thick crusts, then some more active lotion must be conjoined with the warm ablution, or with the application of steam, in order to clear the surface. Lotions of diluted alcohol, of sulphuretted potash, or the decoction of dulcamara, will aid the exfoliation; and the thick crusts may be softened and loosened by lotions containing a portion of the liquor potassæ, or of the muriatic acid. When these are removed, the cuticle may be restored gradually to its healthy condition by the unguentum picis, or the unguentum hydrargyri nitratis diluted with saturnine cerate, or simple ointment; or lotions containing a small proportion of the oxymuriate of mercury may be substituted. The ointments should be applied at night, and washed off in the morning with warm water, or a slight saponaceous lotion.

The same cases will be accelerated in their progress towards a cure, by the use of those internal remedies which tend to support the strength and to stimulate the cutaneous vessels. For this purpose the arsenical solution is often extremely beneficial, in doses of four or five drops, which may be slowly increased to eight, and persevered in for a month or more. Pitch, administered in the form of pills, is productive of a similar good effect, where the cutaneous circulation is very inert; but both these medicines are liable to aggravate the eruption, where it is connected with much irritability of the skin. The solution of oxymuriate of mercury has appeared to have some efficacy in these inert states; and in thin and delicate girls, of relaxed habits, affected with the lepra alphos, the vinum ferri, or the tartrate of iron, has been taken with much advantage.

One of the most effectual remedies for lepra, however, under all its varieties, is the decoction of the leaves and twigs of the solanum dulcamara, which was introduced to the notice of British practitioners by Sir Alexander Crichton. This medicine is at first administered in doses of two or three ounces thrice every day, which are gradually augmented until a pint is at length consumed daily. When there is a degree of torpor in the superficial vessels, the same decoction, made with a larger proportion of the shrub, is advantageously employed as a lotion; but if there is much inflammatory disposition, this and every other external stimulus must be prohibited.

Where this irritable state of the disease exists indeed, and it is the most frequent, nothing more stimulating than tepid water, or thin gruel, can be used for the purposes of ablution; and the arseniates, pitch, &c. above mentioned, must be excluded. The disease, under this condition, will be certainly aggravated by sea-bathing, by the external use of the strong sulphureous waters, or of any irritant; but it will be alleviated by the internal employment of sulphur, with soda or nitre, or the hydrarg. sulphuratus niger with an antimonial, especially when conjoined with the decoction of dulcamara. The caustic potash, or liquor potassæ, in the dose of twenty or thirty drops, alone, or in combination with the precipitated sulphur, is likewise beneficial; and the tinctura veratri, given in such doses as not to disorder the bowels, has occasionally removed this state of the disease.

When the skin is highly inflamed, thickened, and stiff, of a vivid red colour, intermixed with a yellowish hue, where the cuticle is separating in large flakes, the heat, pain, and itching are often extremely troublesome, and the motion of the limbs is almost impracticable. The most effectual relief is obtained, in these cases, by gently besmearing the parts with cream, or a little fresh and well-washed lard, or butter.

Lepra græcorum. The lepra vulgaris, alphos, and nigricans, have all been so denominated. See *Lepra.*

LEPRIASIS. (From λεπρος, *scaber.*) The leprosy.

LEPROSY. See *Lepra.*

LEPROUS. (*Leprosus;* from *lepra,* the leprosy.) 1. Appertaining to the disease called *lepra.*

2. In *Botany,* applied to the leprous-like appearance on crustaceous lichens.

Leptu'nticus. (From λεπτος, thin.) Thin: attenuating.

Lepty'smus. (From λεπτος, slender.) Attenuation, or the making a substance less solid.

LEPUS. (*us, i.* m.) The name of a genus of animals of the order *Griles,* in the class *Mammalia.* The hare.

Lepus cuniculus. The systematic name of the rabbit; the flesh of which, when young and tender, is easy of digestion.

Lepus timidus. The systematic name of the common hare; the flesh of which is considered as a delicacy, and easy of digestion.

Le'ros. (From ληρεω, to trifle.) A slight delirium.

LETHARGY. (*Lethargus, i.* m.; from ληθη, forgetfulness: so called because with it the person is forgetful.) A heavy and constant sleep, with scarcely any intervals of waking: when awakened, the person answers, but, ignorant or forgetful of what he said, immediately sinks into the same state of sleep. Lethargy is very nearly allied to mild forms of apoplexy, and is frequently produced by torpid movement and congestion of blood in the vessels of the brain. Severe exertions of the body and mind, and retrocedent gout, are also causes of it. The common causes of sleep, therefore, whether natural or morbid, are in many cases causes of lethargy. The proximate cause of sleep is to be sought for in a torpitude or exhaustion of sensorial power from the ordinary stimulants of the day. The same effect may result from a defective supply

of sensorial power, as well as by exhaustion; and, consequently, the torpitude of sleep may ensue whenever such deficient action or energy exists, even where there is no exposure to its ordinary exciting causes: and this it is which constitutes the real difference between genuine lethargy and sound healthy sleep. It is most probable that the diseases called cataphora, typhomania, and coma vigil are modifications of lethargy.

The cure of lethargy is to be attempted by a diligent search into the cause, the removal of which generally establishes health. If any suppressed discharge or eruption can be traced, we should endeavour to reproduce it by all possible means; and if any foulness of blood or of habit exists, general and topical bleedings, purgatives, and strong exercise must be resorted to, with an abstemious plan of diet. Genuine lethargy is sometimes and frequently the result of a determination of blood to the head; in all of which cases topical bleedings, by cupping, and purgatives, are required, and a rigid perseverance in proper exercise and spare diet. On the other hand, it is also, and frequently, a purely nervous affection; and in these cases stimulants and a generous diet are proper, with blisters, and ammoniated nervous tonics.

LETHE'A. The name of the poppy.

LETHIA. (*a, æ.* m.) A new alkali found in spodumene.

LETI'TIA. Joy. See *Pathemata animi.*

LETTUCE. See *Lactuca.*

LEUCACA'NTHA. (*a, æ.* f.; from λευκος, white, and ακανθα, a thorn: so named from its white blossom.) The cotton-thistle.

LEUCA'NTHEMUM. (*um, i.* n.; from λευκος, white, and ανθεμος, a flower: so called from its white floret.) See *Chrysanthemum leucanthemum.*

LEUCASMUS. (*us, i.* m. Λευκασμος, whiteness: so named from its appearance.) Veal-skin. See *Vitiligo.*

LEUCE. (Λευκος, white.) A species of leprosy. See *Alphus.*

LEUCELE'CTRUM. (*um, i.* n.; from λευκος, white, and ηλεκτρον, amber.) White amber.

LEUCINE. (From λευκος, white: so named from its appearance.) A white pulverulent matter obtained by digesting equal parts of beef fibre and sulphuric acid together, and, after separating the fat, diluting the acid mixture, and saturating with chalk, filtering and evaporating. A substance tasting like ozmazome is thus procured, which is to be boiled in different portions of alkohol. The alkoholic solutions, on cooling, deposit the white pulverulent matter, or *leucine.*

LEUCOLA'CHANUM. (From λευκος, white, and λαχανον, a herb: so named from its colour.) The *Valeriana sylvestris.*

LEUCO'MA. (*a, atis.* n.; from λευκος, white.) Leucoma and albugo are often used synonymously, to denote a white opacity of the cornea of the eye. Both of them, according to Scarpa, are essentially different from the nebula, for they are not the consequence of chronic ophthalmy, attended with varicose veins, and an effusion of a milky serum into the texture of the delicate continuation of the conjunctiva over the cornea, but are the result of violent acute ophthalmy. In this state, a dense coagulating lymph is extravasated from the arteries; sometimes superficially, at other times deeply into the substance of the cornea. On other occasions, the disease consists of a firm callous cicatrix on this membrane, the effect of an ulcer, or wound, with loss of substance. The term *albugo* strictly belongs to the first form of the disease, *leucoma* to the last, more particularly when the opacity occupies the whole, or the chief part, of the cornea.

LEUCONYMPHÆ'A. (*a, æ.* f.; from λευκος, white, and νυμφαια, the water-lily.) See *Nymphæa alba.*

LEUCOPHA'GIUM. (*um, ii.* n.; from λευκος, white, and φαγω, to eat.) A medicated white food.

LEUCOPHLEGMA'SIA. (*a, æ.* f.; from λευκος, white, and φλεγμα, phlegm.) Leucophlegmatic. A tendency in the system to a dropsical state, known by a pale colour of the skin, a flabby condition of the solids, and a redundancy of serum in the blood.

LEUCO'PIPER. (*er, eris.* n.; from λευκος, white, and πεπερι, pepper.) White pepper. See *Piper nigrum.*

LEUCORRHŒ'A. (*a, æ.* f.; from λευκος, white, and ρεω, to flow.) *Fluor albus.* The whites. A secretion of whitish or milky mucus from the vagina of women, arising from debility, and not from the venereal virus. This disease is marked by the discharge of a thin white or yellow matter from the uterus and vagina, attended likewise with some degree of fœtor, smarting in making water, pains in the back and loins, anorexia and atrophy. In some cases the discharge is of so acrid a nature, as to produce effects on those who are connected with the woman somewhat similar to venereal matter, giving rise to excoriations about the glans penis and præputium, and occasioning a weeping from the urethra.

To distinguish leucorrhœa from gonorrhœa, it will be very necessary to attend to the symptoms. In the latter, the running is constant, but in a small quantity; there is much ardor urinæ, itching of the pudenda, swelling of the labia, increased inclination to venery, and very frequently an enlargement of the glands in the groin: whereas in the former the discharge is irregular, and in considerable quantities, and is neither preceded by, nor accompanied with, any inflammatory affection of the pudenda.

Immoderate coition, injury done to the parts by difficult and tedious labours, frequent miscarriages, immoderate flowings of the menses, profuse evacuations, poor diet, an abuse of tea, and other causes, giving rise to general debility, or to a laxity of the parts more immediately concerned, are those which usually produce the whites, vulgarly so called from

the discharge being commonly of a milky white colour.

Fluor albus, in some cases, indicates that there is a disposition to disease in the uterus, or parts connected with it, especially where the quantity of the discharge is very copious, and its quality highly acrimonious. By some the disease has been considered as never arising from debility of the system, but as being always a primary affection of the uterus. Delicate women, with lax fibres, who remove from a cold climate to a warm one, are very apt to be attacked with it, without the parts having previously sustained any kind of injury.

The disease shows itself by an irregular discharge from the uterus and vagina of a fluid which, in different women, varies much in colour, being either of a white, green, yellow, or brown hue. In the beginning it is, however, most usually white and pellucid, and in the progress of the complaint acquires the various discolourations, and different degrees of acrimony, from whence proceeds a slight degree of smarting in making water. Besides the discharge, the patient is frequently afflicted with severe and constant pains in the back and loins, loss of strength, failure of appetite, dejection of spirits, paleness of the countenance, chilliness, and languor. Where the disease has been of long continuance, and very severe, a slow fever, attended with difficult respiration, palpitations, faintings, and swellings of the lower extremities, often ensues.

A perfect removal of the disorder will at all times be a difficult matter to procure; but it will be much more so in cases of long standing, and where the discharge is accompanied with a high degree of acrimony. In these cases, many disorders, such as prolapsus uteri, ulcerations of the organ, atrophy, and dropsy, are apt to take place, which in the end prove fatal.

Where the disease terminates in death, the internal surface of the uterus appears, on dissection, to be pale, flabby, and relaxed; and where organic affections have arisen, much the same appearances are to be met with as have been noticed under the head of menorrhagia.

LEUCO'RRHOIS. (From λευκος, white, and ρεω, to flow.) A discharge of mucus from the urethra or vagina.

LEVA'TOR. (*or*, *oris*. m.; from *levo*, to lift up.) A muscle the office of which is to lift up the part to which it is attached.

Levator anguli oris. *Abducens labiorum*, of Spigelius. *Elevator labiorum communis*, of Douglas. *Caninus*, of Winslow. A muscle situated above the mouth, which draws the corner of the mouth upwards, and makes that part of the cheek opposite to the chin prominent, as in smiling. It arises thin and fleshy from the hollow of the superior maxillary bone, between the root of the socket of the first grinder and the foramen infra orbitarium, and is inserted into the angle of the mouth and under lip, where it joins with its antagonist.

Levator ani. *Levator magnus seu internus*, of Douglas. A muscle of the rectum. It arises from the os pubis, within the pelvis, as far up as the upper edge of the foramen thyroideum and joining of the os pubis with the os ischium, from the thin tendinous membrane that covers the obturator internus and coccygæus muscles, and from the spinous process of the ischium. From these origins all round the inside of the pelvis, its fibres run down like rays from the circumference to a centre, to be inserted into the sphincter ani, acceleratores urinæ, and anterior part of the two last bones of the os coccygis, surrounding the extremity of the rectum, neck of the bladder, prostate gland, and part of the vesiculæ seminales. Its fibres, joining with those of its fellow, form a funnel-shaped hole, that draws the rectum upwards after the evacuation of the fæces, and assists in shutting it. The levatores ani also sustain the contents of the pelvis, and assist in ejecting the semen, urine, and contents of the rectum, and perhaps, by pressing upon the veins, contribute greatly to the erection of the penis.

Levator labii inferioris. A muscle of the mouth situated below the lips. *Levator menti*, of Albinus. *Incisivus inferior*, of Winslow. *Elevator labii inferioris proprius*, of Douglas. It arises from the lower jaw, at the roots of the alveoli of two incisor teeth, and the cuspidatus, and is inserted into the under lip and skin of the chin.

Levator labii superioris alæque nasi. *Elevator labii superioris proprius*, of Douglas. *Incisivus lateralis et pyramidalis*, of Winslow. A muscle of the mouth and lips, that raises the upper lip towards the orbit, and a little outwards; it serves also to draw the skin of the nose upwards and outwards, by which the nostril is dilated. It arises by two distinct origins: the first, broad and fleshy, from the external part of the orbitar process of the superior maxillary bone, immediately above the foramen infra orbitarium; the second, from the nasal process of the superior maxillary bone, where it joins the os frontis. The first portion is inserted into the upper lip and orbicularis muscle; the second, into the upper lip and outer part of the ala nasi.

Levator labii superioris proprius. *Musculus incisivus*. A muscle of the upper lip. It arises under the edge of the orbit, and is inserted into the middle of the lip.

Levator oculi. See *Rectus superior oculi.*

Levator palati. A muscle situated between the lower jaw and the os hyoides laterally. *Levator palati mollis*, of Albinus. *Petrosalpingo-staphilinus, vel salpingo-staphilinus internus*, of Winslow. *Salpingo-staphilinus*, of Valsalva. *Pterigo-staphilinus externus vulgo*, of Douglas. *Spheno-staphilinus*, of Cowper. It arises tendinous and fleshy from the extremity of the petrous portion of the temporal bone, where it is perforated by the Eustachian tube, and also from the membraneous part of the same tube, and is inserted into the whole length of the velum pendulum palati, as far as the root of the uvula, and unites with its fellow. Its use is to draw the velum pen-

dulum palati upwards and backwards, so as to shut the passage from the fauces into the mouth and nose.

LEVATOR PALATI MOLLIS. See *Levator palati.*

LEVATOR PALPEBRÆ SUPERIORIS. *Aperiens palpebrarum rectus. Apertor oculi.* A proper muscle of the upper eyelid, that opens the eyes by drawing the eyelid upwards. It arises from the upper part of the foramen opticum of the sphenoid bone, above the rectus superior oculi, near the trochlearis, and is inserted by a broad thin tendon into the cartilage that supports the upper eyelid.

LEVATOR PARVUS. See *Transversus perinei.*

LEVATOR SCAPULÆ. A muscle situated on the posterior part of the neck, that pulls the scapula upwards and a little forwards. This name, which was first given to it by Riolanus, has been adopted by Albinus. Douglas calls it *elevator seu musculus patientiæ;* and Winslow, *angularis, vulgo levator proprius.* It is a long muscle, nearly two inches in breadth, and is situated obliquely under the anterior edge of the trapezius. It arises tendinous and fleshy from the transverse processes of the four, and sometimes five superior vertebræ colli, by so many distinct slips, which soon unite to form a muscle that runs obliquely downwards and outwards, and is inserted by a flat tendon into the upper angle of the scapula. Its use is to raise the scapula upwards and a little forwards.

LEVIGATION. (*Lævigatio, onis.* f.; from *lævigo,* to make smooth.) The reduction of a hard substance, by triture, to an impalpable powder.

LEVI'STICUM. (*um, i.* n.; from *levo,* to assuage: so called from the relief it gives in painful flatulencies.) See *Ligusticum levisticum.*

LEVRET, ANDREW, a French surgeon and accoucheur. He published several works, which went through various editions and translations, mostly on obstetrical subjects; but there is one on the *Radical Cure of Polypi* in different parts of the body.

LEXIPHA'RMIC. (*Lexipharmicus;* from ληγω, to terminate, and φαρμακον, poison.) A medicine which resists or destroys the power of poison.

LEXIPY'RETUS. (From ληγω, to make cease, and πυρετος, a fever.) A febrifuge medicine.

LIBA'DIUM. (From λιβαζω, to make moist: so called because it grows in watery places.) See *Chironia centaurium.*

LIBANO'TIS. (*is, idis.* f.; from λιβανος, frankincense: so called from its resemblance in smell to frankincense.) Rosemary.

LI'BANUS. (*us, i.* m.; from *Libanon,* a mountain in Syria, where it grows.)

1. The *Pinus cedrus,* or cedar of Lebanon.

2. The frankincense tree, or *Pinus abies.*

LIBER. (*er, eri.* m.) The inner bark. Immediately under the cuticle of plants and trees is a succulent cellular substance, for the most part of a green colour, at least of the leaves and branches, called by Du Hamel *enveloppe cellulaire,* and by Mirbel *tissue herbacé.* Under this is the bark, consisting of but one layer in plants or branches only one year old. In the older branches and trunks of trees, it consists of as many layers as they are years old, the innermost being called the *liber,* in which layer only the essential vital functions are carried on for the time being, after which it is pushed outwards with the cellular integument, and becomes, like that, a lifeless crust. — *Smith.*

LI'BOS. (From λειβω, to distil.) A rheum or defluxion from the eyes or nose.

LIBU'RNUM. (*um, i.* n.; from *Liburnia,* the country where it flourished.) The mealy-tree. See *Viburnum lantana.*

LICETO, FORTUNIO, was born in 1577. He was a very copious writer, having published above fifty treatises on different subjects, and displayed much erudition, but no great acuteness or originality. His treatise *De Monstrorum Causis, Naturâ, et Differentiis,* is best known.

LI'CHANUS. (From λειχω, to lick: so called because it is commonly used in licking up any thing.) The fore-finger.

LI'CHEN. (Λειχην, or λιχην. *Lichen, enis.* or *enos.* m.; a term, Dr. Mason Good observes, common to the Greek phytologists, as well as the Greek pathologists. By the former it is applied to an extensive genus of the algæ, or rather to many of its species; and it is conjectured by Pliny that the physicians applied it to this disease from the resemblance it produces, on the surface of the body, to many of the spotty and minutely tuberculated lichens which are found upon stones, walls, barks of trees, &c. Gorræus, however, derives it from λειχω, to lick, because it was supposed to be cured by being licked, or from its lambent or tongue-like form over different parts of the body.) The lichen.

I. In *Pathology,* a disease, defined, by Dr. Willan, an extensive eruption of papulæ affecting adults, connected with internal disorder, usually terminating in scurf, recurrent, not contagious. The varieties of lichen he considers under the denominations of *simplex, agrius, pilaris, lividus, tropicus, circumscriptus,* and *urticatus.*

The *lichen simplex* usually commences with headache, flushing of the face, loss of appetite, general languor, and increased quickness of the pulse. Distinct red papulæ arise first about the cheeks and chin, or on the arms; and, in the course of three or four days, the same appearance takes place on the neck, body, and lower extremities, accompanied with an unpleasant sensation of tingling, which is somewhat aggravated during the night. In about a week, the colour of the eruption fades, and the cuticle begins to separate; the whole surface is at lengh covered with scurfy exfoliations, which are particularly large, and continue longest in the flexures of the joints. The duration

of the complaint is seldom in any two cases alike; ten, fourteen, seventeen, or sometimes twenty days intervene betwixt the eruption and the renovation of the cuticle. The febrile state, or rather the state of irritation at the beginning of this disorder, is seldom considerable enough to confine the patient to the house. After remaining five or six days, it is generally relieved on the appearance of the eruption. This, as well as some other species of the lichen, occurs about the beginning of summer, or in autumn, more especially affecting persons of a weak and irritable habit; hence women are more liable to it than men. Lichen simplex is also a frequent sequel of acute diseases, particularly fever and catarrhal inflammation, of which it seems to produce a crisis.

Lichen circumscriptus is characterised by clusters or patches of papulæ, which have a well defined margin, and are of an irregularly circular form. Some of them are stationary for a week or two, and disappear; but others extend gradually, by new papulated borders, into large figured forms, which coalesce. As the borders extend, the central areæ become even, but continue slightly red and scurfy. Sometimes, before the scurf is removed, a new crop of papulæ arises, terminating like the former in exfoliations; and by these new eruptions the complaint is prolonged for several weeks. It may be excited either by internal or external causes of irritation. In adults it is occasionally produced by vaccination, and may be deemed a proof of the full affection of the constitution by the virus.

Little medicinal treatment is necessary for these species of lichen. It is sufficient that patients avoid heating themselves by much exercise or by stimulants, and take a light diet, with diluent drinks, and a gentle laxative occasionally. The diluted sulphuric acid is a grateful tonic to the stomach during the period of exfoliation; or a light chalybeate may be taken with advantage at the same period. All strong external applications are improper, especially preparations of mercury and of sulphur, which produce severe irritation. The ancients recommended that the parts should be besmeared every morning with saliva; and some demulcent lotion, as a substitute for this uncleanly expedient, prepared with the white of egg, or emulsion of almonds, will relieve the painful sensations of the patient.

The *Lichen agrius* is preceded by nausea, pain in the stomach, headache, loss of strength, and deep-seated pains in the limbs, with fits of coldness and shivering; which symptoms continue several days, and are sometimes relieved by the papulous eruption. The papulæ are distributed in clusters, or often in large patches, chiefly on the arms, the upper part of the breast, the neck, face, back, and sides of the abdomen; they are of a vivid red colour, and have a redness, or some degree of inflammation, diffused round them to a considerable extent, and attended with itching, heat, and a painful tingling. Dr. Willan has observed, in one or two cases where it was produced from imprudent exposure to cold, that an acute disease ensued, with great quickness of the pulse, heat, thirst, pains of the bowels, frequent vomiting, headache, and delirium. After these symptoms had continued ten days, or somewhat longer, the patient recovered, though the eruption did not return. The diffuse redness connecting the papulæ, and the tendency to become pustular, distinguish the lichen agrius from the lichen simplex, and the other varieties of this complaint, in which the inflammation does not extend beyond the basis of the papulæ, and terminates in scurf, or scales.

Lichen pilaris. This is merely a modification of the first species of lichen, and, like it, often alternates with complaints of the head, or stomach, in irritable habits. The peculiarity of the eruption is, that the small tubercles or asperities appear only at the roots of the hairs of the skin, being probably occasioned by an enlargement of their bulbs, or an unusual fulness of the blood-vessels distributed to them. This affection is distinguishable from the cutis anserina, by its permanency, by its red papulæ, and by the troublesome itching or tingling which attends it. If a part thus affected be violently rubbed, some of the papulæ enlarge to the size of wheals, but the tumour soon subsides again. The eruption continues more or less vivid for about ten days, and terminates, as usual, in small exfoliations of the cuticle, one of which surrounds the base of each hair. This complaint, as likewise the lichen agrius, frequently occurs in persons accustomed to drink largely of spirituous liquors undiluted.

Lichen lividus. The papulæ characterising this eruption are of a dark red, or livid hue, and somewhat more permanent than in the foregoing species of lichen. They appear chiefly on the arms and legs, but sometimes extend to other parts of the body. They are finally succeeded, though at very uncertain periods, by slight exfoliations of the cuticle, after which a fresh eruption is not preceded nor attended by any febrile symptoms. It principally affects persons of weak constitution, who live on a poor diet, and are engaged in laborious occupations. Young persons, and often children living in confined situations, or using little exercise, are also subject to the lichen lividus; and, in them, the papulæ are generally intermixed with petechiæ, or larger purple spots, resembling vibices. This circumstance points out the affinity of the lichen lividus with the purpura, or land-scurvy, and the connection is further proved by the exciting causes, which are the same in both complaints. The same method of treatment is likewise successful in both cases. They are presently cured by nourishing food, moderate exercise in the open air, along with the use of Peruvian bark and vitriolic acid, or the tincture of muriated steel.

Lichen tropicus. By this term is expressed

the *prickly heat*, a papulous eruption, almost universally affecting Europeans settled in tropical climates. The prickly heat appears without any preceding disorder of the constitution. It consists of numerous papulæ, about the size of a small pin's head, and elevated so as to produce a considerable roughness on the skin. The papulæ are of a vivid red colour, and often exhibit an irregular form, two or three of them being in many places united together; but no redness or inflammation extends to the skin in the interstices of the papulæ.

Dr. Bateman has introduced another species — *Lichen urticatus.* In its first appearance it is in irregular, inflamed wheals, so closely resembling the spots excited by the bites of bugs or gnats, as almost to deceive the observer. The inflammation, however, subsides in a day or two, leaving small, elevated, itching papulæ. While the first wheals are thus terminating, new ones continue to appear in succession, until the whole body and limbs are spotted with papulæ, which become here and there confluent, in small patches. This eruption is peculiar to children: it commences, in some cases, soon after birth, and sometimes later, and continues with great obstinacy for many months. Both the wheals and the papulæ are accompanied with intense itching, which is exceedingly severe in the night, occasioning an almost total interruption of sleep, and considerable loss of flesh.

Frequent tepid bathing, light covering, especially in bed, with the use of small doses of sulphur, or the hydrargyrus sulphuratus niger, internally, appear to relieve the symptoms. The skin will not bear stimulation, and is irritated even by a bath of too high temperature. When it has occurred in feeble and emaciated children, it is relieved by chalybeate medicines, as the vinum ferri, or the solution of the tartrate before mentioned. This combination of inflamed papulæ, with intense itching, unites the characters of the lichen and prurigo; an union which, it must be allowed, is likewise not unfrequent in young adult persons.

II. In *Botany*, the name of a genus of plants (applied by the Romans to a plant, which was supposed by them to cure the lichen or tetter,) in the Linnæan system. Class, *Cryptogamia;* Order, *Algæ.* There are several species, some of which are used in medicine.

Lichen aphthosus. *Muscus camutalis.* This plant is said to have a decided good effect in some complaints of the intestines, but is not used in the practice of this country.

Lichen arboreus pullus. See *Lichen olivarius.*

Lichen caninus. The systematic name of the ash-coloured ground liverwort. *Lichen terrestris. Lichen cinereus terrestris. Muscus caninus.* This cryptogamous plant has a weak, faint smell, and a sharpish taste. It was for a long time highly extolled as a medicine of singular virtue, in preventing and curing that dreadful disorder which is produced by the bite of rabid animals, but it is now deservedly forgotten.

Lichen cinereus terrestris. See *Lichen caninus.*

Lichen cocciferus. See *Lichen pyxidatus.*

Lichen coccineus. See *Lichen pyxidatus.*

Lichen islandicus. Iceland moss. The medicinal qualities of this plant have lately been so well established at Vienna, that it is now admitted into the materia medica of the London pharmacopœia. It is extremely mucilaginous, and to the taste bitter, and somewhat astringent. Its bitterness, as well as the purgative quality which it manifests, in its recent state, are in a great measure dissipated on drying, or may be extracted by a slight infusion in water; so that the inhabitants of Iceland convert it into a tolerably grateful and nutritive food. An ounce of this lichen, boiled a quarter of an hour in a pint of water, yielded seven ounces of a mucilage as thick as that procured by the solution of one part of gum-arabic in three of water.

The medical virtues of this lichen were probably first learned from the Icelanders, who employ it in its fresh state as a laxative; but when deprived of this quality, and properly prepared, we are told that it is an efficacious remedy in consumptions, coughs, dysenteries, and diarrhœas. Scopoli seems to have been the first who, of late years, called the attention of physicians to this remedy in consumptive disorders: and further instances of its success are related by Herz, Cramer, Tromsdorff, Ebeling, Paulisky, Stoll, and others, who bear testimony to its efficacy in most of the other complaints above mentioned. Dr. Herz says that, since he first used the lichen in dysentery, he found it so successful, that he never had occasion to employ any other remedy: it must be observed, however, that cathartics and emetics were always repeatedly administered before he had recourse to the lichen, to which he also occasionally added opium. Sir Alexander Crichton informs us, that, during seven months' residence at Vienna, he had frequent opportunities of seeing the lichen islandicus tried in phthisis pulmonalis at the general hospitals, and confesses, "that it by no means answered the expectation he had formed of it." He adds, however, "From what I have seen, I am fully convinced, in my own mind, that there are only two species of this disease where this sort of lichen promises a cure. The two species I hint at are the phthisis hæmoptoica, and the phthisis pituitosa, or mucosa. In several cases of these, I have seen the patients so far get the better of their complaints as to be dismissed the hospital cured; but whether they remained long so or not I cannot take upon me to say." That this lichen strengthens the di-

gestive powers, and proves extremely nutritious, there can be no doubt; but the great medicinal efficacy attributed to it at Vienna will not readily be credited at London. It is commonly given in the form of a decoction, an ounce and a half of the lichen being boiled in a quart of milk. Of this, a teacupful is directed to be drank frequently in the course of the day. If milk disagree with the stomach, a simple decoction of the lichen in water is to be used. Care ought to be taken that it be boiled over a slow fire, and not longer than a quarter of an hour.

LICHEN MARINUS. See *Ulva lactuca*.

LICHEN OLIVARIUS. Tree liverwort. *Lichen arboreus pullus*. An infusion of this is considered as strengthening to the lungs, and given in hæmorrhages, and against old coughs.

LICHEN PLICATUS. The systematic name of the *muscus arboreus*. This plant, we are informed by Linnæus, is applied by the Laplanders to parts which are excoriated by a long journey. It is slightly astringent, and is applied with that intention to bleeding vessels.

LICHEN PRUNASTRI. *Muscus arboreus*. This is astringent, and is used to strengthen the lungs.

LICHEN PULMONARIUS. *Lichen arboreum*. Pectoral moss. Tree lungwort. Oak lungs. Hazel crottles. The systematic name of the officinal *muscus pulmonarius quercinus*. *Pulmonaria arborea*. This sub-astringent and rather acid plant was once in high estimation in the cure of diseases of the lungs, especially coughs, asthmas, and catarrhs. Its virtues are similar, and in no way inferior to those of the lichen islandicus.

LICHEN PYXIDATUS. The systematic name of the cup-moss. *Muscus pyxidatus*. *Musculus pyxoides terrestris*. *Lichen pyxidatus major*. *Lichen coccineus*. The *Lichen cocciferus* and *pyxidatus*, very common little plants, are both used indifferently by the common people in this country in the cure of hooping-cough, in the form of decoction.

LICHEN ROCCELLA. Canary archel. Herb archel. *Roccella*. *Rocella tinctorum*. The systematic name of the roccella of the shops. This plant has been employed medicinally with success in allaying the cough attendant on phthisis, and in hysterical coughs. The principal use is as a blue dye. It is imported to us as it is gathered: those who prepare it for the use of the dyer grind it betwixt stones, so as thoroughly to bruise, but not to reduce it into powder, and then moisten it occasionally with a strong spirit of urine, or urine itself mixed with quicklime: in a few days, it acquires a purplish red, and, at length, a blue colour; in the first state it is called archel, in the latter lacmus or litmus.

Litmus is used in chemistry as a test, either staining paper with it, or by infusing it in water, when it is very commonly, but with great impropriety, called *tincture of turnsole*. The persons by whom this article was prepared formerly gave it the name of turnsole, pretending that it was extracted from the turnsole, *heliotropium tricoccum*, in order to keep its true source a secret. The tincture should not be too strong, otherwise it will have a violet tinge, which, however, may be removed by dilution. The light of the sun turns it red, even in close vessels. It may be made with spirit instead of water. This tincture, or paper stained with it, is presently turned red by acids; and if it be first reddened by a small quantity of vinegar, or some weak acid, its blue colour will be restored by an alkali.

LICHEN SAXATILIS. The systematic name of the *muscus cranii humani*. *Usnea*. This moss, when growing on the human skull, was formerly in high estimation, but is now deservedly forgotten.

LICHEN VELLEUS. This has the same virtues as the lichen pulmonarius.

LID. See *Operculum*.

LI'EN. (*en*, *ēnis*. m.; from λειος, soft or smooth.) The spleen. See *Spleen*.

LIEN SINARUM. The faba Ægyptia. See *Nymphæa nelumbo*.

LIENTE'RIA. (*a*, *æ*. f.; from λειος, smooth, and εντερον, the intestine.) Lientery. See *Diarrhœa*.

LIEUTAUD, JOSEPH, was born at Aix in 1703. He published a syllabus, entitled *Essais Anatomiques*, which was many times reprinted, with improvements. He communicated also several papers on morbid anatomy, and on physiology, to the Academy of Sciences. He also printed a volume, *Elementa Physiologiæ*, composed for his class at Aix. In 1759, his *Précis de Médecine Pratique* appeared, which went through several editions; and, seven years after, his *Précis de la Matière Médicale*. But his most important work, which still ranks high in the estimation of physicians, is entitled *Historia Anatomico-Medica*, in 2 vols. quarto, 1767, containing numerous dissections of morbid bodies.

LIEVRITE. *Yenite*. A blackish-green coloured mineral, composed of silica, alumina, lime, oxide of iron, and oxide of manganese, found in primitive limestone along with epidote, quartz, &c. in the isle of Elba.

LIFE. *Βιος*. *Vita*. A peculiar condition or mode of existence of living beings. Surrounding matter is divided into two great classes, living and dead. The latter is subject to physical laws, which the former also obeys in a great degree. Living matter exhibits, also, physical properties, which are found equally in dead matter. But living bodies are endowed likewise with a set of properties altogether different from these, and contrasting with them in a very remarkable way: these are called vital properties, actions, powers, faculties or forces. These animate living matter so long as it continues alive, and are the source of the various phænomen a which constitute the functions of the living animal body, and which distinguish its history from

that of dead matter. The study of life is the object of the science of physiology, which includes an enquiry into the properties that characterise living matter, and an investigation of the functions which the various organs, by virtue of these properties, are enabled to execute. The vital principle diffused throughout these organs induces a mode of union in the elements, widely differing from that which arises from the common laws of chemical affinity. By the aid of this principle, nature produces the animal fluids, as blood, bile, semen, and the rest, which can never be produced by the art of chemistry. But if, in consequence of death, the laws of vital attraction or affinity cease to operate, then the elements, recovering their physical properties, become again obedient to the common laws of chemical affinity, and enter into new combinations, from which new principles, in the process of putrefaction, are produced. Thus the hydrogene, combining itself with the azote, forms volatile alkali; and the carburetted hydrogene, with the azote, putrid air, into which the whole body is converted. It also appears, from hence, why organised bodies alone, namely, animal and vegetable, are subject to putridity, to which inorganic or mineral substances are in no degree liable; the latter not being compounded according to the laws of vital affinity, but only according to those of chemical affinity: for the fatiscence, or resolution of pyrites, or sulphuret of iron, in atmospheric air, is not putrefaction, but only the oxygene, furnished by the air, combining with the sulphur, and forming iron and sulphate of iron.

The life of an animal body appears to be threefold:—

1. *Its chemical life*, which consists in that attraction of the elements by which the vital principle, diffused through the solids and fluids, defends all the parts of the body from putrefaction. In this sense it may be said that every atom of our body lives *chemically*, and that life is destroyed by putrefaction alone.

2. *Its physical life*, which consists in the irritability of the parts. This physical property remains for some time after death. Thus the heart or intestines, removed from the body whilst still warm, contract themselves on the application of a stimulus. In like manner the serpent or eel, being cut into pieces, each part moves and palpitates for a long time afterwards. Hence these parts may be said to live physically, as long as they are warm and soft.

3. *Its physiological life* consists in the action of organic parts proper to each, as the action of the heart and vessels; so that these actions ceasing, the body is said to be physiologically dead. The physiological life ceases first, next the physical, and finally the chemical perishes.

LIGAMENT. (*Ligamentum, i.* n.; from *ligo*, to bind.) An elastic and strong membrane, connecting the extremities of the moveable bones. Ligaments are divided into *capsular*, which surround joints like a bag, and *connecting* ligaments. The use of the capsular ligaments is to connect the extremities of the moveable bones, and prevent the efflux of synovia; the external and internal connecting ligaments strengthen the union of the extremities of the moveable bones.

Ligamentum annulare. Annular or ring-like ligament: applied to a strong ligament on each ankle and each wrist.

Ligamentum arteriosum. The ductus arteriosus of the fœtus, which becomes a ligament after birth, is so called.

Ligamentum brachio-cubitale. The brachio-cubital ligament. The expansion of the lateral ligament, which is fixed in the inner condyle of the os humeri, runs over the capsular, to which it closely adheres, and is inserted like radii on the side of the great sigmoid cavity of the ulna; it is covered on the inside by several tendons, which adhere closely to it, and seem to strengthen it very considerably.

Ligamentum brachio-radiale. The brachio-radial ligament. The expansion of the lateral ligament which runs over the external condyle of the os humeri, is inserted round the coronary ligament, from thence all the way down to the neck of the radius, and also in the neighbouring parts of the ulna. Through all this passage it covers the capsular ligament, and is covered by several tendons adhering closely to both.

Ligamentum ciliare. Behind the uvea of the human eye, there arise out of the choroid membrane, from the ciliary circle, white complicated striæ, covered with a black matter. The fluctuating extremities of these striæ are spread abroad even to the crystalline lens, upon which they lie, but are not affixed. Taken together, they are called *ligamentum ciliare*.

Ligamentum denticulatum. A small ligament supporting the spinal marrow.

Ligamentum fallopii. The round ligament of the uterus has been so called. See also *Ligamentum Pouparti.*

Ligamentum interosseum. The ligament uniting the radius and ulna, and also that between the tibia and fibula.

Ligamentum latum. The broad ligament of the liver, and that of the uterus. See *Liver*, and *Uterus.*

Ligamentum nuchæ. A strong ligament of the neck, which proceeds from one spinous process to another.

Ligamentum ovarii. The thick round portion of the broad ligament of the uterus, by which the ovarium is connected with the uterus.

Ligamentum pouparti. Fallopian ligament. Poupart's ligament. A ligament extending from the anterior superior spinous process of the ilium to the crista of the os pubis.

Ligamentum rotundum. The round ligament of the uterus. See *Uterus.*

LIGATURE. (*Ligatura, æ.* f.; from *ligo*, to bind.) A thread, or silk, of various thickness, covered with white wax, for the purpose of tying arteries, or veins, or other

parts. Ligatures should be round and very firm, so as to allow their being tied with some force, without risk of breaking.

The immediate effect of a tight ligature on an artery is to cut through its middle and internal coats, a circumstance that tends very much to promote the adhesion of the opposite sides of the vessel to each other. Hence the form and mode of applying a ligature to an artery should be such as are most certain of dividing the above coats of the vessel in the most favourable manner. A broad flat ligature does not promise to answer the purpose in the best manner; because it is scarcely possible to tie it smoothly round the artery, which is very likely to be thrown into folds, or to be puckered by it, and consequently to have an irregular bruised wound made in its middle and internal coats. A ligature of an irregular form is likely to cut through these coats more completely at some parts than at others; and if it does not perfectly divide them no adhesion can take place, and secondary hæmorrhage will follow. A fear of tying the ligature too tight may often lead to the same consequences.

LIGHT. *Lux.* The nature of light has occupied much of the attention of philosophers, and numerous opinions have been entertained concerning it. It has been sometimes considered as a distinct substance, at other times as a quality; sometimes as a cause, frequently as an effect; by some it has been considered as a compound, by others as a simple substance. Philosophers of the present day are mostly agreed as to the independent existence of light, or the cause by which we see.

Nature of Light.—Light is that which proceeds from any body producing the sensation of vision, or perception of other bodies, by depicting an image of external objects on the retina of the eye. Hence it announces to animals the presence of the bodies which surround them, and enables them to distinguish these bodies into transparent, opake, and coloured. See *Vision*. These properties are so essentially connected with the presence of light, that bodies lose them in the dark, and become undistinguishable.

Light is regarded by philosophers as a subtance consisting of a vast number of exceedingly small particles, which are actually projected from luminous bodies, and which probably never return again to the body from which they were emitted.

It is universally expanded through space. It exerts peculiar actions, and is obedient to the laws of attraction, and other properties of matter.

Explanation of certain terms of Light. — In order to facilitate the doctrine of light, we shall shortly explain a few terms made use of by philosophers when treating of it; namely,

A *ray of light* is an exceedingly small portion of light as it comes from a luminous body.

A *medium* is a body which affords a passage for the rays of light.

A *beam of light* is a body of parallel rays.

A *pencil of rays* is a body of diverging or converging rays.

Converging rays are rays which tend to a common point.

Diverging rays are those which come from a point and continually separate as they proceed.

The rays of light are *parallel* when the lines which they describe are so.

The *radiant point* is the point from which diverging rays proceed.

The *focus* is the point to which the converging rays are directed.

Sources of Light. — Light is emitted from the sun, the fixed stars, and other luminous bodies. It is produced by percussion, during electrisation, combustion, and in various other chemical processes.

Why the sun and stars are constantly emitting light, is a question which probably will for ever baffle human understanding.

The light emitted during combustion exists previously, either combined with the combustible body, or with the substance which supports the combustion. The light liberated during chemical action, formed a constituent part of the bodies which act on each other.

Chemical Properties. —The chemical effects of light have much engaged the attention of philosophers. — Its influence upon animal, vegetable, and other substances is as follows:—

1. *On Vegetables.*—Every body knows that most of the discous flowers follow the sun in his course; that they attend him to his evening retreat, and meet his rising lustre in the morning with the same unerring law. It is also well known that the change of position in the leaves of plants, at different periods of the day, is entirely owing to the agency of light, and that plants which grow in windows, in the inside of houses, are, as it were, solicitous to turn their leaves towards the light. Natural philosophers have long been aware of the influence of light on vegetation. It was first observed that plants growing in the shade, or darkness, are pale and without colour. The term *etiolation* has been given to this phænomenon, and the plants in which it takes place are said to be *etiolated*, or *blanched*. Gardeners avail themselves of the knowledge of this fact, to furnish our tables with white and tender vegetables. When the plants have attained a certain height, they compress the leaves, by tying them together, and by this means (or by lying earth over them) deprive them of the contact of light; and thus it is that our white celery, lettuce, cabbages, endive, &c. are obtained. For the same reason, wood is white under the green bark; and roots are less coloured than plants: some of them alter their taste, &c.; they even acquire a deleterious quality when suffered to grow exposed to light. Potatoes are of this kind. Herbs that grow beneath stones, or in places utterly dark, are white, soft, aqueous, and of a mild and insipid taste. The more plants are exposed to the light, the *more colour* they acquire.

Though plants are capable of being nourished exceedingly well in the dark, and in that state grow much more rapidly than in the sun (provided the air that surrounds them is fit for vegetation), they are colourless and unfit for use.

Professor Davy found, by experiment, that red rose-trees, carefully excluded from light, produce roses almost white. He likewise ascertained that this flower owes its colour to light entering into its composition; that pink, orange, and yellow flowers imbibe a smaller portion of light than red ones; and that white flowers contain no light. But vegetables are not only indebted to the light for their colour: taste and odour are likewise derived from the same source.

Light contributes greatly to the maturity of fruits and seeds. This seems to be the cause why, under the burning sun of Africa, vegetables are in general more odoriferous, of a stronger taste, and more abounding with resin. From the same cause it happens, that hot climates seem to be the native countries of perfumes, odoriferous fruits, and aromatic resins.

The action of light is so powerful on the organs of vegetables, as to cause them to pour forth torrents of pure air from the surface of their leaves into the atmosphere, whilst exposed to the sun: whereas, on the contrary, when in the shade, they emit an air of a noxious quality. Take a few handsful of fresh-gathered leaves of mint, cabbage, or any other plant; place them in a bell-glass, filled with fresh water, and invert it into a basin with the same fluid. If the whole be then exposed to the direct rays of the sun, small air bubbles will appear on the surface of the leaves, which will gradually grow larger, and at last detach themselves and become collected at the surface of the water. This is oxygene gas, or vital air.

All plants do not emit this air with the same facility: there are some which yield it the moment the sun acts upon them; as the jacobœa or rag-wort, lavender, peppermint, and some other aromatic plants. The leaves afford more air when attached to the plant than when gathered: the quantity is also greater, the fresher and sounder they are, and if full grown, and collected during dry weather. Green plants afford more air than those which are of a yellowish or white colour. Green fruits afford likewise oxygene gas; but it is not so plentifully furnished by those which are ripe. Flowers in general render the air noxious. The nasturtium indicum, in the space of a few hours, gives out more air than is equal to the bulk of all its leaves. On the contrary, if a like bell-glass, prepared in the same manner, be kept in the dark, another kind of air will be disengaged, of an opposite quality.

There is not a substance which, in well-closed glass vessels, and exposed to the sun's light, does not experience some alteration.

Camphire kept in glass bottles, exposed to light, crystallises into the most beautiful symmetrical figures, on that side of the glass which is exposed to the light.

Yellow wax, exposed to the light, loses its colour, and becomes bleached. Gum guaiacum, reduced to powder, becomes green on exposure to light. Vegetable colours, such as those of saffron, logwood, &c. become pale, or white, &c.

2. *On Animals.* — The human being is equally dependent on the influence of light. Animals in general droop when deprived of light: they become unhealthy, and even sometimes die. When a man has been long confined in a dark dungeon (though well aired), his whole complexion becomes sallow; pustules, filled with aqueous humours, break out on his skin; and the person, who has been thus deprived of light, becomes languid, and frequently dropsical. Worms, grubs, and caterpillars, which live in the earth, or in wood, are of a whitish colour; moths, and other insects of the night, are likewise distinguishable from those which fly by day, by the want of brilliancy in their colour. The difference between those insects, in northern and southern parts, is still more obvious.

The parts of fish which are exposed to light, as the back, fins, &c. are uniformly coloured; but the belly, which is deprived of light, is white in all of them.

Birds which inhabit the tropical countries have much brighter plumage than those of the north. Those parts of the birds which are not exposed to the light are uniformly pale. The feathers on the belly of a bird are generally pale, or white; the back, which is exposed to the light, is almost always coloured; the breast, which is particularly exposed to light in most birds, is brighter than the belly.

Butterflies, and various other animals of equatorial countries, are brighter coloured than those of the polar regions. Some of the northern animals are even darker in summer and paler in winter.

3. *On other substances.* — Certain metallic oxides become combustible when exposed to light; and acids, as the nitric, &c. are decomposed by its contact, and various other substances change their nature.

Light carbonated hydrogene. See *Carburetted hydrogene gas.*

LIGNEUS. Woody. Applied, in *Botany,* to pods, barks, &c. which are of a hard, membraneous, or woody texture; as the strobilus of the *Pinus sylvestris.*

LIGNO'SUS. See *Ligneus.*

LI'GNUM. (*um, i.* n.; *à legendo,* because it is gathered up for fire.) Wood.

Lignum agallochi veri. See *Lignum aloes.*

Lignum aloes. *Lignum agallochi veri. Agalluge. Agallugum. Lignum aquilæ. Lignum calambac. Lignum aspalathi. Xylo aloes. Agallochum. Calambac.* Aloes wood. The tree, the wood of which bears this name, is not yet scientifically known. It is by some supposed to be the *Excœaria agallocha,* the

bark as well as the milk of which is purgative: It is imported from China in small, compact, ponderous pieces, of a yellow rusty brown colour, with black or purplish veins, and sometimes of a black colour. It has a bitterish resinous taste, and a slight aromatic smell. Hoffmann regarded the essential oil of this wood, when dissolved in spirit of wine, as one of the best cordials and invigorants that pharmacy has ever possessed, and especially in debilitated stomachs accompanied with general depression. It is used to fumigate rooms in eastern countries.

Lignum aquilæ. See *Lignum aloes.*

Lignum aspalathi. See *Lignum aloes.*

Lignum calambac. See *Lignum aloes.*

Lignum campechense. See *Hæmatoxylon.*

Lignum indicum. See *Guaiacum.*

Lignum moluccense. See *Croton tiglium.*

Lignum nephriticum. See *Guilandina.*

Lignum pavanæ. See *Croton tiglium.*

Lignum rhodium. See *Aspalathus.*

Lignum sanctum. See *Guaiacum.*

Lignum santali rubri. See *Pterocarpus.*

Lignum sappan. See *Hæmatoxylon.*

Lignum serpentum. See *Ophioxylum.*

LI'GULA. (*a, æ.* f.; a strap.) 1. The clavicle.

2. The glottis.

3. The name of a measure and a weight.

4. A genus of the Mollusca order.

5. The small transparent membrane on the margin of the sheath and base of the leaves of grasses.

LIGULA'TUS. Strap-shaped; shaped like a straw or riband: applied to a kind of floret of a compound flower, which is so shaped; as that of the *Tragopogon*, and *Taraxacum.*

LIGUS'TICUM. (*um, i.* n. Λιγυστικον of Dioscorides; so called from *Liguria*, in Italy, its native country.) The name of a genus of plants. Class, *Pentandria*; Order, *Digynia.*

Ligusticum levisticum. The systematic name of lovage. *Levisticum.* The odour of this plant, *Ligusticum—foliis multiplicibus, foliolis superne incisis*, of Linnæus, is very strong, and particularly ungrateful; its taste is warm and aromatic. It abounds with a yellowish gummy resinous juice, very much resembling opoponax. Its virtues are supposed to be similar to those of angelica and master-wort, in expelling flatulencies, exciting sweat, and opening obstructions; therefore it is chiefly used in hysterical disorders and uterine obstructions. The leaves, eaten in salad, are accounted emmenagogue. The root, which is less ungrateful than the leaves, is said to possess similar virtues, and may be employed in powder.

LIGU'STRUM. (*um, i.* n.; from *ligo*, to bind: so named from its use in making bands.) 1. The name of a genus of plants in the Linnæan system. Class, *Diandria*; Order, *Monogynia.*

2. The pharmacopœial name of the herb privet, the *Ligustrum vulgare.*

LI'LALITE. The mineral lipidolite.

LILIACEUS. (From *lilium*, a lily.) Liliaceous, or resembling the lily.

Liliaceæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as have liliaceous corollæ, and a three-lobed stigma; as colchicum, lilium, crocus, &c.

LILIACINUS. Lilacine: applied to colour like to that of the lilac, or *Syringa vulgaris.* See *Colour.*

LILIA'GO. (*o, inis.* f.; diminutive of *lilium*, the lily: so named from the resemblance of its flower to that of a lily.) *Liliastrum.* Spider-wort. The *Anthericum liliastrum* of Linnæus, formerly said to be alexipharmic and carminative.

LI'LIUM. (*um, ii.* n.; from λειος, smooth, graceful: so named from the beauty of its leaf.) The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia.* The lily.

Lilium album. See *Lilium candidum.*

Lilium candidum. The systematic name of the white lily. *Lilium album. Lilium—foliis sparsis, corollis campanulatis, intus glabris*, of Linnæus. The roots are directed by the Edinburgh Pharmacopœia: they are extremely mucilaginous, and chiefly used, boiled in milk and water, in emollient and suppurating cataplasms, to inflammatory tumours. These lily-roots afford a good substitute, in times of scarcity, for bread. The distilled water has been sometimes used as a cosmetic.

Lilium convallium. See *Convallaria.*

Lilium croceum. See *Hemerocallis.*

Lilium martagon. The martagon lily. Linnæus tells us that the root of this plant forms a part of the ordinary food of the Siberians.

Lilium purpureum. See *Hemerocallis.*

Lilium rubrum. See *Hemerocallis.*

LILY. See *Lilium*, and *Nymphæa.*

Lily, May. See *Convallaria majalis.*

Lily, water. See *Nymphæa.*

Lily, white. See *Lilium candidum.*

Lily of the valley. See *Convallaria.*

LIMATU'RA. (*a, æ.* f.; from *lima*, a file.) File dust or powder.

Limatura ferri. Steel filings are considered as possessing stimulating and strengthening qualities, and are exhibited in worm cases, ataxia, leucorrhœa, diarrhœa, chlorosis, &c.

LI'MAX. (*ax, acis.* m.; from *limus*, slime: so named from its sliminess.) *Cochlea terrestris.* The snail. This animal abounds with a viscid slimy juice, which is readily given out by boiling, to milk or water, so as to render them thick and glutinous. These decoctions are apparently very nutritious and demulcent, and are recommended in consumptive cases and emaciations.

LIMBUS. (*us, i.* m.) The limb, brim, or border. In *Botany*, applied to a part of the corolla. See *Corolla.*

LIME. *Calx.*

1. The oxide of calcium, one of the primi-

tive earths. It is found in great abundance in nature, though never pure, or in an uncombined state. It is always united to an acid, and very frequently to the carbonic acid, as in chalk, common limestone, marble, calcareous spar, &c. It is contained in the waters of the ocean; it is found in vegetables; and is the basis of the bones, shells, and other hard parts of animals. Its combination with sulphuric acid is known by the name of sulphate of lime (*gypsum*, or plaster of Paris). Combined with fluoric acid it constitutes fluate of lime, or Derbyshire spar.

Properties. — Lime is in solid masses, of a white colour, moderately hard, but easily reducible to powder. Its taste is bitter, urinous, and burning. It changes blue cabbage-juice to a green. It is unalterable by the heat of our furnaces. It splits and falls into powder in the air, and loses its strong taste. It is augmented in weight and in size by slowly absorbing water and carbonic acid from the atmosphere. Its specific gravity is 2·3. It combines with phosphorus by heat. It unites to sulphur both in the dry and humid way. It absorbs sulphuretted hydrogene gas. It unites with some of the metallic oxides. Its slaking by water is attended with heat, hissing, splitting, and swelling up, while the water is partly consolidated and partly converted into vapour; and the lime is reduced into a very voluminous dry powder, when it has been sprinkled with only a small quantity of water. It is soluble, when well prepared, in about 450 parts of water. It unites to acids. It renders silex and alumine fusible, and more particularly these two earths together.

Method of obtaining Lime.— Since the carbonic acid may be separated from the native carbonate of lime, this becomes a means of exhibiting the lime in a state of tolerable purity. For this purpose introduce into a porcelain or earthen retort, or rather into a tube of green glass, well coated over with lute, and placed across a furnace, some powdered Carara marble, or oyster-shell powder. Adapt to its lower extremity a bent tube of glass, conveyed under a bell. If we then heat the tube, we obtain carbonic acid gas, and lime will be found remaining in the tube or retort.

The burning of lime, in the large way, depends on the disengagement of the carbonic acid by heat; and, as lime is infusible in our furnaces, there would be no danger from too violent a heat, if the native carbonate of lime were perfectly pure; but as this is seldom the case, an extreme degree of heat produces a commencement of vitrification in the mixed stone, and enables it to preserve its solidity, and it no longer retains the qualities of lime, for it is covered with a sort of crust, which prevents the absorption of the water when it is attempted to be slaked. This is called over-burnt lime.

In order to obtain lime in a state of great purity, the following method may be had recourse to:—

Take Carara marble, or oyster-shells; reduce them to powder, and dissolve the powder in pure acetic acid; precipitate the solution by carbonate of ammonia. Let the precipitate subside, wash it repeatedly in distilled water, let it dry, and then expose it to a white heat for some hours.

The acetic acid, in this operation, unites to the lime, and forms acetate of lime, disengaging at the same time the carbonic acid, which flies off in the gaseous state: on adding to the acetate of lime carbonate of ammonia, acetate of ammonia and an artificial carbonate of lime are formed; from the latter the carbonic acid is again expelled, by exposure to heat, and the lime is left behind in a state of perfect purity.

2. A fruit like a small lemon, the juice of which is a very strong acid, and very much used in the making of punch. Externally, the same acid is applied in the cutaneous affections of warm climates, and also as a remedy against the pains that precede the appearance of yaws. See *Tilia.*

Lime, chloride of. The bleaching salt, or bleaching powder, sold under the name of oxymuriate of lime.

LIMESTONE. A genus of minerals which Professor Jameson divides into the four following species:—

1. Rhomb-spar. 2. Dolomite. 3. Limestone. 4. Arragonite.

Limestone has twelve subspecies:—

1. *Foliated limestone.* Of this there are two kinds: calcareous spar, and foliated granular limestone.

2. *Compact limestone*, of which there are three kinds: common compact limestone, blue Vesuvian, and roestone.

3. *Chalk.*

4. *Agaric mineral*, or *Rock-milk.*

5. *Fibrous limestone*, to which belong the satin spar, and the fibrous calc-sinter.

6. *Tufaceous limestone*, or *calc-tuff.*

7. *Pisiform limestone*, or *peastone.*

8. *Slate spar.*

9. *Aphrite.*

10. *Luculite*, of which there are three kinds: compact, prismatic, and foliated.

11. *Marle*, of which there are two species, the earthy and compact.

12. *Bituminous marle slate.*

Limestone, bituminous. See *Bituminous limestone.*

LIME-TREE. See *Tilia.*

Lime-water. See *Calcis liquor.*

LI'MON. (Hebrew.) See *Citrus medica.*

LIMO'NIUM. (*um, ii.* n.; from λειμων, a green field: so called from its colour.) This name has been applied to,

1. The *Valeriana rubra.*

2. The *Polygonum fagopyrum.*

3. The *Pyrola rotundifolia.*

4. More commonly to the sea-lavender, or *Statice limonium*, of Linnæus, which is said to possess astringent properties.

LIMO'NUM. (*um, i.* n.; from λειμων, a green field: so called from the colour of its

unripe fruit.) The lemon-tree. See *Citrus medica.*

LIMO'SIS. (*is, is.* f.; from λιμος, hunger.) 1. Hunger; appetite.

2. *Morbid appetite:* in which sense it embraces bulimia, dyspepsia, &c.

LINACRE, Thomas, was born at Canterbury, about the year 1460. In the reign of Henry VIII. he appears to have stood above all rivalship at the head of his profession, and evinced his attachment to its interests, as well as to the public good, by founding medical lectures at the two universities, and obtaining the institution, in 1518, of the Royal College of Physicians in London. The practice of medicine was then occupied by illiterate monks and empirics, who were licensed by the bishops, whence much mischief must have arisen. A corporate body of regularly bred physicians was therefore established, in whom was vested the sole right of examining and admitting persons to practise, as well as of examining apothecaries' shops. Linacre was the first president, which office he retained during the remainder of his life, and at his death, in 1524, bequeathed his house to the college. He had relinquished practice, and entered into holy orders, about five years before, being greatly afflicted with the stone, which was the cause of his dissolution. In his literary character Linacre stands eminently distinguished, having been one of the first to introduce the learning of the ancients into this country. He translated several of the most valuable works of Galen into Latin, and his style is remarkable for its purity and elegance; he had, indeed, devoted great time to Latin composition, on which he published a large philosophical treatise. His professional skill was universally allowed among his contemporaries, as well as the honour and humanity with which he exercised the medical art; and the celebrated Erasmus has bestowed upon him the highest commendation. He was buried in St. Paul's cathedral, where a monument was afterwards erected to his memory, with a Latin inscription, by Dr. Caius.

LINAGRO'STIS. (*is, is.* f.; from λινον, cotton, and αγρωστις, grass: so called from the softness of its texture.) Cotton-grass. The *Eriophorum* of Linnæus.

LINANGI'NA. (*a, æ.* f.; from *linum*, flax, and *ango*, to strangle: so called because, if it grows among flax or hemp, it twists round it, and chokes it.) See *Cuscuta europæa.*

LINA'RIA. (*a, æ.* f.; from *linum*, flax: named from the resemblance of its leaves to those of flax.) See *Antirrhinum linaria.*

LI'NCTUS. (*us, ûs.* m.; from *lingo*, to lick.) *Lohoc. Eclegma. Elexis. Elegma. Eclectos. Ecleitos. Illinctus.* A loch, a lambative. A term in pharmacy, that is generally applied to a soft and somewhat oily substance, of the consistence of honey, which is licked off the spoon, it being too solid and adhesive to be taken otherwise.

LI'NEA. (*a, æ.* f.; from *linum*, a thread.) A line: applied to some parts which have a thread or line-like appearance, as the long tendinous appearance of the muscles in the abdomen, &c. See *Linea alba.*

Linea alba. *Linea centralis.* A tendinous expansion that extends from the scrobiculus cordis straight down to the navel, and from thence to the pubes. It is formed by the tendinous fibres of the internal oblique ascending and the external oblique descending muscles, and the transversalis, interlaced with those of the opposite side.

Lineæ semilunares. The white lines on the outer margin of the recti muscles of the belly, formed by the union of the abdominal tendons.

Lineæ transversæ. The lines which cross the recti muscles of the abdomen.

LINEARIS. Linear: strap-shaped. Applied to leaves, petals, leafstalks, seeds, &c. of plants, which are narrow, with parallel sides; as the leaves of most grasses, those of the *Narcissus, Pseudo-narcissus,* and the petals of the *Tussilago farfara*, leafstalk of the *Citrus medica*, and seeds of the *Crucianella.*

LINEATUS. Lineate, or streaked.

LING. See *Gadus molva.*

LI'NGUA. (*a, æ.* f.; from *lingo*, to lick up.) The tongue. See *Tongue.*

Lingua avis. The seeds of the *Fraxinus*, or ash, are so called, from their supposed resemblance to a bird's tongue.

Lingua canina. So called from the resemblance of its leaves to a dog's tongue. See *Cynoglossum.*

Lingua cervina. See *Scolopendrium vulgare.*

LINGUA'LIS. (From *lingua*, the tongue.) *Basio-glossus*, of Cowper. A muscle of the tongue. It arises from the root of the tongue laterally, and runs forward between the hyo-glossus and genio-glossus, to be inserted into the tip of the tongue, along with part of the stylo-glossus. Its use is to contract the substance of the tongue, and to bring it backwards.

LINGUIFO'RMIS. See *Lingulatus.*

LINGULA'TUS. (From *lingua*, a tonge.) *Linguiformis.* Tongue-shaped. applied to a leaf of a thick, oblong, blunt figure, generally cartilaginous at the edges; as in the *Mesembryanthemum linguiforme.*

LINIMENT. See *Linimentum.*

Liniment of ammonia. See *Linimentum ammoniæ.*

Liniment of camphire. See *Linimentum camphoræ.*

Liniment of mercury. See *Linimentum hydrargyri.*

Liniment of turpentine. See *Linimentum terebinthinæ.*

Liniment of verdigris. See *Linimentum æruginis.*

LINIME'NTUM. (*um, i.* n.; from *lino*, to anoint.) A liniment. An oily substance of a mediate consistence, between an ointment and oil, but so thin as to drop. The following are some of the most approved forms:—

LINIMENTUM ÆRUGINIS. Liniment of verdigris, formerly called oxymel æruginis, mel Ægyptiacum, and unguentum Ægyptiacum. Take of verdigris, powdered, an ounce; vinegar, seven fluid ounces; clarified honey, fourteen ounces. Dissolve the verdigris in the vinegar, and strain it through a linen cloth; having added the honey gradually, boil it down to a proper consistence.

LINIMENTUM AMMONIÆ FORTIUS. Strong liniment of ammonia. Take of solution of ammonia, a fluid ounce; olive oil, two fluid ounces. Shake them together until they unite. A more powerful stimulating application than the former, acting as a rubefacient. In pleurodynia, indolent tumours, stiffness of the joints, and arthritic pains, it is to be preferred to the milder one.

LINIMENTUM AMMONIÆ SUBCARBONATIS. Liniment of subcarbonate of ammonia, formerly called linimentum ammoniæ and linimentum volatile. Take of solution of subcarbonate of ammonia, a fluid ounce; olive oil, three fluid ounces. Shake them together until they unite. A stimulating liniment, mostly used to relieve rheumatic pains, bruises, and paralytic numbness.

LINIMENTUM AQUÆ CALCIS. Liniment of lime-water. Take of lime-water, olive oil, of each eight ounces; rectified spirit of wine, one ounce. Mix. This has been long in use as an application to burns and scalds.

LINIMENTUM CAMPHORÆ. Camphire liniment. Take of camphor, half an ounce; olive oil, two fluid ounces. Dissolve the camphire in the oil. In retentions of urine, rheumatic pains, distensions of the abdomen from ascites, and tension of the skin from abscess, this is an excellent application.

LINIMENTUM CAMPHORÆ COMPOSITUM. Compound camphire liniment. Take of camphire, two ounces; solution of ammonia, six fluid ounces; spirit of lavender, a pint. Mix the solution of ammonia with the spirit in a glass retort; then, by the heat of a slow fire, distil a pint. Lastly, in this distilled liquor dissolve the camphire. An elegant and useful stimulant application in paralytic, spasmodic, and rheumatic diseases. Also for bruises, sprains, rigidities of the joints, incipient chilblains, &c.

LINIMENTUM HYDRARGYRI. Mercurial liniment. Take of strong mercurial ointment, prepared lard, of each four ounces; camphire, an ounce; rectified spirit, fifteen minims; solution of ammonia, four fluid ounces. First powder the camphire, with the addition of the spirit, then rub it with the mercurial ointment and the lard; lastly, add gradually the solution of ammonia, and mix the whole together. An excellent formula for all surgical cases, in which the object is to quicken the action of the absorbents, and gently stimulate the surfaces of parts. It is a useful application for diminishing the indurated state of particular muscles, a peculiar affection every now and then met with in practice; and it is peculiarly well calculated for lessening the stiffness and chronic thickening often noticed in the joints. If it be frequently or largely applied, it affects the mouth more rapidly than the mercurial ointment.

LINIMENTUM OPIATUM. A resolvent anodyne embrocation, adapted to remove indolent tumours of the joints, and those weaknesses which remain after strains and chilblains before they break.

LINIMENTUM SAPONIS COMPOSITUM. Compound soap liniment. *Linimentum saponis.* Take of hard soap, three ounces; camphire, an ounce; spirit of rosemary, a pint. Dissolve the camphire in the spirit, then add the soap, and macerate in the heat of a sand-bath, until it be melted. The basis of this form was first proposed by Riverius, and it is now commonly used under the name of opodeldoc. This is a more pleasant preparation, to rub parts affected with rheumatic pains, swellings of the joints, &c. than any of the foregoing, and at the same time not inferior, except where a rubefacient is required.

LINIMENTUM SAPONIS CUM OPIO. Soap liniment, with opium. Take of compound soap liniment, six ounces; tincture of opium, two ounces. Mix. For dispersing indurations and swellings, attended with pain, but no acute inflammation.

LINIMENTUM TEREBINTHINÆ. Turpentine liniment. Take of resin cerate, a pound; oil of turpentine, half a pint. Add the oil of turpentine to the cerate, previously melted, and mix. This liniment is very commonly applied to burns, and was first introduced by Mr. Kentish, of Newcastle.

LINIMENTUM TEREBINTHINÆ VITRIOLICUM. Vitriolic liniment of turpentine. Take of olive oil, ten ounces; oil of turpentine, four ounces; vitriolic acid, three drachms. Mix. This preparation is said to be efficacious in chronic affections of the joints, and in the removal of long existing effects of sprains and bruises.

LINNÆ'A. (*a, æ.* f.; so named in honour of Linnæus.) The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Angiospermia.*

LINNÆA BOREALIS. A plant named in honour of the immortal Linnæus, which has a bitter sub-astringent taste, and is used in some places in the form of fomentation, to rheumatic pains, and an infusion with milk is much esteemed in Switzerland in the cure of sciatica.

LINNÆAN SYSTEM. A system, or arrangement of the natural productions, embracing the three kingdoms of nature. See *Classification.*

LINNÆUS, CHARLES, was born in Sweden, in 1707. He derived at a very early age, from his father, that attachment to the study of nature by which he afterwards so eminently distinguished himself. He was intended for the church, but made so little improvement in the requisite learning, that this was soon abandoned for the profession of medicine. He appears to have had a singular

inaptitude for learning languages; though he was sufficiently versed in Latin. His scanty finances much embarrassed his progress at first; but his taste for botany at length having procured him the patronage of Dr. Celsius, professor of divinity at Upsal, he was enabled to pursue his studies to more advantage. In 1730, he was appointed to give lectures in the botanic garden, and began to compose some of those works, by which he rendered his favourite science more philosophical, and more popular than it had ever been before. Two years afterwards he was commissioned to make a tour through Lapland, of which he subsequently published an interesting account; and having learned the art of assaying metals, he gave lectures on this subject also on his return. In 1735, he took his degree in physic at Harderwyck, and in his inaugural dissertation advanced a strange hypothesis, that intermittent fevers are owing to particles of clay, taken in with the food, obstructing the minute arteries. Soon after this, his *Systema Naturæ* first appeared; which was greatly enlarged and improved in numerous successive editions. In Holland, he fortunately obtained the support of a Mr. Clifford, an opulent banker, whereby he was enabled to visit England also; but his great exertions afterwards impaired his health, and being attacked with a severe intermittent, he could not resist the desire, when somewhat recovered, of returning to his native country. Arriving there in 1738, he settled at Stockholm, where his reputation soon procured him some medical practice, and the appointment of physician to the navy, as well as lecturer on botany and mineralogy: a literary society was also established, of which he was the first president, and by which numerous volumes of transactions have since been published. In 1740, he was chosen professor of medicine at Upsal, having been admitted a member of that academy on his return to Sweden; he also shared with Dr. Rosen the botanical duties, and considerably improved the garden; he was afterwards made secretary, and on some public occasions did the honours of the university. He received likewise marks of distinction from several foreign societies. About the year 1746, he was appointed Archiater; and it became an object of national interest to make additions to his collection from every part of the world. A systematic *Treatise on the Materia Medica* was published by him in 1749; and two years after his *Philosophia Botanica*, composed during a severe fit of the gout, in which he supposed himself to have derived great benefit from taking a large quantity of wood strawberries. This was soon followed by his great work, the *Species Plantarum*; after which he was honoured with the order of the Polar Star, never before conferred for literary merit; and having declined a splendid invitation to Spain, he was raised to the rank of nobility. In 1763, his son was allowed to assist him in the botanical duties. About this time he published his *Genera Morborum*, and three years after his *Clavis Medicinæ*. His medical lectures, though too theoretical, were very much esteemed; but he had declined general practice on his establishment at Upsal. As he advanced in life, the fatiguing occupations in which he was engaged impaired his health, notwithstanding his temperate and regular habits, and at length brought on his dissolution in 1778. This was regarded as a loss to the nation, and even to the world. About ten years after a society, adopting his name, was formed in this country, which has published many valuable volumes of transactions, and the president purchased Linnæus's collections of his widow: similar institutions have also been established in other parts of the world.

LINOSPE'RMUM. (*um, i.* n.; from λινον, flax, and σπερμα, seed.) See *Linum usitatissimum*.

LINOZOSTRIS. A name given by the ancient Greek writers to two plants, very different from one another. The one is the *Mercurialis*, or British mercury; the other the *Epilinum*, or dodder.

LINSEED. See *Linum usitatissimum*.

LINT. See *Linteum*.

LINTEUM. (*um, ei.* n.) Lint. A soft woolly substance, made by scraping old linen cloth, and employed in surgery as the common dressing in all cases of wounds and ulcers, either simply or covered with different unctuous substances.

LI'NUM. (*um, i.* n.; from λειος, soft, smooth: so called from its soft, smooth texture.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Pentagynia*.

2. The pharmacopœial name of the common flax. See *Linum usitatissimum*.

LINUM CATHARTICUM. *Linum minimum. Chamælium.* Purging flax, or mill-mountain. This small plant, *Linum—foliis oppositis ovato-lanceolatis, caule dichotomo, corollis acutis,* of Linnæus, is an effectual and safe cathartic. It has a bitterish and disagreeable taste. A handful infused in half a pint of boiling water is the dose for an adult.

LINUM USITATISSIMUM. The systematic name of the common flax. *Linum sylvestre. Linum — calycibus capsulisque mucronatis, petalis crenatis, foliis lanceolatis alternis, caule subsolitario,* of Linnæus. The seeds of this useful plant, called linseed, have an unctuous, mucilaginous, sweetish taste, but no remarkable smell; on expression they yield a large quantity of oil, which, when carefully drawn without the application of heat, has no particular taste or flavour: boiled in water, they yield a large proportion of a strong flavourless mucilage, which is in use as an emollient or demulcent in cough, hoarsenesses, and pleuritic symptoms, that frequently prevail in catarrhal affections; and it is likewise recommended in nephritic pains and stranguries. The meal of the seeds is also much used externally, in emollient and maturating cataplasms. The expressed oil is an officinal preparation, and is supposed to be of a more healing and

balsamic nature than the other oils of this class: it has, therefore, been very generally employed in pulmonary complaints, and in colics and constipations of the bowels. The cake which remains after the expression of the oil contains the farinaceous part of the seed, and is used in fattening cattle, under the name of oil cake.

Lion-toothed leaf. See *Runcinatus.*

LIP. See *Labium.*

LI'PARIS. (*is, is.* f.; from λιπος, fat: so named from its unctuous quality.) See *Pinguicula.*

LIPAROCE'LE. (From λιπος, fat, and κηλη, a tumour.) That species of sarcocele in which the substance constituting the disease very much resembles fat.

LIPO'MA. (*a, atis.* n.; from λιπος, fat.) A solitary, soft, unequal, indolent tumour, arising from a luxuriancy of adeps in the cellular membrane. The adipose structure forming the tumour is sometimes diseased towards its centre, and more fluid than the rest. At other times it does not appear to differ in any respect from adipose membrane, except in the enlargement of the cells containing the fat. These tumours are always many years before they arrive at any size.

LIPOPSY'CHIA. (*a, æ.* f.; from λειπω, to leave, and ψυχη, the soul, or life.) A swoon, or fainting. See *Syncope.*

LIPOTHY'MIA. (*a, æ.* f.; from λειπω, to leave, and θυμος, the mind.) Fainting. See *Syncope.*

LIPPITU'DO. (*o, inis.* f.; from *lippus*, blear-eyed.) Blear-eyedness. A chronic disease, the result often of an acute form of ophthalmitis. It consists in an exudation of a puriform humour from the margin of the eyelids. The proximate cause is a deposition of acrimony on the glandulæ meibomianæ in the margin of the eyelids. This humour in the night glues the tarsi of the eyelids together. The margins of the eyelids are red and tumefy, are irritated, and excite pain. See *Ophthalmitis.*

Lipy'ria. (From λειπω, to leave, and πυρ, heat.) A sort of fever, where the heat is drawn to the inward parts, while the external are cold.

LIQUIDA'MBAR. (From *liquidum*, fluid, and *ambar*, a fragrant substance, generally taken for ambergris; alluding to the aromatic liquid gum which distils from this tree.) The name of a genus of plants in the Linnæan system. Class, *Monœcia.* Order, *Polyandria.*

Liquidambar styraciflua. The systematic name of the tree which affords both the liquid amber and liquid storax. The liquid amber is a resinous juice of a yellow colour, inclining to red, at first about the consistence of turpentine, by age hardened into a solid brittle mass. It is obtained by wounding the bark of this tree, which is described by Linnæus the *Liquidambar—foliis palmato-angulatis; foliis indivisis, acutis.* The juice has a moderately pungent, warm, balsamic taste, and a very fragrant smell, not unlike that of the *Styrax calamita*, heightened by a little ambergris. It is seldom used medicinally. The *Styrax liquida* is also obtained from this plant by boiling. There are two sorts distinguished by authors: the one the purer part of the resinous matter, that rises to the surface in boiling, separated by a strainer, of the consistence of honey, tenacious like turpentine, of a reddish or ash-brown colour, moderately transparent, of an acrid unctuous taste and a fragrant smell, faintly resembling that of the solid styrax, but somewhat disagreeable. The other, the more impure part which remains on the strainer, untransparent, and in smell and taste much weaker than the former. Their use is chiefly as stomachics, in the form of plaster.

LIQUIFACTION. *Liquificatio.* A chemical term, in some instances synonymous with *fusion*, in others with the word *deliquescence*, and in others with the word *solution.*

LIQUIRI'TIA. (*a, æ.* f.; from *liquor*, juice, or from *elikoris*, Welsh.) See *Glycyrrhiza.*

LI'QUOR. (*or, oris.* m.; from *liqueo*, to become liquid.) A liquor. This term is applied in the last editions of the London Pharmacopœia to some preparations, before improperly called waters; as the *aqua ammoniæ, &c.*

Liquor acetatis plumbi. See *Plumbi acetatis liquor.*

Liquor acetatis plumbi dilutus. See *Plumbi acetatis liquor dilutus.*

Liquor æthereus vitriolicus. See *Æther sulphuricus.*

Liquor aluminis compositus. Compound solution of alum. Take of alum, sulphate of zinc, of each half an ounce; boiling water, two pints. Dissolve at the same time the alum and sulphate of zinc in the water, and then strain the solution through paper. This water was long known in our shops under the title of *aqua aluminosa Bateana.* It is used for cleansing and healing ulcers and wounds, and for removing cutaneous eruptions, the part being bathed with it hot three or four times a day. It is sometimes likewise employed as a collyrium; and as an injection in fluor albus and gonorrhœa, when not accompanied with virulence.

Liquor ammoniæ. See *Ammonia.*

Liquor ammoniæ acetatis. See *Ammoniæ acetatis liquor.*

Liquor ammoniæ carbonatis. See *Ammoniæ subcarbonatis liquor.*

Liquor ammoniæ subcarbonatis. See *Ammoniæ subcarbonatis liquor.*

Liquor of ammonia. See *Ammonia.*

Liquor amnii. See *Amnios.*

Liquor antimonii tartarizati. See *Antimonii tartarizati liquor.*

Liquor arsenicalis. See *Arsenicalis liquor.*

Liquor calcis. See *Calcis liquor.*

Liquor cupri ammoniati. See *Cupri ammoniati liquor.*

LIQUOR FERRI ALKALINI. See *Ferri alkalini liquor*.

LIQUOR HYDRARGYRI OXYMURIATIS. See *Hydrargyri oxymurias*.

LIQUOR MINERALIS ANODYNUS HOFFMANNI. Hoffmann's anodyne liquor. See *Spiritus ætheris sulphurici compositus*.

LIQUOR POTASSÆ. See *Potassæ liquor*.

LIQUOR SUBCARBONATIS POTASSÆ. See *Potassæ subcarbonatis liquor*.

LIQUOR VOLATILIS CORNU CERVI. This preparation of the fluid volatile alkali, commonly termed hartshorn, is in common use to smell at in faintings, &c. See *Ammoniæ subcarbonas*.

LIQUORICE. See *Glycyrrhiza*.

Liquorice, Spanish. See *Glycyrrhiza*.

LIRELLA. (*a, æ*. f.; a diminutive of *lire*, a ridge between two furrows.) Acharius' name for the black letter-like receptacles of the genus *Opegrapha*

LISTER, MARTIN, was born in Buckinghamshire about 1638. He wrote on the *English Medicinal Waters*, on *Small Pox*, and some other diseases. His reputation is principally founded on his researches in natural history and comparative anatomy, on which he published several separate works, as well as nearly forty papers in the Philosophical Transactions. He died in 1712.

LITHAGO'GUS. (From λιθος, a stone, and αγω, to bring away.) Lithagogue: that which expels the stone.

LITHARGE. See *Lithargyrum*.

Litharge plaster. See *Emplastrum lithargyri*.

LITHA'RGYRUM. (*um, i*. n.; and *us, i*. m.; from λιθος, a stone, and αργυρος, silver.) *Lithargyrus*. Litharge. An oxide of lead, in an imperfect state of vitrification. When silver is refined by cupellation with lead, this latter metal, which is scorified, and causes the scorification of the imperfect metals alloyed with the silver, is transformed into a matter composed of small semitransparent shining plates, resembling mica; which is litharge. Litharge is more or less white or red, according to the metals with which the silver is alloyed. The white is called litharge of silver; and the red has been improperly called litharge of gold. See *Lead*, and *Plumbi acetatis liquor*.

LITHIA. (*a, æ*. f.; from λιθειος, *lapideus*.) 1. The name of an alkali discovered by Arfredson, a young chemist of great merit, employed in the laboratory of Berzelius. It was found in a mineral from the mine of Uten in Sweden, called *petalite* by D'Andrada, who first distinguished it. Sir H. Davy demonstrated, by voltaic electricity, that the basis of this alkali is a metal, to which the name of *lithium* has been given.

Caustic lithia has a very sharp burning taste. It destroys the cuticle of the tongue like potash. It does not dissolve with great facility in water, and appears not to be much more soluble in hot than in cold water. In this respect it has an analogy with lime. Heat is evolved during its solution in water.

When exposed to the air it does not attract moisture, but absorbs carbonic acid, and becomes opake. When exposed for an hour to a white heat in a covered platinum crucible, its bulk does not appear to be diminished: but it has absorbed a quantity of carbonic acid.

2. Urinary calculus.

LI'THIAS. (So called because it is formed of the lithic acid.) A lithiate, or salt, formed by the union of the lithic acid, or acid of the stone sometimes found in the bladder of animals with salifiable bases; thus, *lithiate of ammonia*, &c.

LITHI'ASIS. (*is, is*. f.; from λιθος, a stone.) 1. The formation of stone, or gravel.

2. A tumour of the eyelid, under which is a hard concretion resembling a stone.

LITHIC. (*Lithicus*; from λιθος, a stone: because it is obtained from the stones of the bladder.) The name of an acid.

LITHIC ACID. *Acidum lithicum*. *Acidum uricum*. This was discovered in analysing human calculi, of many of which it constitutes the greater part, and of some, particularly that which resembles wood in appearance, it forms almost the whole. It is likewise present in human urine, and in that of the camel. It is found in those arthritic concretions commonly called chalkstones. It is often called *uric* acid.

The following are the results of Scheele's experiments on calculi, which were found to consist almost wholly of this acid:—

1. Dilute sulphuric acid produced no effect on the calculus, but the concentrated dissolved it; and the solution, distilled to dryness, left a black coal, giving off sulphureous acid fumes. 2. The muriatic acid, either diluted or concentrated, had no effect on it even with ebullition. 3. Dilute nitric acid attacked it cold; and with the assistance of heat produced an effervescence and red vapour, carbonic acid was evolved, and the calculus was entirely dissolved. The solution was acid, even when saturated with the calculus, and gave a beautiful red colour to the skin in half an hour after it was applied; when evaporated, it became of a blood-red, but the colour was destroyed by adding a drop of acid: it did not precipitate muriate of barytes, or metallic solutions, even with the addition of an alkali; alkalies rendered it more yellow, and if superabundant, changed it by a strong digesting heat to a rose colour; and this mixture imparts a similar colour to the skin, and is capable of precipitating sulphate of iron black, sulphate of copper green, nitrate of silver grey, superoxygenated muriate of mercury, and solutions of lead and zinc, white. Lime-water produced in the nitric solution a white precipitate, which dissolved in the nitric and muriatic acids without effervescence, and without destroying their acidity. Oxalic acid did not precipitate it. 4. Carbonate of potash did not dissolve it, either cold or hot, but a solution of perfectly pure potash dissolved it even cold. The solution was yellow; sweetish to the taste; precipitated by all the acids, even the carbonic; did not render lime-water turbid; decomposed and precipitated solution

of iron brown, of copper grey, of silver black, of zinc, mercury, and lead, white; and exhaled a smell of ammonia. 5. About 200 parts of lime-water dissolved the calculus by digestion, and lost its acrid taste. The solution was partly precipitated by acids. 6. Pure water dissolved it entirely, but it was necessary to boil for some time 360 parts with one of the calculus in powder. This solution reddened tincture of litmus, did not render lime-water turbid, and on cooling deposited in small crystals almost the whole of what it had taken up. 7. Seventy-two grains distilled in a small glass retort over an open fire, and gradually brought to a red heat, produced water of ammonia mixed with a little animal oil, and a brown sublimate, weighing 28 grains, and 12 grains of coal remained, which preserved its black colour on red-hot iron in the open air. The brown sublimate was rendered white by a second sublimation; was destitute of smell, even when moistened by an alkali; was acid to the taste; dissolved in boiling water, and also in alkohol, but in less quantity; did not precipitate lime-water; and appeared to resemble succinic acid.

Fourcroy has found, that this acid is almost entirely soluble in 2000 times its weight of cold water, when the powder is repeatedly treated with it. From his experiments he infers that it contains azote, with a considerable portion of carbon, and but little hydrogene, and little oxygene.

Of its combinations with the basis we know but little.

Much additional information has been obtained within these few years on the nature and habitudes of the lithic acid. Dr. Henry wrote a medical thesis, and afterwards published a paper on the subject, in the second volume of the new series of the Manchester Memoirs, both of which contain many important facts. He procured the acid in the manner above described by Fourcroy. It has the form of white shining plates, which are denser than water. Has no taste nor smell. It dissolves in about 1400 parts of boiling water. It reddens the infusion of litmus. When dissolved in nitric acid, and evaporated to dryness, it leaves a pink sediment. The dry acid is not acted on nor dissolved by the alkaline carbonates, or subcarbonates. It decomposes soap when assisted by heat; as it does also the alkaline sulphurets and hydrosulphurets. No acid acts on it, except those that occasion its decomposition. It dissolves in hot solutions of potash and soda, and likewise in ammonia, but less readily. The lithates may be formed, either by mutually saturating the two constituents, or we may dissolve the acid in an excess of base, and we may then precipitate by carbonate of ammonia. The lithates are all tasteless, and resemble in appearance lithic acid itself. They are not altered by exposure to the atmosphere. They are very sparingly soluble in water. They are decomposed by a red heat, which destroys the acid. The lithic acid is precipitated from these salts by all the acids, except the prussic and carbonic. They are decomposed by the nitrates, muriates, and acetates of barytes, strontites, lime, magnesia, and alumina. They are precipitated by all the metallic solutions, except that of gold. When lithic acid is exposed to heat, the products are carburetted hydrogene, and carbonic acid, prussic acid, carbonate of ammonia, a sublimate, consisting of ammonia combined with a peculiar acid, which has the following properties: —

Its colour is yellow, and it has a cooling bitter taste. It dissolves readily in water and in alkaline solutions, from which it is not precipitated by acids. It dissolves also sparingly in alkohol. It is volatile, and, when sublimed a second time, becomes much whiter. The watery solution reddens vegetable blues, but a very small quantity of ammonia destroys this property. It does not cause effervescence with alkaline carbonates. By evaporation it yields permanent crystals, but ill defined, from adhering animal matter. These redden vegetable blues. Potash, when added to these crystals, disengages ammonia. When dissolved in nitric acid, they do not leave a red stain, as happens with uric acid; nor does their solution in water decompose the earthy salts, as happens with alkaline lithates (or urates). Neither has it any action on the salts of copper, iron, gold, platinum, tin, or mercury. With nitrates of silver and mercury, and acetate of lead, it forms a white precipitate, soluble in an excess of nitric acid. Muriatic acid occasions no precipitate in the solution of these crystals in water. These properties show, that the acid of the sublimate is different from the uric, and from every other known acid. Dr. Austin found, that by repeated distillations lithic acid was resolved into ammonia, nitrogene, and prussic acid.

When lithic acid is projected into a flask with chlorine, there is formed, in a little time, muriate of ammonia, oxalate of ammonia, carbonic acid, muriatic acid, and malic acid; the same results are obtained by passing chlorine through water, holding this acid in suspension.

LITHIUM. (*um, i.* n.; from its being the base of lithic acid.) The metallic basis of lithia. See *Lithia.*

LITHOI'DES. (From λιθος, a stone, and ειδος, a likeness: so called from its hardness.) Stone-like: applied to the petrous portion of the temporal bone.

LITHO'LABUM. (From λιθος, a stone, and λαμβανω, to seize.) An instrument for extracting the stone from the bladder.

LITHO'LOGY. (*Lithologia, æ.* f.; from λιθος, a stone, and λογος, a discourse.) A discourse or treatise on stones.

LITHOMA'RGA. See *Lithomarge.*

LITHOMARGE. Stone-marrow. A mineral of which there are two kinds, the friable and the indurated.

LITHONTRIPTIC. (*Lithontripticus;* from λιθος, a stone, and τριβω, to bear away.) From the strict sense and common acceptation

of the word, a lithontriptic should possess a power of dissolving calculi in the urinary passages. It is, however, doubted by many, whether there be in nature any such substances. By this term, then, is meant those substances which possess a power of removing a disposition in the body to the formation of calculi. The researches of modern chemists have proved, that these calculi consist mostly of a peculiar acid, named the lithic or uric acid. With this substance the alkalies are capable of uniting, and forming a soluble compound; and these are accordingly almost the sole lithontriptics. From the exhibition of alkaline remedies, the symptoms arising from stone in the bladder are very generally alleviated; and they can be given to such an extent that the urine becomes very sensibly alkaline, and is even capable of exerting a solvent power on these concretions. Their administration, however, cannot be continued to this extent for any length of time, from the irritation they produce on the stomach and urinary organs. The use, therefore, of the alkalies, as solvents, or lithontriptics, is now scarcely ever attempted: they are employed merely to prevent the increase of the concretion, and to palliate the painful symptoms, which they do apparently by preventing the generation of lithic acid, or the separation of it by the kidneys; the urine is thus rendered less irritating, and the surface of the calculus is allowed to become smooth.

When the alkalies are employed with this view, they are generally given neutralised, or with excess of carbonic acid. This renders them much less irritating. It at the same time, indeed, diminishes their solvent power; for the alkaline carbonates exert no action on urinary calculi; but they are still capable of correcting that acidity in the primæ viæ, which is the cause of the deposition of the lithic acid from the urine, and therefore serve equally to palliate the disease. And when their acrimony is thus diminished, their use can be continued for any length of time.

It appears from the experiments of Fourcroy and others, that some other ingredients of calculi, as well as the lithic acid, are dissolved by the caustic alkali, and various experiments have shown that most calculi yield to its power. It is obvious, however, that what is taken by the mouth is subject to many changes in the alimentary canal, and also the lymphatic and vascular systems; and in this way it must be exceedingly difficult to get such substances (even where they are not liable to alterations) in sufficient quantity into the bladder. Indeed, there are very few authenticated cases of the urine being so changed as to become a menstruum for the stone. Excepting the case of Dr. Newcombe, recorded by Dr. Whytt, the instance of Mr. Home is almost the only one. Though lithontriptics, however, may not in general dissolve the stone in the bladder, yet it is an incontrovertible fact that they frequently mitigate the pain; and, to lessen such torture as that of the stone in the bladder, is surely an object of no little importance. Lime was long ago known as a remedy for urinary calculi, and different methods were employed to administer it. One of these plans fell into the hands of a Mrs. Steevens, and her success caused great anxiety for the discovery of the secret. At last Parliament bought the secret for the sum of 5000*l*. In many instances, stones which had been unquestionably felt were no longer to be discovered; and as the same persons were examined by surgeons of the greatest skill and eminence, both before and after the exhibition of her medicines, it was no wonder that the conclusion was drawn that the stones really were dissolved. From the cessation of such success, and from its now being known that the stones are occasionally protruded between the fasciculi of the muscular fibres of the bladder, so as to be lodged in a kind of cyst on the outside of the muscular coat, and cause no longer any grievances, surgeons of the present day are inclined to suspect that this must have happened in Mrs. Steeven's cases. This was certainly what happened in one of the cases on whom the medicine had been tried. It is evident that a stone so situated would not any longer produce irritation, but would also be quite indiscoverable by the sound, for, in fact, it is no longer in the cavity of the bladder.

As soap was, with reason, supposed to increase the virtues of the lime, it led to the use of caustic alkali, taken in mucilage, or veal broth. Take of pure potash ℥viij.; of quick-lime ℥iv.; of distilled water, ℔ij. Mix them well together in a large bottle, and let them stand for twenty-four hours. Then pour off the ley, filter it through paper, and keep it in well-stopped vials for use. Of this, the dose is from thirty drops to ʒij., which is to be repeated two or three times a day, in a pint of veal broth, early in the morning, at noon, and in the evening. Continue this plan for three or four months, living, during the course, on such things as least counteract the effect of the medicine.

The common fixed alkalies, or carbonated alkali, and the acidulous soda-water, have of late been used as lithontriptics. Honey has also been given; and Mr. Home, surgeon at the Savoy, has recorded its utility in his own and in his father's cases. Bitters have likewise been tried.

Dismissing all theories, lime-water, soap, acidulous soda-water, caustic alkali, and bitters are useful in cases of stone. Of the soap, as much may be taken as the stomach will bear, or as much as will prove gently laxative; but of the lime-water, few can take more than a pint daily.

The acidulous soda-water may be taken in larger quantities, as it is more agreeable.

There is a remedy celebrated in Holland, under the name of liquor lithontriptica Loosii, which contains, according to an accurate analysis, muriate of lime. This professor Hufeland recommends in the following form:—

℞. Calcis muriatis, ʒj.
Aquæ distillatæ, ℥ij.: ft. solutio.

Thirty drops are to be taken four times a day, which may be increased as far as the stomach will bear.

For curing stone patients, little reliance can be placed in any lithontriptics hitherto discovered, though they may rationally be given, with a confident hope of procuring an alleviation of the fits of pain attending the presence of stone in the bladder. After all, the only certain method of getting rid of the calculus is the operation of lithotomy.

LITHOSPE'RMUM. (*um, i.* n.; from λιθος, a stone, and σπερμα, seed: named from the hardness of its seed.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

2. The pharmacopœial name of common gromwell. See *Lithospermum officinale*.

Lithospermum officinale. The systematic name of the officinal gromwell; called also *Ætonychum*. The seeds of this plant, *Lithospermum—seminibus lævibus, corollis vix calycem superantibus, foliis lanceolatis*, of Linnæus, were formerly supposed, from their stony hardness, to be efficacious in calculous and gravelly disorders. Little credit is given to their lithontriptic character, yet they are occasionally used as diuretic for clearing the urinary passages, and for obviating strangury, in the form of emulsion.

LITHO'TOMY. (*Lithotomia, æ.* f.; from λιθος, a stone, and τεμνω, to cut.) The operation of cutting into the bladder, in order to extract a stone. Several methods have been recommended for performing this operation, but there are only two which can be practised with any propriety. One is, where the operation is to be performed immediately above the pubes, in that part of the bladder which is not covered with peritonæum, called the *high operation*. The other, where it is done in the perinæum, by laying open the neck and lateral part of the bladder, so as to allow of the extraction of the stone, called the *lateral operation*, from the prostate gland of the neck of the bladder being laterally cut.

LITHOTRITY. (*Lithotritas, atis.* f.; from λιθος, a stone, and τειρω, to break into pieces.) The breaking a stone, through the urethra, in the urinary bladder into pieces, that they may escape with the urine. This operation has lately been practised with success by Baron Heurteloup, M. Civiale, and others in France.

LITMUS. See *Lichen roccella*.

Li'tron. See *Nitre*.

Li'tus. A liniment.

LI'VER. Ἡπαρ. *Hepar.* A large abdominal viscus, of a deep red colour, of great size and weight, situated under the diaphragm, in the right hypochondrium, its smaller portion occupying part of the epigastric region. In the human body, the liver is divided into two principal lobes, the right of which is by far the largest. They are divided on the upper side by a broad ligament, and on the other side by a considerable depression or fossa. Between and below these two lobes is a smaller lobe, called lobulus spigelii. See *Lobulus spigelii*. In describing this viscus, it is necessary to attend to seven principal circumstances:—its ligaments; its surfaces; its margins; its tubercles; its fissure; its sinus; and the pori biliari.

The *ligaments* of the liver are five in number, all arising from the peritonæum. 1. *The right lateral ligament*, which connects the thick right lobe with the posterior part of the diaphragm. 2. *The left lateral ligament*, which connects the convex surface and margin of the left lobe with the diaphragm, and, in those of whom the liver is very large, with the œsophagus and spleen. 3. *The broad or middle suspensory ligament*, which passes from the diaphragm into the convex surface, and separates the right lobe of the liver from the left. It descends from above through the large fissure to the concave surface, and is then distributed over the whole liver. 4. *The round ligament*, which in adults consists of the umbilical vein, indurated into a ligament. 5. *The coronary ligament*.

The liver has two *surfaces*, one superior, which is convex and smooth, and one inferior, which is concave, and has holes and depressions to receive, not only the contiguous viscera, but the vessels running into the liver.

The *margins* of the liver are also two in number: the one, which is posterior and superior, is obtuse; the other, situated anteriorly and inferiorly, is acute.

The *tubercles* of the liver are likewise two in number, viz. *lobulus anonymus*, and *lobulus caudatus*. These are found on the under surface, near the vena portæ. See *Lobulus anonymus*, and *caudatus*.

Upon looking on the concave surface of this viscus, a considerable fissure is obvious, known by the name of the *fissure of the liver*.

In order to expose the *sinus*, it is necessary to remove the gall-bladder, when a considerable sinus, before occupied by the gall-bladder, will be apparent.

The *blood-vessels* of the liver are the hepatic artery, the vena portæ, and the vena cavæ hepaticæ, which are described under their proper names. The *absorbents* of the liver are very numerous. The liver has *nerves*, from the great intercostal and eighth pair, which arise from the hepatic plexus, and proceed along with the hepatic artery and vena portæ into the substance of the liver. With regard to the substance of the liver, various opinions have been entertained. It is, however, now pretty well ascertained to be a large gland, composed of lesser glands, connected together by cellular structure. The small glands which thus compose the substance of the liver are termed penicilli, from the arrangement of the minute ramifications of the vena portæ composing each gland, resembling that of the hairs of a pencil. The chief use of this large viscus is to supply a fluid, named bile, to the intes-

tines, which is of the utmost importance in chylification. The small penicilli perform this function by a specific action on the blood they contain, by which they secrete in their very minute ends the fluid termed *hepatic bile;* but whether they pour it into what is called a follicle, or not, is yet undecided, and is the cause of the difference of opinion respecting the substance of the liver. If it be secreted into a follicle, the substance is truly glandular, according to the notion of the older anatomists; but if it be secreted merely into a small vessel, called a biliary pore (the existence of which can be demonstrated), corresponding to the end of each of the penicilli, without any intervening follicle, its substance is then, in their opinion, vascular. According to our notions in the present day, in either case, the liver is said to be glandular; for we have the idea of a gland when any arrangement of vessels performs the office of separating from the blood a fluid or substance different in its nature from the blood. The small vessels which receive the bile secreted by the penicilli, are called *pori biliarii:* these converge together throughout the substance of the liver towards its under surface, and, at length, form one trunk, called *ductus hepaticus*, which conveys the bile into either the *ductus communis choledochus*, or *ductus cysticus*. See *Gall-bladder*.

Liver, inflammation of. See *Hepatitis*.

Liver of sulphur. See *Potassæ sulphuretum*.

LIVERWORT. See *Marchantia*.

Liverwort, ash-coloured. See *Lichen*.

Liverwort, ash-coloured ground. See *Lichen*.

Liverwort, ground. See *Lichen caninus*.

Liverwort, Iceland. See *Lichen*.

Liverwort, noble. See *Marchantia*.

Liverwort tree. See *Lichen olivarius*.

LIVIDUS. Livid: applied to designate a dark greyish violet colour. See *Colour*.

LI'VOR. (*or, ōris.* m.; from *liveo*, to be black and blue.) Lividness: a black mark from a blow; a dark circle under the eye.

LIX. (*Lix, licis.* f.; from λις, light.) Formerly applied to water, and now to wood-ash.

LIXI'VIAL. *Lixivialis;* from *lix*, wood-ash. Salts are so called which are extracted by lixiviation.

LIXIVIA'TION. *Lixiviatio.* The process employed by chemists of dissolving, by means of warm water, the saline and soluble particles of cinders, the residues of distillation and combustion, coals, and natural earths. Salts thus obtained are called *Lixivial salts*.

LIXI'VIUM. (*um, ii.* n.; from *lix*, wood-ash.) The liquor in which saline and soluble particles of the residues of distillation and combustion are dissolved.

Lixivium saponarium. See *Potassæ liquor*.

Lixivium tartari. See *Potassæ subcarbonatis liquor*.

LOBATUS. (From *lobus*, a lobe.) Lobate: lobes. Applied to leaves which have the margins of the segments lobed, as in *Anemone hepatica*, and to such as are lobed like the vine, thistle, and many geraniums.

LOBB, Theophilus, practised as a physician in London with considerable reputation, and left several works on medical topics. He wrote on fevers, small-pox, and some other diseases; but his most celebrated publication was, *A Treatise on Solvents of the Stone*, and on curing the stone and the gout by aliments, which passed through several editions. He considered the morbid matter of an alkaline nature, and vegetable acids as the remedy. He was author also of *A Compendium of the Practice of Physic*, and of several papers in the Gentleman's Magazine.

LOBE. See *Lobus*.

Lobed leaf. See *Lobatus*.

LOBE'LIA. (*a, æ.* f.; named in honour of Lobel, a botanist.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Monogamia*.

2. The pharmacopœial name of the blue lobelia. See *Lobelia syphilitica*.

Lobelia syphilitica. The systematic name of the blue lobelia of the pharmacopœias. The root is the part directed by the Edinburgh Pharmacopœia for medicinal use; in taste it resembles tobacco, and is apt to excite vomiting. It derived the name of *syphilitica* from its efficacy in the cure of syphilis, as experienced by the North American Indians, who considered it as a specific in that disease, and with whom it was long an important secret, which was purchased by Sir William Johnson, and since published by different authors. The method of employing this medicine is stated as follows: a decoction is made of a handful of the roots in three measures of water. Of this half a measure is taken in the morning fasting, and repeated in the evening; and the dose is gradually increased, till its purgative effects become too violent, when the decoction is to be intermitted for a day or two, and then renewed, until a perfect cure is effected. During the use of this medicine, a proper regimen is to be enjoined, and the ulcers are also to be frequently washed with the decoction; or if deep and foul, to be sprinkled with the powder of the inner bark of the New Jersey tea-tree, *Ceanothus americanus*. Although the plant thus used is said to cure the disease in a very short time, yet it is not found that the antisyphilitic powers of the lobelia have been confirmed in any instance of European practice.

LOBSTER. See *Cancer gammarus*.

LO'BULUS. (*us, i.* m.; diminutive of *lobus*, a lobe.) A small lobe; as *lobulus spigelii*.

Lobulus accessorius. See *Lobulus anonymus*.

Lobulus anonymus. *Lobulus accessorius anterior-quadratus.* The anterior point of the right lobe of the liver. Others define it to be that space of the great lobe betwixt the fossa of the umbilical vein and gall-bladder, and extending forward, from the fossa for the lodgment of the vena portæ, to the anterior margin of the liver.

Lobulus caudatus. *Processus caudatus.* A tail like process of the liver, stretching

downward from the middle of the great right lobe to the lobulus spigelii. It is behind the gall-bladder, and betwixt the fossa venæ portarum and the fissure for the lodgment of the vena cava.

Lobulus spigelii. *Lobulus posterior. Lobulus posticus papillatus.* A lobe of the liver betwixt the two greater lobes, but rather belonging to the right great lobe. From its situation deep behind, and from its having a perpendicular papilla-like projection, it is called lobulus posterior, or papillatus. To the left side it has the fissure for the lodgment of the ductus venosus; on the right, the fissure for the vena cava; and above, it has the great transverse fissure of the liver, for the lodgment of the cylinder of the porta; obliquely to the right, and upwards, it has a connection with the lower concave surface of the great lobe, by the processus caudatus, which Winslow calls one of the roots of the lobulus spigelii. It is received into the bosom of the lesser curve of the stomach.

LOBUS. (*us, i.* m.; said to be derived from λωβειν, to be ashamed, and applied to a part of the ear, which becomes red or blushes when the person is ashamed.) A lobe.

1. In *Anatomy*, applied to the more or less separate parts of which some of the viscera are composed; as glands, the ear, the liver, &c.

2. In *Botany*, a principal division of a leaf, the margins of which are in some degree rounded: it is also applied to the divisions of the petals, or any other suitable part. A capsule is sometimes said to be lobed.

LOCAL. *Localis.* Belonging to a part and not the whole. A common division of diseases is into general and local.

Loca'les. (The plural of *localis.*) The name of the fourth class of Cullen's Nosology, which comprehends morbid affections that are partial, and includes eight orders; viz. *dysæsthesiæ, dysorexiæ, dyscinesiæ, apocenoses, epischeses, tumores, ectopia,* and *dialyses.* See *Nosology.*

Localis membrana. The pia mater.

LO'CHIA. (From λοχευω, to bring forth.) The cleansings. The serous, and for the most part green-coloured, discharge that takes place from the uterus and vagina of women, during the first four days after delivery.

LOCHIORRHŒ'A. (*a, æ.* f.; from λοχια, and ρεω, to flow.) An excessive discharge of the lochia.

LOCKED-JAW. See *Tetanus.*

LOCULAMENTUM. (*um, i.* n.) In *Botany*, means the space or cell between the valves and partitions of a capsule; distinguished from their number into unilocular, bilocular, &c. See *Capsula.*

LOCUSTA. A term sometimes applied to the spikelet of grasses. See *Spicula.*

LOGWOOD. See *Hæmatoxylon.*

LOIMIC. (*Loimicus;* from λοιμος, *pestis, contagium.*) Appertaining to the plague, or to contagions.

LOMENTACEUS. (From *lomentum;* in allusion to the pulse-like nature of the plants in question, so as to keep in view their analogy with the *papilionaceæ.*) Lomentaceous; of the nature of a lomentum.

Lomentaceæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as have a bivalve pericarpium or legume, and not papilionaceous coorls; as cassia, fumaria, ceretonia, &c.

LOMENTUM. 1. In *Dietetics*, a word used by old writers on medicine, to express a meal made of beans, or bread made of this meal, and used as a wash.

2. In *Botany*, a bivalve pericarpium, divided into cells by very small partitions, never lateral like those of the legume.

From its figure is termed,

1. *Articulate*, when the partitions are visible externally; as in *Hedysarum argenteum.*

2. *Moniliform*, necklace-like, consisting of a number of little globules; as in *Hedysarum moliferum.*

3. *Aculeate;* as in *Hedysarum onobrychis.*

4. *Crystate;* as in *Hedysarum caput galli.*

5. *Isthmis interceptum*, when the cells are much narrower than the joints; as in *Hippocrepis.*

6. *Corticose*, the external bark being woody, and the inside pulpy; as in *Cassia fistula.*

LOMMIUS, Jodocus, was born in Guelderland, about the commencement of the 16th century. He left three small works, which are still valued from the purity and elegance of their Latinity: a *Commentary on Celsus; Medicinal Observations*, in Three Books; and a *Treatise on the Cure of continued Fevers.* The two latter have been several times reprinted and translated.

LOMONITE. Diphrismatic zeolite.

LONCHI'TIS. (*is, idis.* f.; from λογχη, a lance: so named because the leaves resemble the head of a lance.) See *Asplenium ceterach.*

Longa'num. (From *longus*, long; so named from its length.) The intestinum rectum.

LONGING. A desire peculiar to the female, and only during pregnancy, and those states in which the uterine discharge is suppressed.

LONGI'SSIMUS. The longest. Parts are so named from their length, compared to that of others; as *longissimus dorsi*, &c.

Longissimus dorsi. This muscle, which is somewhat thicker than the sacrolumbalis, greatly resembles it, however, in its shape and extent, and arises, in common with that muscle, between it and the spine. It ascends upwards along the spine, and is inserted by small double tendons into the posterior and inferior part of all the transverse processes of the vertebræ of the back, and sometimes of the last vertebra of the neck. From its outside it sends off several bundles of fleshy fibres, interspersed with a few tendinous filaments, which are usually inserted into the lower edge of the ten uppermost ribs, not far from their tubercles. In some subjects, however, they are found inserted into a less number, and in others, though more rarely, into every one of the ribs. Towards the upper part of this

muscle is observed a broad and thin portion of fleshy fibres, which cross and intimately adhere to the fibres of the longissimus dorsi. This portion arises from the upper and posterior part of the transverse processes of the five or six uppermost vertebræ of the back, by as many tendinous origins, and is usually inserted, by six tendinous and fleshy slips, into the transverse processes of the six inferior vertebræ of the neck. This portion is described, by Winslow and Albinus, as a distinct muscle; by the former, under the name of *transversalis major colli*, and by the latter, under that of *transversalis cervicis*. But its fibres are so intimately connected with those of the longissimus dorsi, that it may very properly be considered as an appendage to the latter. The use of this muscle is to extend the vertebræ of the back, and to keep the trunk of the body erect; by means of its appendage, it likewise serves to turn the neck obliquely backwards, and a little to one side.

Longissimus manus. See *Flexor tertii internodii pollicis*.

Longissimus oculi. See *Obliquus superior oculi*.

LONGITU'DINAL. *Longitudinalis*. Parts are so named from their direction.

Longitudinal sinus. Longitudinal sinus of the dura mater. A triangular canal, proceeding in the falciform process of the dura mater, immediately under the bones of the skull, from the crista galli to the tentorium, where it branches into the lateral sinuses. The longitudinal sinus has a number of trabeculæ or fibres crossing it. Its use is to receive the blood from the veins of the pia mater, and convey it into the lateral sinuses, to be carried through the internal jugulars to the heart.

Longsightedness. See *Presbyopia*.

LO'NGUS. Long. 1. In *Anatomy*, some parts are so named from their comparative length; as *longus colli*, &c.

2. In *Botany*, a cup or calyx is said to be long when it is equal in length to the tube of the blossom.

Longus colli. This is a pretty considerable muscle, situated close to the anterior and lateral part of the vertebræ of the neck. Its outer edge is in part covered by the rectus internus major. It arises tendinous and fleshy within the thorax, from the bodies of the three superior vertebræ of the back, laterally; from the bottom and fore-part of the transverse processes of the first and second vertebræ of the back, and of the last vertebræ of the neck: and likewise from the upper and anterior points of the transverse processes of the sixth, fifth, fourth, and third vertebræ of the neck, by as many small distinct tendons; and is inserted tedinous into the fore-part of the second vertebra of the neck, near its fellow. This muscle, when it acts singly, moves the neck to one side; but, when both act, the neck is brought directly forwards.

LONICE'RA. (*a, æ.* f.) The name of a genus of plants in the Linnæan sytem. Class, *Pentandria*; Order, *Monogynia*.

Lonicera diervilla. A species of honeysuckle. *Diervilla*. The young branches of this species, *Lonicera—racemis terminalibus, foliis serratis*, of Linnæus, are employed in North America as a certain remedy in gonorrhœa and suppression of urine. It has not yet been exhibited in Europe.

Lonicera periclimenum. Common honey-suckle. *Caprifolium*. This beautiful and common plant was formerly used in the cure of asthma, for cleansing sordid ulcers, and removing diseases of the skin, virtues it does not now appear to possess.

LOOSENESS. See *Diarrhœa*.

LO'PEZ. *Radix lopeziana*. *Radix indica lopeziana*. The name of the root of an unknown tree, growing, according to some, at Goa. It is met with in pieces of different thickness, some at least of two inches diameter. The woody part is whitish, and very light; softer, more spongy, and whiter next the bark, including a denser, somewhat reddish, medullary part. The bark is rough, wrinkled, brown, soft, and, as it were, woolly, pretty thick, covered with a thin paler cuticle. Neither the woody nor cortical part has any remarkable smell or taste, nor any appearance of resinous matter. It appears that this medicine has been remarkably effectual in stopping colliquative diarrhœas, which had resisted the usual remedies. Those attending the last stage of consumptions were particularly relieved by its use. It seemed to act, not by an astringent power, but by a faculty of restraining and appeasing spasmodic and inordinate motions of the intestines. Dr. Gaubius, who gives this account, compares its action to that of simarouba, but thinks it more efficacious than this medicine.

Lopha'dia. (From λοφος, the hinder part of the neck.) *Lophia*. The first vertebra of the neck.

LOPPED. See *Truncatus*.

LORDO'SIS. (From λορδος, curved, bent.) A curvature of the spine.

LO'RICA. (From *lorico*, to crust over.) A kind of lute, with which vessels are coated before they are put into the fire.

LORICA'TION. *Loricatio*. Coating. Nicholson recommends the following composition for the coating of glass vessels, to prevent their breaking when exposed to heat:—Take of sand and clay, equal parts; make them into a thin paste, with fresh blood, prevented from coagulating by agitation, till it is cold, and diluted with water; add to this some hair, and powdered glass: with a brush, dipped in this mixture, besmear the glass; and when this layer is dry, let the same operation be repeated twice, or oftener, till the coat applied is about one third part of an inch in thickness.

LORRY, Anne-Charles, was born in 1725. He was author of several works, some of which still maintain their value; particularly his treatise on Cutaneous Diseases, which combines much erudition and accurate observation, with great clearness of arrangement

and perspicuity of language. He died in 1783.

LOTION. (*Lotio*, *onis*. f.; from *lavo*, to wash.) An external fluid application. Lotions are usually applied by wetting linen in them, and keeping it on the part affected.

LO'TUS. (*us*, *i*. f.; from the nymph *Lotis*, who was changed into this tree; or from λω, to desire.) 1. A tree the fruit of which was said to be so delicious as to make those who tasted it forsake all other desires: hence the proverb, *Λωτον εφαγον*, *lotum gustavi*: I have tasted lotus.

2. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

LOUIS, Anthony, was born in 1723. He wrote the *Surgical part of the Encyclopédie*, and presented several interesting papers to the Royal Academy of Surgery, of which he was secretary: besides which, he was author of *several works on anatomical*, *medical*, and *other subjects*. In a memoir on the legitimacy of retarded births, he maintains that the detention of the fœtus more than ten days beyond the ninth month is physically impossible.

LOVAGE. See *Ligusticum levisticum*.

LOVE-APPLE. See *Solanum*.

LOWER, Richard, was born in Cornwall about the year 1631. In 1665 he published a defence of Willis's work on Fevers, displaying much learning and ingenuity. But his most important performance was entitled, "Tractatus de Corde, item de motu et calore Sanguinis, et Chyli in eum transitu," printed four years after. He demonstrated the dependence of the motions of the heart upon the nervous influence, and referred the red colour of arterial blood to the action of the air in the lungs; he also gave an account of his experiments, made at Oxford, in February 1665, on the transfusion of blood from one living animal to another, of which an abstract had before appeared in the Philosophical Transactions. He afterwards practised this upon an insane person, before the Royal Society.

Loxa'rthros. (From λυξος, oblique, and αρθρον, a joint.) *Loxarthrus*. An obliquity of the joint, without spasm or luxation.

LO'XIA. (*a*, *æ*. f.; from λυξος, oblique.) The wry neck.

LUCATE'LLUS. The name of the inventor of a balsam. See *Balsamum Lucatelli*.

LU'CIDUS. Transparent.

LUCULLITE. A species of limestone.

Lu'dus helmontii. *Ludus paracelsi*. The waxen vein. A stony matter said to be serviceable in calculus.

LUDWIG, Christian Theophilus, was born in Silesia in 1709. He published several botanical works: elementary works were likewise written by him on the different branches of medical knowledge. A more important work is entitled *Adversaria Medico-practica*, in three octavo volumes. He has given an account of his trials of stramonium and belladonna in epilepsy, by no means favourable to either.

LU'ES. (*es*, *is*. f.; from λυω, to dissolve, because it produces dissolution.) A pestilence or poison.

Lues deifica. One of the many pompous names formerly given to epilepsy.

Lues neurodes. A typhus fever.

Lues venerea. The plague of Venus, or the venereal disease. See *Syphilis*.

LUISINUS, Louis, was born at Udina, about the middle of the 16th century. He translated Hippocrates's aphorisms into Latin hexameters; and published a treatise on regulating the affections of the mind by moral philosophy and the medical art: but his most celebrated work is entitled *Aphrodisiacus*, printed at Venice, in two folio volumes.

LU'JULA. (*a*, *æ*. f.; corrupted or contracted from *Allelujah*, *Praise the Lord*: so called from its many virtues.) See *Oxalis*.

LUMBA'GO. (*o*, *inis*. f.; from *lumbus*, the loin.) A rheumatic affection of the muscles about the loins. See *Rheumatismus*.

LUMBAR. *Lumbalis*. Belonging to the loins; as lumbar region, &c.

Lumbar abscess. *Abscessus lumbalis*. Psoas abcess: so called from the situation in which the matter is found, namely, upon the side of the psoas muscle, or betwixt that and the iliacus internus. Between these muscles there lies a quantity of loose cellular membrane, in which an inflammation often takes place, either spontaneously or from mechanical injuries. This terminates in an abscess that can procure no outlet but by a circuitous course, in which it generally produces irreparable mischief, without any violent symptoms occurring to alarm the patient. The abscess sometimes forms a swelling about Poupart's ligament; sometimes below it; and frequently the matter glides under the fascia of the thigh. Occasionally, it makes its way through the sacro-ischiatic foramen, and assumes rather the appearance of a fistula in ano. The uneasiness in the loins, and the impulse communicated to the tumour by coughing, evince that the disease arises in the lumbar region; but it must be confessed, that we can hardly ever know the existence of the disorder, before the tumour, by presenting itself externally, leads us to such information. The lumbar abscess is sometimes connected with diseased vertebræ, which may either be a cause or effect of the collection of matter. The disease, however, is frequently unattended with this complication.

The situation of the symptoms of lumbar abscess renders this affection liable to be mistaken for some other, viz. lumbago and nephritic pains, and, towards its termination, for crural or femoral hernia. The first, however, is not attended with the shivering that occurs here; and nephritic complaints are generally discoverable by attention to the state of the urine. The distinction from crural hernia is more difficult. In both, a soft inelastic swelling is felt in the same situation: but in hernia, it is attended with obstructed fæces, vomiting, &c., and its appearance is always

sudden, while the lumbar tumour is preceded by various complaints before its appearance in the thigh. In a horizontal posture, the abscess also totally disappears, while the hernia does not.

Lumbar region. Regio lumbalis. The loins.

Lumbaris externus. See *Quadratus lumborum.*

Lumbaris internus. See *Psoas magnus.*

LUMBRICA'LIS. (From *lumbricus,* the earth-worm.) Resembling or appertaining to the earth-worm.

Lumbricalis manus. *Fidicinalis. Flexor primi internodii digitorum manus, vel perforatus lumbricalis,* of Cowper. The small flexors of the fingers which assist the bending the fingers when the long flexors are in full action. They arise thin and fleshy from the outside of the tendons of the flexor profundus, a little above the lower edge of the carpal ligaments, and are inserted by long slender tendons into the outer sides of the broad tendons of the interosseal muscles about the middle of the first joints of the fingers.

Lumbricales pedis. Four muscles like the former, that increase the flexion of the toes, and draw them inwards.

LUMBRICOI'DES. (From *lumbricus,* and εἶδος, resemblance.) Like to the *lumbricus,* or earth-worm.

LUMBRI'CUS. (*us, i.* m.; *à lubricitate:* from its slipperiness.) A name given to some worms, as the common earth-worm, and the long round worm which inhabits the intestines of man and other animals. See *Vermis.*

Lumbricus terrestris. The earth-worm. Formerly given internally, when dried and pulverised, as a diuretic.

Lu'mbus veneris. See *Achillea millefolium.*

LU'NA. (*a, æ.* f.; *à lucendo.*) 1. The moon.

2. The old alchemistical name of silver.

Luna cornea. Muriate of silver.

Luna fixata. An obsolete epithet of the oxide of zinc.

Luna plena. A term used by the old alchemists in the transmutation of metals.

Lunar caustic. See *Argenti nitras.*

LUNA'RE OS. One of the bones of the wrist; so named from its shape.

Lunaria. See *Ophiaglossum lunaria.*

Lunaria rediviva. *Bulbonach,* of the Germans. Satin and honesty. The name of a plant formerly esteemed as a warm diuretic.

LU'NATIC. (*Lunaticus;* from *luna,* the moon: so called because the malady returns, or is aggravated or influenced by the moon.)

1. A lunatic.

2. A disease which appears to be influenced by the moon.

LUNA'TUS. See *Lunulatus.*

LUNG. *Pulmo.* The lungs are two viscera situated in the chest, by means of which we breathe. The lung in the right cavity of the chest is divided into three lobes, that in the left cavity into two. They hang in the chest, attached at their superior part to the neck by means of the trachea, and are separated by the mediastinum. They are also attached to the heart by means of the pulmonary vessels. The substance of the lungs is of four kinds, viz. vesicular, vascular, bronchial, and parenchymatous. The vesicular substance is composed of the air-cells. The vascular invests those cells like a network. The bronchial is formed by the ramifications of the bronchia throughout the lungs, having the air-cells at their extremities: and the spongy substance that connects these parts is termed the *parenchyma.* The lungs are covered with a fine membrane, a reflection of the pleura, called *pleura-pulmonalis.* The internal surface of the air-cells is covered with a very fine, delicate, and sensible membrane, which is continued from the larynx through the trachea and bronchia. The arteries of the lungs are the bronchial, a branch of the aorta, which carries blood to the lungs for their nourishment; and the pulmonary, which circulates the blood through the air-cells to undergo a certain change. The pulmonary veins return the blood that has undergone this change, by four trunks, into the left auricle of the heart. The bronchial veins terminate in the vena azygos. The nerves of the lungs are from the eighth pair and great intercostal. The absorbents are of two orders; the superficial, and the deep-seated: the former are more readily detected than the latter. The glands of these viscera are called bronchial. They are muciparous, and situated about the bronchia. See *Respiration.*

LUNG-WORT. See *Pulmonaria.*

Lung-wort, tree. See *Lichen pulmonarius.*

LUNULA'RIS. See *Lunulatus.*

LUNULA'TUS. *Lunatus. Lunularis.* Lunulate: crescent-shaped, or half-moon-like. A term applied to leaves, pods, &c. which are so shaped, whether the points are directed towards the stalk, or from it; as in the leaves of *Passiflora lunata,* and legumen of *Medicago foliata.*

LU'PIA. (From λυπεω, to molest.) 1. A genus of disease, including encysted tumours, the contents of which are very thick, and sometimes solid; as *meliceris, atheroma, steatoma,* and *ganglion.*

2. (From *lupus,* a wolf: so called because it does not cease to destroy the part it seizes.) A malignant ulcer which eats away the soft parts on which it appears, laying bare the bones and cartilages, and which is equally fatal with cancer.

3. A tumour which often occurs in the knee and elbow joint, consisting of a soft spongy cellular fungus.

Lupino'sus. (From *lupinus,* the lupin.) Lupin-like: applied to a disease of the skin, the *porrigo lupinosa.*

LUPI'NUS. (*us, i.* m.; so called by Pliny and other ancient writers. Professor Martin says the word owes its origin to *lupus,* a wolf, because plants of this genus ravage the ground by over-running it, after the manner of that animal. It is also derived from λυπη, grief: whence Virgil's epithet,

tristes lupini; from the fanciful idea of its acrid juices, when tasted, producing a sorrowful appearance on the countenance.) The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

2. Under this term the white lupin is directed in some pharmacopœias.

Lupinus albus. The systematic name of the white lupin. The seed, the ordinary food of mankind in the days of Galen and Pliny, is now forgotten. Its farinaceous and bitter meal is occasionally exhibited to remove worms from the intestines, and made into poultices to resolve indolent tumours.

LUPULIN. Lupuline. The name given by Dr. Ives to an impalpable yellow powder, in which he believes the virtues of the hop to reside, and which may be obtained by beating and sifting the hops used in brewing. It appears to be peculiar to the female plant, and is probably secreted by the nectaria. In preserving beer from the acetous fermentation, and in communicating an agreeable flavour to it, lupulin was found to be equivalent to ten times its weight of hop-leaves.

LU'PULUS. (*us, i.* m.; from λυπη, dislike: so named from its bitterness.) See *Humulus.*

LU'PUS. (*us, i.* m.) 1. The wolf.

2. A disease like a cancer is also so called, because it eats away the flesh very rapidly.

3. The term was intended, by Dr. Willan, to comprise, together with the "*noli me tangere,*" affecting the nose and lips, other slow tubercular affections, especially about the face, commonly ending in ragged ulcerations of the cheeks, forehead, eyelids, and lips, and sometimes occurring in other parts of the body, where they gradually destroy the skin and muscular parts to a considerable depth. Sometimes the disease appears in the cheek circularly, or in the form of a sort of ringworm, destroying the substance, and leaving a deep and deformed cicatrix; other parts are occasionally the seat of this disease.

By the knife or the caustic, a separation has sometimes been made of the morbid from the sound parts, and the progress of the disease arrested. And in some cases, where the ulceration was very slow, and unaccompanied by much inflammation, the internal use of arsenic has been found beneficial; a circumstance which has probably given rise to the opinion that cancer has been cured by that mineral. In some less severe cases of lupous tubercles in the face, which had made no progress towards ulceration, the solution of muriate of barytes, taken internally, has materially amended the complaint.

Luridæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of those which prove some deadly poison; the corolla mostly monopetalous; as *Datura, Solanum, Nicotiana.*

LU'RIDUS. Ghastly; pale. Some plants are so called from their producing such effects when eaten.

Lustra'go. (From *lustro,* to expiate: so called because it was used in the ancient purifications.) Flat or base vervain.

LUSUS. (*us, ûs.* m.) A sport.

Lusus naturæ. A sport of nature; a monster. See *Monster.*

LUTE. See *Lutum.*

Lu'tea corpora. See *Corpus luteum.*

LUTE'OLA. (*a, æ.* f.; from *lutum,* mud: because it grows in muddy places, or is of the colour of mud.) See *Reseda luteola.*

LUTEUS. A deep yellow. See *Colour.*

LU'TUM. (*um, i.* n.; from λυτος, soluble.) *Cæmentum.* Mud. Lute. A composition with which chemical vessels are covered, to preserve them from the violence of the fire, and to close exactly their joinings to each other, to retain the substances which they contain when they are volatile and reduced to vapour.

LUXA'TION. (*Luxatio;* from *luxo,* to put out of joint.) A dislocation of a bone from its proper cavity.

Lyca'nche. (From λυκος, a wolf, and αγχω, to strangle.) A species of quincy, in which the patient makes a noise like the howling of a wolf.

Lycanthro'pia. (From λυκος, a wolf, and ανθρωπος, a man.) A species of insanity, in which the patients leave their houses in the night, and wander about like wolves, in unfrequented places.

LY'CHNIS. (*is, idis.* f.; from λυχνος, a torch: because the ancients used its leaves, rolled up, for torches.) 1. A name of several vegetable productions.

2. The name of a genus of plants. Class, *Decandria;* Order, *Pentagynia.*

Lychnis segetum. See *Agrostemma.*

LYCHNOI'DES. (From *lychnis,* the name of a plant, and ειδος, resemblance.) Like the herb *lychnis.*

Lychnoides segetum. See *Agrostemma.*

LYCO'CTONUM. (*um, i.* n.; from λυκος, a wolf, and κτεινω, to slay: so called because it was the custom of hunters to secrete it in raw flesh, for the purpose of destroying wolves.) The *Aconitum.*

LYCOPE'RDON. (From λυκος, a wolf, and περδω, to break wind: so named because it was supposed to spring from the dung of wolves.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Fungi.*

2. The pharmacopœial name of the puff-ball. See *Lycoperdon bovista.*

Lycoperdon bovista. The systematic name of the puff-ball. Mollipuf. Puff-fist. *Crepitus lupi.* A round or egg-shaped fungus: the *Lycoperdon—subrotundum, lacerato dehiscens,* of Linnæus; when fresh, of a white colour, with a very short, or scarcely any pedicle, growing in dry pasture-grounds. When young, it is sometimes covered with tubercles on the outside, and is pulpy within. By age it becomes smooth externally, and dries internally into a very fine, light, brownish dust, which is used by the common people to stop hæmorrhages.

Lycoperdon cervinum. *Boletus.* Deer-ball. This has the character of being aphrodisiac, and increasing the quantity of milk.

Lycoperdon tuber. The systematic name of the truffle. *Tuber gulosorum. Tubera terræ.* Trubs. *Tuber cibarium,* of Dr. Withering. A solid fungus, of a globular figure, which grows under the surface of the ground, without any roots, or the access of light, and attains a size from a pea to the largest potatoe. It has a rough, blackish coat, and is destitute of fibres. There are several species used in the places in which they are found: as the *Tuber moschatum; Tuber albidum,* called *Bianchetti; Tuber rufum,* called *Rossetti;* the black truffle with white flesh; and also the *Tuber griseum,* or Piedmont truffle, which has a slight odour of garlick. None of these are poisonous, though so nearly allied to the *Lycoperda,* differing only in being fleshy in the inside, instead of being powdery. Cooks are well acquainted with its use and qualities. They are all used to give delicate flavours to soups and sauces. The truffle is found in woods and pastures in some parts of Kent, but is not very common in England. In France and Spain, truffles are very frequent, and grow to a much larger size than they do here. In these places the peasants find it worth their while to search for them, and they train up dogs and swine for this purpose, who, after they have been inured to their smell by their masters frequently placing them in their way, will readily scrape them up as they ramble the fields and woods.

LYCOPE'RSICUM. (*um, i.* n.; from λυκος, a wolf, and περσικον, a peach: so called from its exciting a violent degree of lust.) *Lycopersicon.* Wolf's peach. Love-apple. See *Solanum lycopersicon.*

LYCOPO'DIUM. (*um, ii.* n.; from λυκος, a wolf, and πους, a foot: so called from its supposed resemblance.) 1. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Musci.*

2. The pharmacopœial name of the club-moss. See *Lycopodium clavatum.*

Lycopodium clavatum. The systematic name of the club-moss. Wolf's-claw. *Muscus clavatus. Lycopodium.* This plant affords a great quantity of pollen, which is much esteemed in some places to sprinkle on young children, to prevent excoriation, and to cure parts that are so. A decoction of the herb is said to be a specific in the cure of the plica polonica.

Lycopodium selago. The systematic name of the upright club-moss. *Muscus erectus.* The decoction of this plant acts violently as a vomit and a purgative, and was formerly, on that account, employed to produce abortions.

LYCO'PSIS. (*is, idis.* f.; from λυκος, a wolf, and οψις, an aspect: so called from its being of the colour of a wolf, or from the circumstance of the flowers being ringent, and having the appearance of a grinning mouth. The herbage is also furnished, says Ambrosinus, with a sort of rigid hairiness, similar to the coat of a wolf.) 1. The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the wall-bugloss, *Echium ægyptiacum,* the *Asperago ægyptiaca* of Wildenow.

LY'COPUS. (*us, i.* m.; from λυκος, a wolf, and πους, a foot: so named from its likeness.) The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.* Wolf's-claw, or water horehound.

Lycopus europæus. This plant is sometimes used as an astringent.

Lydian stone. A flinty slate.

Lygi'smus. (From λυγιζω, to distort.) A dislocation.

Ly'gus. (From λυγιζω, to bend: so called from its flexibility.) The agnus castus.

LYMPH. *Lympha.* The liquid contained in the lymphatic vessels. Two processes may be employed to procure lymph. One is to lay bare a lymphatic vessel, divide it, and receive the liquid that flows from it; but this is a method difficult to execute, and besides, as the lymphatic vessels are not always filled with lymph, it is uncertain: the other consists in letting an animal fast during four or five days, and then extracting the fluid contained in the thoracic duct.

The liquid obtained in either way has, at first, a slightly opaline rose colour. It has a strong spermatic odour; a salt taste; it sometimes present a slight yellow tinge, and at other times a red madder colour.

But lymph does not long remain liquid: it congeals. Its rose colour becomes more deep, an immense number of reddish filaments are developed, irregularly arborescent, and very analogous in appearance to the vessels spread in the tissue of organs.

When we examine carefully the mass of lymph thus coagulated, we find it formed of two parts: the one solid, and forming a great many cells, in which the other remains in a liquid state. If the solid part be separated, the liquid congeals again.

The quantity of lymph procured from one animal is but small: a dog of a large size scarcely yields an ounce. Its quantity appears to increase according to the time of fasting.

The solid part of the lymph, which may be called *clot,* has much analogy with that of the blood. It becomes scarlet-red by the contact of oxygene gas, and purple when plunged in carbonic acid.

This specific gravity of lymph is to that of distilled water as 1022·28 : 1000·00.

Chevreuil analysed the lymph of the dog:

Water,	926·4
Fibrin,	004·2
Albumen,	61·0
Muriate of soda,	6·1
Carbonate of soda,	1·8
Phosphate of lime, Phosphate of magnesia, Carbonate of lime,	0·5
Total	1000·0

Its specific gravity is greater than water; in consistence, it is thin, and somewhat viscid. The quantity in the human body appears to be very great, as the system of the lymphatic vessels forms no small part of it. Its constituent principles appear to be albuminous water and a little salt. The lymphatic vessels absorb this fluid from the tela cellulosa of the whole body, from all the viscera, and the cavities of the viscera; and convey it to the thoracic duct, to be mixed with the chyle.

The use of the lymph is to return the superfluous nutritious jelly from every part, and to mix it with the chyle in the thoracic duct, there to be further converted into the nature of the animal; and, lastly, it has mixed with it the superfluous aqueous vapour, which is effused into the cavities of the cranium, thorax, abdomen, &c.

LYMPHATIC. (*Lymphaticus;* from *lympha*, lymph.) 1. Of the nature of lymph.

2. The name of an absorbent vessel, that carries a transparent fluid or lymph. The lymphatic vessels of the human body are small and transparent, and originate in every part of the body. With the lacteal vessels of the intestines, they form what is termed the *absorbent system.* Their termination is in the thoracic duct. See *Absorbent, Lacteal,* and *Thoracic duct.*

Lymphatics of the head and neck.—Absorbents are found on the scalp and about the viscera of the neck, which unite into a considerable *branch,* that accompanies the jugular vein. Absorbents have not been detected in the human brain, yet there can be no doubt of there being such vessels: it is probable that they pass out of the cranium through the canalis caroticus and foramen lacerum in basi cranii, on each side, and join the above *jugular branch,* which passes through some glands as it proceeds into the chest to the angle of the subclavian and jugular veins.

The absorbents from the right side of the head and neck, and from the right arm, do not run across the neck, to unite with the great trunk of the system: they have an equal opportunity of dropping their contents into the angle betwixt the right subclavian and the jugular vein. These vessels then uniting, form a trunk, which is little more than an inch, nay sometimes not a quarter of an inch, in length, but which has nearly as great a diameter as the proper trunk of the left side.

This vessel lies upon the right subclavian vein, and receives a very considerable number of lymphatic vessels: not only does it receive the lymphatics from the right side of the head, thyroid gland, neck, &c. and the lymphatics of the arm, but it receives also those from the right side of the thorax and diaphragm, from the lungs of this side, and from the parts supplied by the mammary artery. Both in this, and in the great trunk, there are many valves.

Of the upper extremities. — The absorbents of the upper extremities are divided into superficial and deep-seated. The *superficial absorbents* ascend under the skin of the hand in every direction to the wrist, from whence a *branch* proceeds upon the posterior surface of the fore-arm to the head of the radius, over the internal condyle of the humerus, up to the axilla, receiving several branches as it proceeds. Another *branch* proceeds from the wrist along the anterior part of the fore-arm, and forms a *network,* with a *branch* coming over the ulna from the posterior part, and ascends on the inside of the humerus to the glands of the axilla. The *deep-seated absorbents* accompany the larger blood-vessels, and pass through two glands about the middle of the humerus, and ascend to the glands of the axilla. The superficial and deep-seated absorbents having passed through the axillary glands, form *two trunks,* which unite into *one,* to be inserted with the jugular absorbents into the thoracic duct, at the angle formed by the union of the subclavian with the jugular vein.

Lymphatics of the inferior extremities. — These are also superficial and deep-seated. The *superficial ones* lie between the skin and muscles. Those of the toes and foot form a *branch,* which ascends upon the back of the foot, over the tendon of the cruræus anticus, forms with other branches *a plexus* above the ankles, then proceeds along the tibia over the knee, sometimes passes through a gland, and proceeds up the inside of the thigh, to the subinguinal glands. The *deep-seated* absorbents follow the course of the arteries, and accompany the femoral artery, in which course they pass through some glands in the leg and above the knee, and then proceed to some deep-seated subinguinal glands. The absorbents from about the external parts of the pubes, as the penis and perinæum, and from the external parts of the pelvis, in general, proceed to the inguinal glands. The subinguinal and inguinal glands send forth several branches, which pass through the abdominal ring into the cavity of the abdomen.

Of the abdominal and thoracic viscera.—The absorbents of the lower extremities accompany the external iliac artery, where they are joined by many branches from the *uterus, urinary bladder, spermatic chord,* and some branches accompanying the internal iliac artery; they then ascend to the sacrum, where they form a *plexus,* which proceeds over the psoas muscles, and meeting with the lacteals of the mesentery, form the thoracic duct, or trunk of the absorbents, which is of a serpentine form, about the size of a crow-quill, and runs up the dorsal vertebræ, through the posterior opening of the diaphragm, between the aorta and vena azygos, to the angle formed by the union of the left subclavian and jugular veins. In this course it receives the *absorbents of the kidneys,* which are superficial and deep-seated, and unite as they proceed towards the thoracic duct; and *the absorbents of the spleen,* which are upon its peritonæal coat, and unite with those of the pancreas,—a *branch* from the

plexus of vessels passing above and below the duodenum, and formed by the absorbents of the *stomach*, which come from the lesser and greater curvature, and are united about the pylorus with those of the pancreas and liver, which converge from the external surface and internal parts towards the portæ of the liver, and also by several branches from the *gall-bladder*.

Use of Lymphatics.—The office of these vessels is to take up substances which are applied to their mouths: thus the vapour of circumscribed cavities, and of the cells of the cellular membrane, are removed by the lymphatics of those parts; and thus mercury and other substances are taken into the system when rubbed on the skin. See *Absorption*.

The principle by which this absorption takes place, is a power inherent in the mouths of absorbing vessels, a vis insita, dependent on the high degree of irritability of their internal membrane, by which the vessels contract and propel the fluid forwards. Hence the use of this function appears to be of the utmost importance, viz. to supply the blood with chyle; to remove the superfluous vapour of circumscribed cavities,—otherwise dropsies, as hydrocephalus, hydrothorax, hydrocardia, ascites, hydrocele, &c. would constantly be taking place; to remove the superfluous vapour from the cells of the cellular membrane dispersed throughout every part of the body, that anasarca may not take place; to remove the hard and soft parts of the body, and to convey into the system medicines which are applied to the surface of the body.

Lymphatic gland. See *Conglobate gland*.

Lypo'ma. See *Lipoma*.

LY'RA. (*a, æ.* f.; from λυρα, a lyre, or musical instrument.) *Psalterium*. The triangular medullary space between the posterior crura of the fornix of the cerebrum, which is marked with prominent medullary fibres that give the appearance of a lyre.

LYRATUS. (From *lyra*, a musical instrument.) Lyrate, or lyre-shaped. A leaf is so named which is cut into transverse segments, generally longer towards the extremity of the leaf, which is rounded; as in *Erysimum barbaria*.

Lyre-shaped. See *Lyratus*.

Ly'rus. (From *lyra*, the lyre: so called because its leaves are divided like the strings of a lyre.) See *Arnica montana*.

Lysigy'ia. (From λυω, to loosen, and γυιον, a member.) The relaxation of limbs.

LYSIMA'CHIA. (*a, æ.* f.; from *Lysimachus*, who first discovered it.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

Lysimachia nummularia. The systematic name of the money-wort; called also, *Nummularia*, *Hirundinaria*, and *Centimorbia*. This plant is very common in our ditches. It was formerly accounted vulnerary; and was said to possess antiscorbutic and restringent qualities. Boerhaave looks upon it as similar to a mixture of scurvy-grass with sorrel.

Lysimachia purpurea. See *Lythrum*.

LYSSA. (*a, æ.* f. Λυσσα, *rabies*.) Hydrophobia.

Lyssode'ctus. (From λυσσα, canine madness, and δακνυμι, to bite.) One who is mad in consequence of having been bitten by a mad animal.

LYTHRODES. See *Scapolite*.

LY'THRUM. (*um, i.* n.; from λυθρον, blood: so called from its resemblance in colour.) The name of a genus of plants in the Linnæan system. Class, *Dodecandria*; Order, *Digynia*.

Lythrum salicaria. *Lysimachia purpurea*. The systematic name of the common or purple willow-herb. The herb, root, and flowers possess a considerable degree of astringency, and are used medicinally in the cure of diarrhœas and dysenteries, fluor albus, and hæmoptysis.

LYTTA. (*a, æ.* f.) The name of a genus of insects. See *Cantharis*.

M.

M. This letter has two significations. When herbs, flowers, chips, or such-like substances are ordered in a prescription, and M. follows them, it signifies *manipulus*, a handful; and when several ingredients have been directed, it is a contraction of *misce*: thus, *m. f. haust.* signifies mix, and let a draught be made.

Maca'ndon. (Indian.) A tree growing in Malabar, the fruit of which is roasted and eaten as a cure for dysenteries, and in cholera morbus, and other complaints.

Macapa'tli. Sarsaparilla.

Macaxocotli'fera. The name of a tree in the West Indies, the fruit of which is sweet and laxative. A decoction of the bark of this tree cures the itch, and the powder thereof heals ulcers.

MACBRIDE, David, was born in the county of Antrim, of an ancient Scotch family, in 1726. He investigated particularly the treatment of scurvy, upon which he published a treatise. In 1764, he published his *Experimental Essays*, which were every

where received with great applause. For several years he gave private lectures on the *Practice of Physic*, which he published in 1772: this work displayed great acuteness of observation, and very philosophical views of pathology; and contained a new arrangement of diseases, which appeared to Dr. Cullen of sufficient importance to be introduced into his system of nosology.

MACE. See *Myristica moschata*.

Macedonian parsley. See *Bubon*.

MACEDONI'SIUM SEMEN. See *Smyrnium*.

MA'CER. (From *masa*, Hebrew.) Grecian macer or mace. The root which is imported from Barbary by this name, is supposed to be the simarouba, and is said to be antidysenteric.

MACERA'TION. (*Maceratio, onis*. f.; from *macero*, to soften by water.) In a pharmaceutical sense, this term implies an infusion either with or without heat, wherein the ingredients are intended to be almost wholly dissolved in order to extract their virtues.

MACERO'NA. See *Smyrnium olusatrum*.

MACHÆRION. *Machæris*. The amputating knife.

MACHA'ON. The proper name of an ancient physician, said to be one of the sons of Æsculapius; whence some authors have fancied to dignify their own inventions with his name, as particularly a collyrium, described by Scribonius, entitled *Asclepias Machaonis*; and hence, also, medicine in general is by some called *Ars Machaonia*.

MACHINAME'NTUM ARISTIONIS. A machine for reducing dislocation.

MA'CIES. (*es, ei*. f.; from *maceo*, to grow lean.) Emaciation. See *Marasmus*.

MA'CIS. (*is, idis*. f.) Mace. See *Myristica*.

MACKAREL. See *Scomber scomber*.

MACQUER, JOSEPH, was born at Paris in 1710. His most laborious work was a *Dictionary of Chemistry*, in two octavo volumes, subsequently translated into English by Keir, with great improvements. He published also *Formulæ Medicamentorum Magistralium*, and had a share in the composition of the Pharmacopœia Parisiensis of 1758.

MACROCE'PHALUS. (*us, i*. m.; from μακρος, long, and κεφαλη, the head.) See *Physeter macrocephalus*.

MACROCHE'LUS. (*us, i*. m.; from μακρος, long, and τραχηλος, the neck.) One who has a long neck, in opposition to *Acrochelus*.

MACROPHYSOCE'PHALUS. (*us, i*. m.; from μακρος, long, φυσις, nature, and κεφαλη, the head: so called from the length of the head.) One who has a head unnaturally long and large. This word, according to Turton, is only used by Ambrose Parey.

MACRO'PIPER. (*er, eris*. n.; from μακρος, long, and πεπερι, pepper.) Long pepper. See *Piper longum*.

MACROPNŒ'A. (*a, æ*. f.; from μακρος, long, and πνεω, to breathe.) A difficulty of breathing, where the inspirations are at long intervals.

MA'CULA. (*a, æ*. f.) A spot, a permanent discolouration of some portion of the skin, often with a change of its texture, but not connected with any disorder of the constitution.

MACULA MATRICIS. A mother's mark. See *Nævus maternus*.

MACULÆ. The name of an order of Dr. Willan's cutaneous diseases, which comprises those discolourations of the skin which are permanent, and most of which are the result of an alteration of the natural texture of the part. It comprehends *ephelis, nævus, spilus*, and moles.

MACULA'TUS. Spotted: applied, in *Botany*, to stems, petals, &c.; as the stem of the common hemlock, *Conium maculatum*; the *petales* of the *Digitalis purpurea*.

Mad apple. See *Solanum melongena*.

MADARO'SIS. (*is, eos*. f.; from μαδος, bald, without hair.) A defect or loss of eyebrows or eyelashes, causing a disagreeable deformity, and painful sensation of the eyes, in a strong light.

MADDER. See *Rubia*.

MADNESS. See *Mania*, and *Melancholia*.

Madness, canine. See *Hydrophobia*.

MA'DOR. Moisture. A sweating.

MADREPO'RA. *Madrepore*. 1. A genus in natural history, of the class, *Vermes*; and order, *Zoophyta*. An animal resembling a Medusa.

2. A species of coral. It consists of carbonate of lime, and a little animal membranaceous substance.

Madwort, Galen's. See *Marrubium*.

MAGATTI, CÆSAR, was born in 1579, at Reggio. He was author of a considerable improvement in the art of surgery, by his work entitled *De rara Medicatione Vulnerum*, condemning the use of tents, and recommending a simple, easy method of dressing.

MAGDA'LEON. (From μασσω, to knead.) A mass of plaster, or other composition, reduced to a cylindrical form.

MAGELLA'NICUS CORTEX. See *Wintera*.

MA'GISTERY. (*Magisterium, ii*. n.; from *magister*, a master.) Magistery. An obsolete term used by ancient chemists to signify a peculiar and secret method of preparing any medicine, as it were, by a masterly process. The term was also long applied to all precipitates.

MAGISTRA'LIS. (From *magister*, a master.) Applied, by way to eminence, to such medicines as are extemporaneous, or in common use.

MAGISTRA'NTIA. (From *magistro*, to rule: so called by way of eminence, as exceeding all others in virtue.) See *Imperatoria*.

MA'GMA. (*a, atis*. n.; from μασσω, to blend together.) 1. A thick ointment.

2. The fæces of an ointment, after the thinner parts are strained off.

3. A confection.

MA'GNES. (*es, etis*. m.; from *Magnes*,

its inventor.) The magnet, or loadstone. A muddy iron ore, in which the iron is modified in such a manner as to afford a passage to a fluid called the magnetic fluid. The magnet exhibits certain phænomena: it is known by its property of attracting steel filings; and is found in Auvergne, in Biscay, in Spain, in Sweden, and Siberia.

Magnes arsenicalis. Arsenical magnet. It is a composition of equal parts of antimony, sulphur, and arsenic, mixed and melted together so as to become a glassy body.

Magnes epilepsiæ. An old and obsolete name of native cinnabar.

MAGNE'SIA. (*a*, *æ*. *f*.) 1. The ancient chemists gave this name to such substances as they conceived to have the power of attracting any principle from the air. Thus an earth which, on being exposed to the air, increased in weight, and yielded vitriol, they called *magnesia vitriolata:* and later chemists, observing in their process for obtaining magnesia, that nitrous acid was separated, and an earth left behind, supposing it had attracted the acid, called it *magnesia nitri*, which, from its colour, soon obtained the name of *magnesia alba*.

2. The name of one of the primitive earths, having a metallic basis, called *magnesium*. It has been found native in the state of hydrate.

Magnesia may be obtained by pouring into a solution of its sulphate a solution of subcarbonate of soda, washing the precipitate, drying it, and exposing it to a red heat. It is usually procured in commerce, by acting on magnesian limestone with the impure muriate of magnesia, or bittern of the sea-salt manufactories. The muriatic acid goes to the lime, forming a soluble salt, and leaves behind the magnesia of both the bittern and limestone. Or the bittern is decomposed by a crude subcarbonate of ammonia, obtained from the distillation of bones in iron cylinders. Muriate of ammonia and subcarbonate of magnesia result. The former is evaporated to dryness, mixed with chalk and sublimed. Subcarbonate of ammonia is thus recovered, with which a new quantity of bittern may be decomposed; and thus, in ceaseless repetition, forming an elegant and econominal process. 100 parts of crystallised Epsom salt, require for complete decomposition 56 of subcarbonate of potash, or 44 dry subcarbonate of soda, and yield 16 of pure magnesia after calcination.

When magnesia is exposed to the air, it very slowly attracts carbonic acid. It combines with sulphur, forming a sulphuret.

The metallic basis, or magnesium, may be obtained in the state of amalgam with mercury, by electrisation.

When magnesia is strongly heated in contact with two volumes of chlorine, this gas is absorbed, and one volume of oxygene is disengaged. Hence it is evident that there exists a combination of magnesium and chlorine, or a true chloride. The salt called muriate of magnesia, is a compound of the chloride and water. When it is acted on by a strong heat, by far the greatest part of the chlorine unites to the hydrogene of the water, and rises in the form of muriatic acid gas; while the oxygene of the decomposed water combines with the magnesium to form magnesia.

Magnesia is often associated with lime in minerals, and their perfect separation becomes an interesting problem in analysis.

Properties.—Pure magnesia does not form with water an adhesive ductile mass. It is in the form of a very white spongy powder, soft to the touch, and perfectly tasteless. It is very slightly soluble in water. It absorbs carbonic acid gradually from the atmosphere. It changes very delicate blue vegetable colours to green. Its attraction to the acids is weaker than those of the alkalies. Its salts are partially decomposed by ammonia, one part of the magnesia being precipitated, and the other forming a triple compound. Its specific gravity is about 2·3. It is infusible even by the most intense heat; but when mixed with some of the other earths it becomes fusible. It combines with sulphur. It does not unite to phosphorus or carbon. It is not dissolved by alkalies in the humid way. When heated strongly, it becomes phosphorescent. With the dense acids it becomes ignited. With all the acids it forms salts of a bitter taste, mostly very soluble.

The magnesia of the present London Pharmacopœia was formerly called *Magnesia calcinata; usta; pura*. It is directed to be made thus:—Take of carbonate of magnesia, four ounces; burn it in a very strong fire, for two hours, or until acetic acid, being dropped in, extricates no bubbles of gas. It is given as an absorbent, antacid, and eccoprotic, in cardialgia, spasms, convulsions, and tormina of the bowels of infants; pyrosis, flatulencies, and other diseases of the primæ viæ; obstipation, leucorrhœa, rickets, scrofula, crusta lactea, and podagra. The dose is from half a drachm to a drachm.

Magnesia calcinata. See *Magnesia*.

Magnesia, hydrate of. A mineral found in New Jersey, consisting of magnesia and water.

Magnesia usta. See *Magnesia*.

Magnesia vitriolata. See *Magnesiæ sulphas*.

Magnesiæ subcarbonas. *Magnesiæ carbonas. Magnesia alba.* Subcarbonate of magnesia. The London College direct it to be made as follows:—Take of sulphate of magnesia, a pound; subcarbonate of potash, nine ounces; water, three gallons. Dissolve the subcarbonate of potash in three pints of the water, and strain; dissolve also the sulphate of magnesia separately in five pints of the water, and strain; then add the rest of the water to this latter solution, apply heat, and, when it boils, pour in the former solution, stirring them well together; next, strain through a linen cloth; lastly, wash the powder repeatedly with boiling water, and dry it upon bibulous paper, in a heat of 200°. It is in form of very fine powder, considerably re-

sembling flour in its appearance and feel; it has no sensible taste on the tongue; it gives a faint greenish colour to the tincture of violets, and converts turnsole to a blue. It is employed medicinally as an absorbent, antacid, and purgative, in doses from half a drachm to two drachms.

MAGNESIÆ SULPHAS. *Sulphas magnesiæ purificata. Magnesia vitriolata. Sal catharticus amarus. Sal catharticum amarum.* Sulphate of magnesia. Epsom salt. Bitter purging salt.

This salt exists in several mineral springs, as that of Epsom, from which it was formerly obtained: it is now afforded, however, in greater abundance and more pure from the bittern left after the extraction of salt from sea-water. It has likewise been found efflorescing on brick walls, both old and recently erected, and in small quantity in the ashes of coals. The capillary salt of Idria, found in silvery crystals mixed with the aluminous schist in the mines of that place, and hitherto considered as a feathery alum, has been ascertained by Klaproth to consist of sulphate of magnesia, mixed with a small portion of sulphate of iron. When pure, it crystallises in small quadrangular prisms, terminated by quadrangular pyramids or dihedral summits. Its taste is cool and bitter. It is very soluble, requiring only an equal weight of cold water, and three fourths its weight of hot. It effloresces in the air though but slowly. If it attract moisture, it contains muriate of magnesia or of lime. Exposed to heat, it dissolves in its own water of crystallisation, and dries, but is not decomposed nor fused, but with extreme difficulty. It consists, according to Bergman, of 33 acid, 19 magnesia, 48 water. A very pure sulphate is said to be prepared in the neighbourhood of Genoa, by roasting a pyrites found there; exposing it to the air in a covered place for six months; watering it occasionally, and then lixiviating.

It is from these saline solutions that the salt is obtained: the method generally adopted for obtaining it is evaporation, which causes the salt to crystallise in tetrahedral prisms. It has a very bitter taste, and is soluble in its own weight of water at 60°, and in three fourths of its weight of boiling water. Sulphate of magnesia, when perfectly pure, effloresces; but that of commerce generally contains foreign salts, such as the muriate of magnesia, which renders it so deliquescent, that it must be kept in a close vessel or bladder. By the action of heat it undergoes the watery fusion, and loses its water of crystallisation, but does not part with its acid. One hundred parts of crystallised sulphate of magnesia consist of 29·35 parts of acid, 17 of earth, and 53·65 of water. The alkalies, strontian, barytes, and all the salts formed by these salifiable bases, excepting the alkaline muriates, decompose sulphate of magnesia. It is also decomposed by the nitrate, carbonate, and muriate of lime.

Epsom salt is a mild and gentle purgative, operating with sufficient efficacy, and in general with ease and safety, rarely occasioning any gripes, or the other inconveniencies of resinous purgatives. Six or eight drachms may be dissolved in a proper quantity of common water; or four, five, or more in a pint or quart of the purging mineral waters. These solutions may likewise be so managed, in small doses, as to produce evacuation from the other emunctories: if the patient be kept warm, they increase perspiration, and, by moderate exercise in the cool air, the urinary discharge. Some allege that this salt has a peculiar effect in allaying pain, as in colic, even independently of evacuation. It is, however, principally used for the preparation of the subcarbonate of magnesia.

Magnesian water, ærated. See *Ærated magnesian water.*

MAGNESITE. A yellowish grey or white mineral, composed of magnesia, carbonic acid, alumina, a ferruginous manganese, lime, and water, found in serpentine rocks, in Moravia.

MAGNESIUM. (*um, ii.* n.) The metallic basis of magnesia. See *Magnesia.*

MAGNET. See *Magnes.*

MAGNETISM. The property which iron possesses of attracting or repelling other iron, according to circumstances; that is, similar poles of magnets repel, but opposite poles attract each other.

MAGNETISM, ANIMAL. A sympathy lately supposed, by some persons, to exist between the magnet and the human body; by means of which, the former became capable of curing many diseases in an unknown way, somewhat resembling the performances of the old magicians. Animal magnetism is now entirely exploded.

MAGNUM DEI DONUM. So Dr. Mead called the Peruvian bark. See *Cinchona.*

MAGNUM OS. The third bone of the lower row of bones of the carpus, reckoning from the thumb towards the little finger.

MAGNUS. Great: applied to parts from their relative size; and to diseases and remedies from their importance; as *magnum os, magnus morbus, magnum dei donum,* &c.

MAGNUS MORBUS. The great disease. So Hippocrates calls the epilepsy.

MAGY'DARIS. The root of the laserwort.

MAHAGONI. See *Swietenia.*

MAHALEB. A species of *Prunus.*

MAHMOU'DY. Scammony.

MAIDENHAIR. See *Adianthum.*

Maidenhair, black. See *Asplenium.*

Maidenhair, Canada. See *Adianthum.*

Maidenhair, common. See *Asplenium.*

Maidenhair, English. See *Adianthum.*

Maidenhair, golden. See *Polytrichum.*

MAIDENHAIR-TREE. *Ginanitsio.* The *Gingko biloba.* In China and Japan, where this tree grows, the fruit acquires the size of a damask plum, and contains a kernel resembling that of our apricot. These kernels always make part of the dessert at all public feasts and

entertainments. They are said to promote digestion, and to cleanse the stomach and bowels. The oil is used at the table.

MAJALIS. The pig castrated before the sixth month. See *Sus scrofa*.

MAJANTHEMUM. See *Convallaria majalis*.

MAJORA'NA. (*a, æ.* f.; *quod mense Maio floreat*, because it flowers in May.) See *Origanum majorana*.

MAJORANA SYRIACA. See *Teucrium*.

MA'LA. (*a, æ.* f.; from *malus*, an apple: so called from its roundness.) A prominent part of the cheek. See *Jugale os*.

MALA ÆTHIOPICA. A species of love-apple. See *Solanum lycopersicum*.

MALA ASSYRIA. The citron.

MALA AURANTIA. See *Citrus aurantium*.

MALA COTONEA. The quince.

MALA INSANA NIGRA. See *Solanum*.

Malabar plum. See *Eugenia jambos*.

MALABATHRI OLEUM. Oil of cassia.

MALABA'THRINUM. (From μαλαβαθρον, malabathrum.) Ointment of malabathrum. It is compounded of myrrh, spikenard, malabathrum, and many other aromatic ingredients.

MALABA'THRUM. (Μαλαβαθρον; from *Malabar*, in India, whence it was brought, and *betre*, a leaf, Ind.) See *Laurus cassia*.

MA'LACA RADIX. See *Sagittaria*.

Malacca bean. See *Avicennia tomentosa*.

MA'LACHE. (*e, es.* f.; from μαλακος, soft: so called from the softness of its leaf.) The mallow. See *Malva*.

MALACACEOUS. Soft.

MALACHITE. (From μαλαχη, the mallow: from its resemblance in colour to the mallow.) Mountain blue, a carbonate of copper ore found in Siberia.

MALACHOLITE. See *Sahlite*.

MALA'CIA. (*a, æ.* f.; from μαλαχιον, a ravenous fish.) Depraved appetite, when such things are coveted as are not proper for food. See *Pica*.

MALACO'STEON. (*um, i.* n.; from μαλακος, soft, and οςεον, a bone.) A softness of the bones. *Mollities ossium*. A disease of the bones, wherein they can be bent without fracturing them, in consequence either of the inordinate absorption of the phosphate of lime, from which their natural solidity is derived, or else of this matter not being duly secreted and deposited in their fabric. In rickets, the bones only yield and become distorted by slow degrees; but in the present disease they may be at once bent in any direction. The mollities ossium is rare, and its causes not well understood. All the cases of this disease on record have proved fatal, no means of cure having yet been found. On dissection of those who have died, all the bones, except the teeth, have been found unusually soft, so that scarcely any of them could resist the knife; the periosteum has been found thicker than usual; and the bones have been found to contain a great quantity of oily matter and little earth.

MALA'CTICUS. (From μαλασσω, to soften.) Emollient softening.

MALAGUE'TTA. Grains of paradise.

MALAGUETTA. Grains of paradise.

MALA'GMA. (*a, atis.* n.; from μαλασσω, to soften.) A poultice.

MALAMIRIS. A species of *Piper*.

MALA'RIA. (*a, æ.* f.) The name in Italy of an endemic intermittent, which attacks people in the neighbourhood of Rome, and especially about the Pontine marshes, which have often been drained to carry off the decomposing animal and vegetable materials that spread their *aria cattiva*, as it is called, over the whole of the campagna.

MALARUM OSSA. See *Jugale os*.

MA'LATE. *Malas*. A salt formed by the union of the malic acid, or acid of apples, with salifiable bases; thus, *malate of copper*, *malate of lead*, &c.

MA'LE. The arm-pit.

Male fern. See *Aspidium filix mas*.

Male impotency. See *Sterilitas*.

Male orchis. See *Orchis mascula*.

Male speedwell. See *Veronica officinalis*.

MALIA'SMUS. (*us, i.* m.; from μαλις, cutaneous vermination.) Breeding animalcules on the skin; as the louse, flea, tick, &c.

MALIC. (*Malicus*; from *malus*, an apple.) The name of an acid.

MALIC ACID. *Acidum malicum*. This acid is obtained by saturating the juice of apples with alkali, and pouring in the acetous solution of lead, until it occasions no more precipitate. The precipitate is then to be edulcorated, and sulphuric acid poured on it, until the liquor has acquired a fresh acid taste, without any mixture of sweetness. The whole is then to be filtered, to separate the sulphate of lead. The filtered liquor is the malic acid, which is very pure, remains always in a fluid state, and cannot be rendered concrete. See *Sorbic acid*.

MALI'GNANT. (*Malignus*; from *malus*.) A term which may be applied to any disease, the symptoms of which are so aggravated as to threaten destruction of the patient. It is frequently used to signify a dangerous epidemic.

Malignant fever. See *Typhus*.

Malignant sore throat. See *Tonsillitis*.

MA'LIS. (*is, is.* m. Μαλις and μαλιασμος are Greek nouns composing cutaneous vermination.) Cutaneous vermination.

MALLEABILITY. (*Malleabilitas*; from *malleus*, a hammer.) The property which several metals possess of being extended under the hammer into thin plates, without cracking. The thin leaves of silver and gold are the best examples of malleability. See *Ductility*.

MALLEAMO'THE. *Pavette*. *Pavate*. *Erysipelas curans arbor*. A shrub which grows in Malabar. The leaves, boiled in palm oil, cure the impetigo; the root, powdered and mixed with ginger, is diuretic.

MALLEATIO. (*à malleo*: because the person strikes the knees with his hands, as if with a hammer.) It is a form of chorea, or St. Vitus's dance, in which the person has a convulsive action of one or both hands, which

strike the knee like a hammer. If the motion be forcibly stopped, the convulsion becomes afterwards still more violent and general. See *Chorea.*

MALLEI ANTERIOR. See *Laxator tympani.*

MALLEI EXTERNUS. See *Laxator tympani.*

MALLEI INTERNUS. See *Tensor tympani.*

MALLE'OLUS. (*us, i.* m.; diminutive of *malleus*, a mallet: so called, from its supposed resemblance to a mallet.) The ankle, distinguished into external and internal, or *malleolus externus* and *internus.*

MA'LLEUS. (*us, i.* m. *Malleus, quasi molleus;* from *mollio*, to soften: a hammer.) A bone of the internal ear is so termed from its resemblance. It is distinguished into a head, neck, and manubrium. The *head* is round, and encrusted with a thin cartilage, and annexed to another bone of the ear, the incus, by ginglymus. Its *neck* is narrow, and situated between the head and manubrium, or handle; from which a long slender process arises, adheres to a furrow in the auditory canal, and is continued as far as the fissure in the articular cavity of the temporal bone. The *manubrium* is terminated by an enlarged extremity, and connected to the membrana tympani by a short conoid process.

MALLOW. See *Malva.*

Mallow, marsh. See *Althæa officinalis.*

Mallow, round-leaved. See *Malva.*

Mallow, vervain. See *Malva alcea.*

MALOGRANA'TUM. (From *malum*, an apple, and *granum*, a grain: so named from its grain-like seeds.) The pomegranate.

MALPIGHI, MARCELLO, was born near Bologna, in 1628. He was the first to employ the microscope in examining the circulation of the blood; and the same instrument assisted him in exploring the minute structure of various organs, as is evident from his first publication on the lungs, in 1661; and this was followed by successive treatises on many other parts. In 1669, his essay *De Formatione Pulli in Ovo*, was printed at London, with his remarks on the silk-worm, and on the conglobate glands: much light was thrown by these investigations on the obscure subject of generation, and other important points of physiology. He was thence led to the consideration of the structure and functions of plants, and evinced himself an original, as well as a very profound observer. His *Anatome Plantarum* was published by the Royal Society in 1675 and 1679, with some observations on the incubation of the egg. His only medical work, *Consultatiorum Medicinalium Centuria Prima*, did not appear till 1713. He was not distinguished as a practitioner, but deserves praise for pointing out the mischief of bleeding in the malignant epidemics, which prevailed in Italy in his time.

MALPI'GHIA. (*a, æ.* f.; so named in honour of Malpighi, the celebrated vegetable anatomist.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Trigynia.*

MALPIGHIA GLABRA. The systematic name of a tree which affords an esculent cherry, about Christmas.

MALT. Grain which has become sweet, from the conversion of its starch into sugar, by an incipient growth or germination artificially induced, called malting.

MA'LTHA. (*a, æ.* f.; from μαλασσω, to soften.) 1. A medicine softened and tempered with wax.

2. The name of the mineral tallow of Kirwan, which resembles wax, and is said to have been found on the coast of Finland.

MALTHA'CTICUS. (From μαλθακιζω, to soften.) Emollient, softening.

MALTHEORUM. Common salt.

MA'LUM. (*um, i.* n.) 1. A disease.

2. An apple.

MALUM MORTUUM. A disease that appears in the form of a pustule, which soon forms a dry, brown, hard, and broad crust. It is seldom attended with pain, and remains fixed for a long time before it can be detached. It is mostly observed on the tibia and os coccygis, and sometimes the face.

MALUM PILARE. See *Plica.*

MA'LUS. (*us, i.* f.; an apple-tree.) See *Pyrus malus.*

MALUS INDICA. *Bilimbi billing-bing*, of Bontius. The *Malus indica—fructu pentagono*, of Europeans. A tree carefully cultivated in the gardens of the East Indies, where it flowers throughout the year. The juice of the root is cooling, and drank as a cure for fevers. The leaves boiled and made into a cataplasm with rice, are famed in all sorts of tumours, and the juice of the fruit is used in almost all external heats, dipping linen rags in it, and applying them to the parts. It is drank, mixed with arrack, to cure diarrhœas; and the dried leaves, mixed with betel leaves, and given in arrack, are said to promote delivery. The ripe fruit is eaten as a delicacy, and the unripe made into a pickle for the use of the table.

MA'LVA. (*a, æ.* f.; *quasi molva;* from *mollis*, soft: named from the softness of its leaves.) 1. The name of a genus of plants in the Linnæan system. Class, *Monadelphia;* Order, *Polyandria.*

2. The pharmacopœial name of the common mallow. See *Malva sylvestris.*

MALVA ALCEA. *Malva verbenaca.* The vervain mallow. This plant is distinguished from the common mallow, by its leaves being jagged, or cut in about the edges. It agrees in virtues with the other mallows, but it is the least mucilaginous of any. This, like to the other mallows, abounds with a mucilage, and is good for pectoral drinks.

MALVA ARBOREA. See *Alcea rosea.*

MALVA ROTUNDIFOLIA. Round-leaved mallow. The whole herb and root possess similar virtues to the common mallow. See *Malva sylvestris.*

MALVA SYLVESTRIS. The common mallow. *Malva vulgaris. Malva—caule erecto herbaceo, foliis septemlobatis acutis, pedunculis petiolisque pilosis.* This indigenous plant has a strong

affinity to the althæa, both in a botanical and a medical respect. See *Althæa.* The leaves and flowers are principally used in fomentations, cataplasms, and emollient enemas. The internal use of the leaves seems to be wholly superseded by the radix althæa.

MALVA VERBENACA. See *Malva alcea.*

MALVA VULGARIS. See *Malva sylvestris.*

MALVAVI'SCUS. (*us, i.* m.; from *malva*, the mallow, and *viscus*, glue: so named from its viscidity.) See *Althæa officinalis.*

MALVERN. The village of Great Malvern has, for many years, been celebrated for a spring of remarkable purity, which has acquired the name of the holy well, from the reputed sanctity of its waters, and the real and extensive benefit long derived in various cases from its use.

The holy well water, when first drawn, appears quite clear and pellucid, and does not become sensibly turbid on standing. It possesses somewhat of an agreeable pungency to the taste; but this is not considerable. In other respects it does not differ in taste from pure good water.

The contents of Malvern holy well are,— some carbonic acid, which is, in an uncombined state, capable of acting upon iron, and of giving a little taste to the water; but the exact quantity of which has not been ascertained; a very small portion of earth, either lime or magnesia, united with the carbonic and marine acids; perhaps a little neutraline alkaline salt, and a very large portion of water:—for we may add, that, the carbonic acid perhaps excepted, the foreign matter is less than that of any spring-water which we use. No iron or metal of any kind is found in it, though there are chalybeates in the neighbourhood.

It is singular that, notwithstanding its apparent purity, this water is said not to keep well, and soon acquires a fœtid smell, by standing in open vessels.

Malvern water, like many others, was at first only employed as an external application; and this, indeed, is still its principal use, though it is extended, with some advantage, to a few internal diseases. It has been found highly efficacious in painful and deep ulcerations, the consequence of a scrofulous habit of body, and which are always attended with much local irritation, and often general fever. Applied to the sore, it moderates the profuseness of the discharge, corrects the fœtor, which so peculiarly marks a caries of the bone, promotes the granulating process, and a salutary exfoliation of the carious part; and, by a long perseverance in this course, very dangerous and obstinate cases have at last been cured. Inflammation of the eye, especially the ophthalmia, which is so troublesome in scrofulous habits, often yields to this simple application, and we find that, for a great number of years, persons afflicted with sore eyes have been in the habit of resorting to Malvern holy well. Another order of external diseases, for which this water is greatly celebrated, is cutaneous eruptions: even those obstinate cases of dry desquamations, that frequently follow a sudden application of cold in irritable habits, are often cured by this remedy. Where the skin is hot and dry, it remarkably relieves the intolerable itching of herpetic disorders, and renders the surface of the body more cool and perspirable. It appears, however, from a nice observation of Dr. Wall, that this method of treatment is not so successful in the cutaneous eruptions of very lax leucophlegmatic habits, where the extremities are cold and the circulation languid; but that it succeeds best where there is unusual irritation of the skin, and where it is apt to break in painful fissures, that ooze out a watery acrid lymph. On the first application of this water to an inflamed surface, it will often for a time increase the pain and irritation, but these effects go off in a few days.

The great benefit arising from using Malvern waters as an external remedy in diseases of the skin, and surface of the body, has led to its employment in some internal disorders, and often with considerable advantage. Of these, the most important are painful affections of the kidneys and bladder, attended with the discharge of bloody, purulent, or fœtid urine, the hectic fever produced by scrofulous ulceration of the lungs, or very extensive and irritating sores on the surface of the body, and also fistulas of long standing, that have been neglected, and have become constant and troublesome sores.

The Malvern water is in general a perfectly safe application, and may be used with the utmost freedom, both as an external dressing for sores, and as a common drink.

The internal use of Malvern waters is sometimes attended at first with a slight nausea, and not unfrequently, for the first day or two, it occasions some degree of drowsiness, vertigo, or slight pain of the head, which comes on a few minutes after drinking it. These symptoms go off spontaneously, after a few days, or may readily be removed by a mild purgative. The effects of this water on the bowels are not at all constant; frequently it purges briskly for a few days, but it is not uncommon for the body to be rendered costive by its use; especially, as Dr. Wall observes, with those who are accustomed to malt liquors. In all cases, it decidedly increases the flow of urine, and the general health of the patient. The duration of a course of Malvern waters must vary very considerably, on account of the different kinds of disease for which this spring is resorted to.

MAME'I. The mammoe, momin, or toddy-tree. This tree is found in different parts of the West Indies, but those on the Island of Hispaniola are the best. From incisions made in the branches, a copious discharge of pellucid liquor is obtained, which is called momin, or toddy wine. It must be drank very sparingly, because of its very diuretic quality. It is esteemed as an effectual pre-

servative from the stone; as also a solvent of it when generated. There are two species.

MAMI'LLA. (*a, æ.* f.; diminutive of *mamma*, the breast.) 1. The breast of man.

2. The nipple of the male and female breasts.

MAMI'RA. It is said, by Paulus Ægineta, to be the root of a plant which is of a detergent quality. Some think it is the root of the doronicum; but what it really is cannot be ascertained.

MA'MMA. (*a, æ.* f. Μαμμα, the cry of an infant for the breast.) 1. The whole of the anterior part of the thorax.

2. The two globular projections, composed of common integuments, adipose substance, and lacteal glands and vessels, and adhering to the anterior and lateral regions of the thorax of females. On the middle of each breast is a projecting portion, termed the *papilla* or *nipple*, in which the excretory ducts of the glands terminate, and around which is a coloured orb, or disc, called the *aureola*. The use of the breasts is to suckle new-born infants.

MA'MMARY. See *Mammillary*.

MAMMARY ARTERY. *Arteria mammillaris.* The internal mammary artery is a branch of the subclavian, and gives off the mediastinal, thymal, and pericardial arteries. The external mammary is a branch of the axillary artery.

MAMMARY VEIN. *Vena mammillaris.* These vessels accompany the arteries, and evacuate their blood into the subclavian vein.

MAMMEA. (*a, æ.* f.; so called from its vernacular appellation in the West Indies, *mamei*, and allowed by Linnæus, because of its affinity to *mamma*, a breast, alluding to the shape of its fruit.) The name of a genus of plants. Class, *Polyandria;* Order, *Monogynia*.

MAMMEA AMERICANA. The tree which affords a delicious fruit called *mammea*. It has a very grateful flavour when ripe, and is much cultivated in Jamaica, where it is generally sold in the markets for one of the best fruits of the island.

MAMMILLARY. (*Mammillaris*; from *mamma*, the breast.) Mammary: appertaining to the *mamma*, or breast.

MAN. (*Homo, inis.* m.) Man is compounded of solids, fluids, a vital principle, and, what distinguishes him from every other animal, a soul. See *Animal*.

MA'NCORON. According to Oribasius, a kind of sugar found in a sort of cane.

MANCURA'NA. See *Origanum vulgare*

MANDI'BULA. (*a, æ.* f.; from *mando*, to chew.) The jaw. See *Maxilla inferior*.

MANDRA'GORA. (*a, æ.* f.; from μανδρα, a den, and αγειρω, to collect: because it grows about caves and dens of beasts; or from the German *man dragen*, bearing man.) See *Atropa mandragora*.

MANDRAGORI'TES. (From μανδραγορα, the mandrake.) Wine, in which the roots of the male mandrake are infused.

MANDRAKE. See *Atropa mandragora*.

MANDUCA'TOR. (*or, oris.* m.; from *manduco*, to chew.) A muscle which assists in the action of chewing.

MA'NGA. (Indian.) The mango-tree.

MANGANESE. (*Manganesium, ii.* n.) A metallic substance, which, after iron, seems to be the most frequently diffused metal through the earth: its ores are very common. As a peculiar metal, it was first noticed by Gahn and Scheele, in the year 1774. It is always found in the state of an oxide, varying in the degree of oxidisement. La Peyrouse affirmed, that he had found manganese in a metallic state; but there was probably some mistake in his observation. The ores are distinguished into *grey oxide of manganese, black oxide of manganese, reddish white oxide of manganese*, and *carbonate of manganese*. All these combinations have an earthy texture; they are very ponderous; they occur both amorphous and crystallised; and generally contain a large quantity of iron. Their colour is black, blackish brown, or grey, seldom white. They soil the fingers like soot. They are sometimes crystallised in prisms, tetrahedral, rhomboidal, or striated.

Properties. — Manganese is of a whitish grey colour. Its fracture is granulated, irregular, and uneven. It is of a metallic brilliancy, which it, however, soon loses in the air. Its specific gravity is about 8. It is very hard, and extremely brittle. It is one of the most refractory metals, and most difficult to fuse, requiring at least 160° of Wedgwood's pyrometer. Its attraction of oxygene is so rapid, that exposure to the air is sufficient to render it red, brown, black, and friable in a very short time; it can, therefore, only be kept under water, oil, or ardent spirit. It is the most combustible of all the metals. It decomposes water, by means of heat, very rapidly, as well as the greater part of the metallic oxides. It decomposes sulphuric acid. It is soluble in nitric acid. It is fusible with earths, and colours them brown, violet, or red, according to its state of oxidisement. It frees from colour glasses tinged by iron. It does not readily unite with sulphur. It combines with phosphorus. It unites with gold, silver, and copper, and renders them brittle. It unites to arsenic in close vessels, but does not enter into union with mercury.

Manganese, heated in oxygene or chlorine, takes fire, and forms an oxide or chloride. It has been thought difficult to decide on the oxides of manganese.

According to Sir H. Davy there are two oxides only, the olive and the black. Mr. Brande has three, the olive, dark red, and black. Thénard has four, the green, the white (in the state of hydrate), the chestnut-brown, and the black. Berzelius has five, the first grey, the second green, the third and fourth are not well defined, and the fifth is the black.

Two oxides, however, are well defined.

1. The protoxide may be obtained by dissolving common black manganese in sulphuric or nitric acid, adding a little sugar, and precipitating by solution of potash. A white powder is obtained, which being heated to redness out of the contact of air, becomes yellow, puce-coloured, and, lastly, red brown. To be preserved, it should be washed in boiling water, previously freed from air, and then dried by distilling off the moisture in a retort filled with hydrogene. The dark olive oxide, when examined in large quantities, appears almost black; but when spread upon white paper, its olive tint is apparent. It takes fire when gently heated, increases in weight, and acquires a browner tint. It slowly absorbs oxygene from the air, even at common temperatures. It dissolves in acids without effervescence. The white powder obtained above, is the hydrated protoxide. The different tints which it assumes by exposure to air, are supposed by Sir H. Davy to depend on the formation of variable quantities of the black-brown oxide, which probably retains the water contained in the white hydrate, and is hence deep puce-coloured.

2. The black *peroxide*. Its sp. gr. is 4. It does not combine with any of the acids. It yields oxygene when heated; and, by intense ignition, passes in a great measure into the protoxide.

Method of obtaining Manganese. — This metal is obtained by mixing the black oxide, finely powdered, with pitch; making it into a ball, and putting this into a crucible, with powdered charcoal, one tenth of an inch thick at the sides, and one fourth of an inch deep at the bottom. The empty space is then to be filled with powdered charcoal; a cover is to be luted on; and the crucible exposed, for an hour, to the strongest heat that can be raised. Or, digest the black oxide of manganese repeatedly, with the addition of one sixteenth of sugar, in nitric acid; dilute the mixture with three times its bulk of water; filter it, and decompose it by the addition of potash; collect the precipitate, form it into a paste with oil, and put it into a crucible, well lined with charcoal. Expose the crucible for at least two hours to the strongest heat of a forge.

MANGANESIC. (*Manganesicus;* from *manganese*, the name of its base.) The name of an acid.

MANGANESIC ACID. *Acidum manganesicum.* Chevillot and Edwards have ascertained that the carnelian mineral, which is formed by igniting a mixture of the black oxide of manganese and nitre, has the property of making a neutral manganesate of potash.

MANGEL WURSEL. See *Beta hybrida.*

MANGET, JOHN JAMES, was born at Geneva in 1652. In his literary labours he was indefatigable, even to the end of his life, which terminated in his 91st year. Among the numerous works of compilation executed by him, originality is not to be expected; nor are they remarkable for judgment or accuracy, though still sometimes useful for reference. He published ample collections on almost every subject connected with medicine, besides improved editions of the works of others; but the most important of his productions is entitled, *Bibliotheca Scriptorum Medicorum veterum et recentiorum*, at which he laboured when at least eighty years of age.

MANGI'FERA. (*a, æ.* f.; from *mango*, the name of the fruit which it bears.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* The mango-tree.

MANGIFERA INDICA. The systematic name of the mango-tree, which is cultivated all over Asia. Mangoes, when ripe, are juicy, of a good flavour, and so fragrant as to perfume the air to a considerable distance. They are eaten either raw or preserved with sugar. Their taste is so luscious, that they soon pall the appetite. The unripe fruits are pickled in the milk of the cocoa-nut, that has stood until sour, with salt, capsicum, and garlick. From the expressed juice is prepared a wine; and the remainder of the kernel can be reduced to an excellent flour for the making of bread.

MANGO. See *Mangifera indica.*

MANGOSTANA. See *Garcinia.*

MANGOSTEEN. See *Garcinia mangostana.*

MA'NIA. (*a, æ.* f.; from μαινομαι, to rage.) Madness. The definition of mania is delirium, unaccompanied with fever. The mind is not perfectly master of all its functions: it receives impressions from the senses, which are very different from those produced in health: the judgment and memory are both lost, or impaired; and the irritability of the body is much diminished, being capable, as is supposed, of resisting the usual morbid effects of cold, hunger, and watching, and being likewise less susceptible of other diseases than before.

Mania may be said to be a false perception of things, marked by an incoherence or raving, and a resistance of the passions to the command of the will, accompanied, for the most part, with a violence of action, and furious resentment at restraint.

There are two species of madness, viz. the melancholic and furious.

Madness is occasioned by affections of the mind, such as anxiety, grief, love, religion, terror, or enthusiasm; the frequent and uncurbed indulgence in any passion or emotions, and by abstruse study. In short, it may be produced by any thing that affects the mind so forcibly as to take off its attention from all other affairs. Violent exercise, frequent intoxication, a sedentary life, the suppression of periodical and occasional discharges and secretions, excessive evacuations, and paralytic seizures, are likewise enumerated as remote causes. Certain diseases of the febrile kind have been found to occasion madness,

where their action has been very violent. In some cases it proceeds from an hereditary predisposition. Two constitutions are particularly the victims of madness; the sanguine and melancholic: by the difference of which its appearance is somewhat modified. Each species of mania is accompanied with particular symptoms. Those which attend on the melancholic are sadness, dejection of spirits, and its attendants. Those which accompany an attack of furious madness, are severe pains in the head, redness of the face, noise in the ears, wildness of the countenance, rolling and glistening of the eyes, grinding of the teeth, loud roaring, violent exertion of strength, absurd incoherent discourse, unaccountable malice to certain persons, particularly to the nearest relatives and friends, a dislike to such places and scenes as formerly afforded particular pleasure, a diminution of the irritability of the body with respect to the morbid effects of cold, hunger, and watching, together with a full, quick pulse.

Mania comes on at different periods of life; but, in the greater number of cases, it makes its attack between thirty and forty years of age. Females appear to be more subject to mania than males.

Dissections of maniacal cases, Dr. Thomas observes, most generally show an effusion of water into the cavities of the brain; but in some cases, we are able to discover evident marks of previous inflammation, such as thickening and opacity of the tunica arachnoides and pia mater: in a few instances, a preternatural hardness of the substance of the brain.

From Dr. Greding's observations, it appears that the skulls of the greater number of such persons are commonly very thick. Some he found of a most extraordinary degree of thickness; but it appears that the greater number of insane people die of atrophy and hydrothorax.

The treatment of madness is partly corporeal, partly mental. The leading indications under the first head are, — to diminish vascular or nervous excitement when excessive, as in mania; to increase them when defective, as in melancholia; at the same time guarding against the several exciting causes, and removing any obvious fault in the constitution, or in particular parts, by which the brain may be sympathetically affected. Among the most powerful means of lessening excitement is the abstraction of blood, which, freely practised, has been often an effectual remedy in recent cases and robust habits; but repeated small bleedings are rather likely to confirm the disease; and, in those who have long laboured under it, the object should merely be to obviate dangerous accumulation in the head, by occasionally withdrawing the requisite quantity locally. Purging is much more extensively applicable: where the strength will admit, it may be useful to make very large evacuations in this way; and in all cases it should be a rule to procure regular discharges from the bowels, which are generally torpid. Calomel is mostly proper, as it may evacuate bile more freely, and have other beneficial effects; but it usually requires the assistance of other cathartics. The application of cold to the head is materially serviceable under increased excitement, and some have advised it to the body generally: at any rate, the accumulation of heat should be avoided, and the antiphlogistic regimen steadily observed. Emetics have sometimes had a good effect, especially as influencing the mind of the patient; but to diminish excitement, and induce diaphoresis, it will generally be better to give merely nauseating doses; and occasionally their operation may be promoted by the tepid bath: even the hot bath has been found useful, producing great relaxation, and rendering the patient more tractable. Digitalis may be employed with advantage from its sedative power, exerted especially on the circulation, pushing it till some obvious effect is produced. Narcotics, particularly opium, have been much used, but certainly are not indiscriminately proper: where there is fulness of the vessels of the head, they may even do mischief; and, where organic disease exists, they will probably only palliate: whenever resorted to, the dose should be large, such as may induce sleep, and if no mitigation of the disease appear, it may be better not to persevere in them. Camphire has been sometimes decidedly useful, carried gradually to a very considerable extent. Blisters, and other means of lessening fulness and irritation in the brain, should not be neglected, where circumstances indicate their use. — In the melancholic, on the other hand, where there is rather a deficiency of excitement, it is necessary to direct a more generous diet, nutritious and easy of digestion, as the stomach is usually weak, with a moderate quantity of some fermented liquor, and medicines of a tonic or even stimulant nature, especially ammonia, to relieve flatulence and acidity. Attention should be paid to the bowels, and to maintain the function of the skin, &c. The utility of the cold bath seems questionable in melancholics; though it may occasionally arrest a paroxysm of mania. Regular exercise may contribute materially to improve the health; and even hard labour has been often signally useful in a convalescent state, particularly to those accustomed to it. If the mental derangement supervened on the stoppage of any evacuation, or the metastasis of any other disorder; or appear connected with a scrofulous or syphilitic taint, proper remedies to restore the former, or remove the latter, should be exhibited; and, in some instances, trepanning has relieved the brain from local irritation. In the management of the insane, it is necessary to inspire a certain degree of awe from a conviction of superior power, and at the same time seek to gain their confidence and affection by steadiness and humanity. Some restraint is often necessary for the security of

the patient, or of others, carefully watching, or even confining them, if they threaten the lives of their attendants. When they refuse to take food, or medicine, or any thing which appears absolutely necessary, coercion is proper; or sometimes these caprices may be overcome by stratagem, or exciting uneasy sensations by the motion of a swing, whirling chair, &c. In order to remove any deranged association of ideas, it will be right to endeavour to occupy their minds with some agreeable and regular train of thought, cheerful music, poetry, narrative, the elementary parts of geometry, &c., according to their previous inclinations; to lead them gradually to their former habits, and the society of their friends, engage them in rural sports, take them to public amusements, the watering places, &c., but with as little appearance of design as possible.

Maniguetta. See *Amomum*.

MA'NIHOT. See *Jatropha manihot*.

MANI'PULUS. (*us, i.* m.; *quod manum impleat*, because it fills the hand.) A handful.

Manjapu'meram. A common tree in the West Indies, the flowers of which are distilled, and the water used against inflammations of the eyes.

MA'NNA. (*a, æ.* f.; from *mano*, a gift, Syrian: it being the food given by God to the children of Israel in the wilderness; or from *mahna*, what is it? an exclamation occasioned by their wonder at its appearance.) See *Fraxinus ornus*.

Manna brigantiaca. A species of manna, brought from the neighbourhood of Brianconois, in Dauphiny.

Manna calabrina. Calabrian manna.

Manna canulata. Flaky manna, or manna concreted on straw, or chips.

Manna thuris. A coarse powder of olibanum was sold by this name.

MANNIFERUS. (From *manna*, and *fero*, to bear.) Manna-bearing. The ash-tree has been so called. See *Fraxinus ornus*.

MANSO'RIUS. (From *mando*, to chew.) The masseter muscle. See *Masseter*.

Manti'le. The name of a bandage.

Mantle, ladies'. See *Athamanta*.

MA'NUS. (*us, ûs.* f.; the etymology of which is not known.) The hand. See *Hand*.

Manus dei. 1. A name of a resolvent plaster, described by Lemery.

2. An old name of opium.

MAPLE. See *Acer*.

Maple, sugar. See *Acer*.

MARA'NDA. A species of myrtle, growing in the island of Ceylon, a decoction of the leaves of which is said to be excellent against the venereal disease.

MARA'NTA. (*a, æ.* f.) 1. The name of a genus of plants in the Linnæan system. Class, *Monandria*; Order, *Monogynia*.

2. The Indian arrow-root, of which there are three species, the *Arundinacea*, *Galanga*, and *Comesa*, all of them herbaceous, perennial exotics of the Indies, kept here in hot-houses for curiosity. They have thick, knotty, creeping roots, crowned with long, broad, arundinaceous leaves, ending in points, and upright stalks half a yard high, terminated by bunches of monopetalous, ringent, five-parted flowers. They are propagated by parting the roots in spring, and planting them in pots of light rich earth, and then plunging themin the bark-bed.

Maranta arundinacea. The root of this species, and that of the *comesa*, both of which are commonly called arrow-root, is used by the Indians to extract the virus communicated by their poisoned arrows, from whence it has obtained its name. It is cultivated in gardens and provision-grounds in the West Indies; and the starch is obtained from it by the following process:—The roots, when a year old, are dug up, well washed in water, and then beaten in a large deep wooden mortar, to a pulp; this is thrown into a large tub of clean water: the whole is then well stirred, and the fibrous part wrung out by the hands, and thrown away. The milky liquor being passed through a hair sieve, or coarse cloth, is suffered to settle, and the clear water drained off. At the bottom of the vessel is a white mass, which is again mixed with clean water, and drained: lastly, the mass is dried on sheets in the sun, and is pure starch.

Arrow-root contains, in small bulk, a greater proportion of nourishment than any other yet known. The powder, boiled in water, forms a very pleasant transparent jelly, very superior to that of sago or tapioca, and is much recommended as a nutritious diet for children and invalids. The jelly is made in the following manner:—To a dessert spoonful of powder, add as much cold water as will make it into a paste; then pour on half a pint of boiling water: stir it briskly, and boil it a few minutes, when it will become a clear smooth jelly; a little sugar and sherry wine may be added for debilitated patients, but for infants a drop or two of essence of caraway-seeds or cinnamon is preferable, wine being very liable to become acescent in the stomachs of infants, and thus disagree with the bowels. Fresh milk, either alone or diluted with water, may be substituted for the water. For very debilitated frames, and especially for ricketty children, this jelly, blended with an animal jelly, as that of hartshorn, affords a more nutritious diet than arrow-root alone, which may be done in the following manner:—Boil half an ounce of stag's horn shavings, in a pint of water, for fifteen minutes; then strain and add two dessert spoonsful of arrow-root powder, previously well mixed with a tea-cupful of water; stir them briskly together, and boil them for a few minutes. If the child should be much troubled with flatulency, two or three drops of essence of caraway-seeds, or a little grated nutmeg, may be added; but for adults, port wine, or brandy, will answer best.

Maranta galanga. The smaller galangal. The roots of this plant are used medi-

cinally. Two kinds of galangal are mentioned in the pharmacopœias: the greater galangal, obtained from the *Kæmpferia galanga* of Linnæus; and the smaller galangal, the root of the *Maranta galanga—caulino simplici foliis lanceolatis subsessilibus,* of Linnæus. The dried root is brought from China, in pieces from an inch to two in length, scarcely half so thick, branched, full of knots and joints, with several circular rings of a reddish-brown colour on the outside, and brownish within. It has an aromatic smell, not very grateful, and an unpleasant, bitterish, hot, biting taste. It was formerly much used as a warm stomachic bitter, and generally ordered in bitter infusions. It is now, however, seldom employed.

MARA'SMUS. (*us, i.* m.; from μαραινω, to grow lean.) Emaciation. A wasting away of the flesh. The term marasmus was long ago used collectively to comprehend atrophy, tabes, and phthisis. Extenuation or leanness is not necessarily a disease; for many persons who are peculiarly lean, are peculiarly healthy, while some there are who take pains to fall away in flesh, that they may increase in health, and become stronger. But, if an individual grow weaker as he grows leaner, it affords a full proof that he is under a morbid influence; and it is this influence, this conjunction of extenuation and debility, that is imported by the term marasmus, and its synonym emaciation. See *Atrophia, Tabes, Phthisis,* and *Climactericus.*

Marathri'tes. (From μαραθρον, fennel.) A vinous infusion of fennel; or wine impregnated with fennel.

MARATHROPHY'LLUM. (*um, i.* n.; from μαραθρον, fennel, and φυλλον, a leaf: so named because its leaves resemble those of the common fennel.) See *Peucedanum.*

MARA'THRUM. (From μαραινω, to wither: so called because its stalk and flowers wither in the autumn.) See *Anethum fœniculum.*

Marathrum sylvestre. See *Peucedanum.*

MARBLE. (*Marmor, oris,* n.) A species of limestone, or carbonate of lime. Powdered marble is used in pneumatic medicine, to give out carbonic acid gas.

MARCASITE. See *Bismuth.*

MARCESCENS. (From *marceo,* to wither, decay.) Withering, decaying, marcid: applied to the perianths of the *Pyrus communis,* and *Mespilus germanica.*

MARCHANTIA. (*a, æ.* f.; named after Marchant, who wrote several Essays on the Memoirs of the Academy of Science, 1713.) The name of a genus of plants. Class, *Cryptogamia;* Order, *Algæ.*

Marchantia polymorpha. Liverwort; star liverwort: called also, *Hepatica vulgaris, fontana, terrestis, stellata,* and *jecoraria.* A plant very common in this country. It has a penetrating though mild pungency, and bitter taste, sinking, as it were, into the tongue. It is recommended as an aperient, resolvent, and antiscorbutic, and, though seldom used in this country, appears to be a plant of no inconsiderable virtue.

MARCOR. (*or, oris.* m.; from *marceo,* to become lean.) Leanness. Emaciation. Wasting away of the body.

Marcores. The first order in the class *Cachexiæ,* of Cullen's Nosology, which embraces those diseases that are characterised by universal emaciation. See *Nosology.*

MARESTAIL. See *Hippuris vulgaris.*

MARGARI'TA. (*a, æ.* f.; from *margalith,* Rab.) 1. The pearl; called also, *Perla. Unio.* A small, calcareous concretion, of a bright transparent whiteness, found on the inside of the shell, *Concha margaritifera* of Linnæus, or mother-of-pearl fish. Pearls are very highly prized. They consist of alternating concentric layers of membrane and carbonate of lime. They were formerly exhibited as antacids.

2. A tumour upon the eye resembling a pearl.

MARGARI'TIC. (*Margariticus;* from *margarita,* the pearl: so called from its pearly appearance.) The name of an acid.

Margaritic acid. *Acidum margariticum.* Margaric acid. When we immerse soap made of pork-grease and potash in a large quantity of water, one part is dissolved, while another part is precipitated in the form of several brilliant pellets. These are separated, dried, washed in a large quantity of water, and then dried on a filter. They are now dissolved in boiling alkohol, sp. gr. 0·820, from which, as it cools, the pearly substance falls down pure. On acting on this with dilute muriatic acid, a substance of a peculiar kind, which Chevreuil, the discoverer, calls margarine, or margaric acid, is separated. It must be well washed with water, dissolved in boiling alkohol, from which it is recovered in the same crystalline pearly form, when the solution cools.

Margaric acid is pearly white, and tasteless. Its smell is feeble, and a little similar to that of melted wax. Its specific gravity is inferior to water. It melts at 134° F. into a very limpid, colourless liquid, which crystallises, on cooling, into brilliant needles of the finest white. It is insoluble in water, but very soluble in alkohol, sp. gr. 0·800. Cold margaric acid has no action on the colour of litmus; but, when heated so as to soften without melting, the blue was reddened. It combines with the salifiable bases, and forms neutral compounds. Two orders of margarates are formed, the *margarates* and the *supermargarates,* the former being converted into the latter, by pouring a large quantity of water on them. Other fats besides that of the hog yield this substance.

That of man is obtained under three different forms. 1. In very fine long needles, disposed in flat stars. 2. In very fine and very short needles, forming waved figures, like those of the margaric acid of carcases. 3. In very large brilliant crystals disposed in

stars, similar to the margaric acid of the hog. The margaric acids of man and the hog resemble each other; as do those of the ox and the sheep; and of the goose and the jaguar. The compounds with the bases, are real soaps. The solution in alkohol affords the transparent soap of this country.

MARGINATUS. Bordered; having a border.

MARIGOLD. See *Calendula*.

Marigold, marsh. See *Caltha palustris*.

MARINE. (*Marinus;* from *mare*, the sea.) Appertaining to the sea.

Marine acid. See *Muriatic acid*.

Marine salt. See *Sodæ murias*.

MARIPE'NDAM. The name of a plant in the island of St. Domingo. A distilled water from the tops is held in great esteem against pains in the stomach.

MARI'SCA. (*a, æ*. f.) An excrescence about the anus, or the piles in a state of tumefaction.

MARI'SICUM. The *Mercurialis fruticosa*.

MARJORAM. See *Origanum*.

MARJORA'NA. See *Origanum*.

MARLE. See *Limestone*.

MARMALADE. *Cydonites*. *Confectio cydonii mali*. The pulp of quinces, or any other fruit, boiled into a consistence with honey.

MARMARY'GA. (*a, æ*, f.; from μαρμαιρω, to shine.) A spark, or coruscation, flashing before the eyes.

MARMOLA'RIA. (*a, æ*. f.; from *marmor*, marble: so named because it is spotted like marble.) See *Acanthus mollis*.

MARMOR. See *Marble*.

MARMOR METALLICUM. Native sulphate of barytes.

MARMO'REUS TARTARUS. The hardest species of *human calculus*.

MARMORIGE. An affection of the eyes, in which sparks and flashes of fire are supposed to present themselves.

MAROCO'STINUM. A purgative extract made of the marum and costus; originally made by Mindererus.

MARROW. *Medulla*. The fat substance secreted by the small arteries of its proper membrane, and contained in the medullary cavities of the long cylindrical bones. It differs very little from the fat of the cellular membrane. See *Adeps*.

Marrow, spinal. See *Medulla spinalis*.

MARRUBIA'STRUM. See *Ballote nigra*.

MARRU'BIUM. (*um, ii*. n.; from *marrob*, a bitter juice, Heb.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia*.

2. The pharmacopœial name of the common horehound. See *Marrubium vulgare*.

MARRUBIUM ALBUM. See *Marrubium vulgare*.

MARRUBIUM ALYSSUM. Galen's madwort. This plant has an established reputation in America, as a specific against the bite of the rattle-snake. Its juice is generally given in combination with that of the common horehound. It has for ages been a popular remedy in canine madness, especially in the north of Europe; and, from an article published by Professor Brande, in the Journal of Sciences and the Arts, we find that it still retains its popular sway and reputation over a great part of the Russian empire; and that, in the government of Isola, it has never failed of effecting a cure, in a single instance, for the last five and twenty years. The preparation is simple: the root is reduced to a powder, and the powder is to be eaten by being spread over bread and butter. Two or three doses are said to be sufficient in the worst cases, and will be found to cure mad dogs themselves.

MARRUBIUM AQUATICUM. Water horehound: opening, corroborant.

MARRUBIUM HISPANICUM. Spanish horehound. See *Sideritis syriaca*.

MARRUBIUM NIGRUM FŒTIDUM. The black, stinking horehound, or *Ballote nigra*.

MARRUBIUM VERTICILLATUM. See *Sideritis syriaca*.

MARRUBIUM VULGARE. *Marrubium album*. *Marrubium — dentibus calycinis, setaceis uncinatis*, of Linnæus. Common horehound. The leaves of this indigenous plant have a moderately strong smell of the aromatic kind, but not agreeable; which, by drying, is improved, and in keeping for some months is, in great part, dissipated: their taste is very bitter, penetrating, diffusive, and durable in the mouth. That horehound possesses some share of medicinal power, may be inferred from its sensible qualities; but its virtues do not appear to be clearly ascertained. It is a favourite remedy with the common people in coughs and asthmas. The usual dose is from half an ounce to an ounce, in infusion, two or three times a day. The dose of the extract is from gr. x. to ℥ss.

MARS. (*s, tis*. m.; the mythological god of war: and hence applied to iron, because war implements are made of it.) The alchemistical name of iron.

MARS ALKALIZATUS. One of the alkalies, with an admixture of iron.

MARS SACCHARATUS. Iron mixed with starch and melted sugar.

MARS SOLUBILIS. The ferrum tartarizatum was formerly so called.

MARS SULPHURATUS. Iron filings and sulphur deflagrated.

Marseilles hart-wort. See *Seseli*.

Marsh-mallow. See *Althæa officinalis*.

Marsh-trefoil. See *Menyanthes*.

MARSUPIA'LIS. (From *marsupium*, a purse: so named from its resemblance.) See *Obturator internus*.

Martagon lily. See *Lilium martagon*.

MARTIAL. (*Martialis;* from *Mars*, iron.) Sometimes used to express preparations of iron, or such as are impregnated therewith; as the *Martial regulus* of antimony, &c.

Martial æthiops. The protoxide of iron.

Martial salts. Salts of iron.

Martia'tum unguentum. Soldiers' ointment. Ointment of laurel, rue, marjoram, &c.

Ma'rtis limatura præparata. Purified filings of iron.

MARTYN, John, was born in 1699, in London. His partiality was particularly directed to botany, and many of his papers appeared in the Philosophical Transactions, of which he subsequently took a part in the abridgment. At what period he changed to the medical profession is not known. In 1726, he published his *Tables of Officinal Plants,* disposed according to Ray's system. Having given public lectures on botany in London, with much approbation, he was thought qualified to teach that science at Cambridge; and accordingly, in the following year, he delivered the first course ever heard in that university. In 1741, he published a splendid quarto edition of *Virgil's Georgics,* in which much new light was thrown on the natural history of that author. Dr. Halley having assisted him in the astronomical part; this was followed by the *Bucolics,* on the same plan. In 1761, he resigned his professorship in favour of his son, the Rev. Thomas Martyn; in consequence of whose election he presented his botanical library, of above 200 volumes, with his drawings, herbarium, &c. to the university.

MA'RUM. (*um, i.* n.; from *mar,* Hebrew for bitter: so named from its taste.) Several species of *Teucrium* were so named. See *Teucrium marum.*

Marum creticum. See *Teucrium.*

Marum syriacum. See *Teucrium.*

Marum verum. See *Teucrium marum.*

Marum vulgare. See *Thymus.*

Marvi'sum. Malmsey wine.

MAS. (*as, aris.* m.; etymology uncertain.) Male. There are two sexes of animals and vegetables, the male and the female. The male of animals is distinguished by his peculiar genital organs, and the analogy is carried to vegetables. A flower is called a male flower, which has stamina only, which are reckoned by the exualists to be the male organ.

MA'SCHALE. Μασχαλη. The arm-pit.

Maschali'ster. (From μασχαλιςηρ.) The second vertebra of the back.

MASCULUS. A little male.

Ma'slach. A medicine of the opiate kind, in use among the Turks.

Maspetum. The leaf of the assafœtida plant.

MA'SSA. (*a, æ.* f.; from μασσω, to blend together.) A mass. A term generally applied to the compound out of which pills are to be formed.

Massa carnea jacobi sylvii. See *Flexor longus digitorum pedis.*

Ma'ssalis. An old name for mercury.

MASSE'TER. (*er, eris.* m.; from μασσαομαι, to chew: because it assists in chewing.) *Mansorius.* A muscle of the lower jaw, situated on the side of the face. It is a short, thick muscle, which arises, by fleshy and tendinous fibres, from the lower edge of the malar process of the maxillary bone, the lower horizontal edge of the os malæ, and the lower edge of the zygomatic process of the temporal bone, as far backwards as the eminence belonging to the articulation of the lower jaw. From some little interruption in the fibres of this muscle, at their origin, some writers describe it as arising by two, and others by three distinct portions or heads. The two layers of fibres, of which it seems to be composed, cross each other as they descend, the external layer extending backwards, and the internal one slanting forwards. It is inserted into the basis of the coronoid process, and into all that part of the lower jaw which supports the coronoid and condyloid processes. Its use is to raise the lower jaw, and, by means of the above-mentioned decussation, to move it a little forwards and backwards in the act of chewing.

MASSICOT. The yellow oxide of lead.

Ma'ssoy cortex. See *Cortex massoy.*

MASTERWORT. See *Imperatoria.*

MASTIC. See *Pistachia lentiscus.*

MASTICATION. (*Masticatio;* from *mastico,* to chew.) Chewing. A natural function. It embraces the seizing, catching, or taking the food, the chewing, and the insalivation. The organs for taking in food are the superior extremities and the mouth.

The mouth is the oval cavity formed above, by the palate and the upper jaw; below, by the tongue and the lower jaw; on the sides, by the cheeks; behind, by the *velum* of the palate and the pharynx; and in front by the lips.

The dimensions of the mouth are variable in different persons, and are susceptible of an enlargement in every direction; downwards, by lowering the tongue, and separating the jaws; transversely, by the distension of the cheeks; and from the front backward, by the motion of the lips, and of the *velum* of the palate.

The jaws determine most particularly the form and dimensions of the mouth: the superior jaw makes an essential part of the face, and moves only along with the head; on the contrary, the inferior possesses a very great mobility.

The jaws are furnished with small, very hard bodies, called teeth.

The edge of the socket is covered with a thick layer, fibrous, resisting, denominated gum.

We ought to consider in the parts that contribute to the apprehension of aliments, the muscles that move the jaws, and particularly the inferior. The same thing takes place with the tongue, the numerous motions of which have a great influence on the dimensions of the mouth.

Mechanism of the taking of food.—Nothing is simpler than the taking in of aliments; it

consists in the introduction of alimentary substances into the mouth. For this purpose the hands seize the aliments, and divide them into small portions susceptible of being contained in the mouth, and introduce them into it either directly, or by means of proper instruments.

But, in order to their being received into this cavity, the jaws must separate; in other words, the mouth opens.

In many cases, when the food is introduced into the mouth, the jaws come together to retain it, and assist in mastication or deglutition; but frequently the elevation of the inferior jaw contributes to the taking of the food. We have an example of it when one bites into fruit: then the incisors are thrust into the alimentary substance in opposite directions, and, acting as the blades of scissors, they detach a portion of the mass.

This motion is produced, principally by the contraction of the elevated muscles of the lower jaw, which represents a lever of the third kind, the *power* of which is at the insertion of the elevating muscles, the *point of support* at the articulation temporo-maxillary, and the resistance in the substance upon which the teeth act. The volume of the body placed between the incisors has an influence upon the force by which it may be pressed. If it is small, the power will be much greater, for all the elevating muscles are inserted perpendicularly to the jaw, and the whole of their force is employed in moving the lever that it represents: if the volume of the body is such that it can hardly enter the mouth, though it presents very little resistance, the incisors will not enter it, for the *masseter*, the temporal, and the internal *pterygoid muscles* are inserted very obliquely into the jaw, whence results the loss of the greater part of the force that they develope in contracting. When the efforts of the muscles of the jaws are not sufficient to detach a portion of the alimentary mass, the hand so acts upon it as to separate it from the portion retained by the teeth. On the other hand, the posterior muscles of the neck draw the head strongly back, and from the combination of these efforts results the separation of a portion of the food which remains in the mouth. In this mode, the incisors and eye-teeth are generally employed: the grinders are rarely used. By the succession of these motions of taking food the mouth is filled; and on account of the suppleness of the cheeks, and the easy depression of the tongue, a considerable quantity of food may be accumulated in it.

When the mouth is full, the *velum* of the palate is lowered, its inferior edge is applied upon the most distant part of the base of the tongue, so that all communication is intercepted between the mouth and the pharynx.

Independently of what we have said of the mouth, in respect to taking the food, to conceive its uses in mastication and insalivation, it is necessary to remember that fluids are found in the mouth, which come from different sources. First, the mucous membrane which covers its sides secretes an abundant mucosity; numerous isolated, or agglomerated follicles that are observed in the interior of the cheeks, at the junction of the lips with the gums, upon the back of the tongue, on the anterior aspect of the *velum* and the uvula, pour continually the liquid that they form into the internal surface of the mouth. The same thing takes place with mucous glands, which exist in great number in the interior of the cheeks and palate.

Lastly, there is poured into the mouth, the saliva secreted by six glands, three on each side, and which bear the name of *parotid, sub-maxillary,* and *sub-lingual.* The first, placed between the external ear and the jaw, have each a secreting canal which opens on the level of the second small superior grinder; each maxillary gland has one which terminates on the sides of the ligaments of the tongue, near which those of the sub-lingual glands open.

These fluids are probably variable in their physical and chemical properties according to the organs by which they are formed; but the distinction has not yet been established by chemistry by direct experiments: the mixture under the name of saliva has been exactly analysed.

Amongst the alimentary substances deposited in the mouth, the one sort only traverse this cavity without suffering any change; the others, on the contrary, remain a considerable time in it, and undergo important modifications. The first are the soft sorts of food, or nearly liquid, of which the temperature is little different from that of the body; the second are the aliments, which are hard, dry, fibrous, and those whose temperature is more or less different from what is proper for the animal economy. They are both in common, however, appreciated by the organs of taste in passing through the mouth.

We may attribute to three principal modifications the changes that the food undergoes in the mouth: 1st, change of temperature; 2d, mixture with the fluids that are poured into the mouth, and sometimes dissolution in these fluids; 3d, pressure more or less strong, and very often division, which bruising destroys the cohesion of their parts. It is besides easily and frequently transported from one part of this cavity to another. These three modes of change do not take place successively, but simultaneously, by mutually favouring each other.

The change of temperature of the food retained in the mouth is evident: the sensation which it excites in it is sufficient to prove this. If it has a low temperature, it produces a vivid impression of cold, which continues until it has absorbed the caloric necessary to bring it near to the temperature of the sides of the mouth: the contrary takes place if the temperature is higher than that of the mouth.

It is the same with our judgment on this occasion, as with that which relates to the

temperature of bodies which touch the skin: we join to it, unknown to us, a comparison with the temperature of the atmosphere and with that of the bodies which have been previously in contact with the mouth; so that a body preserving the same degree of heat will appear to us alternately hot or cold, according to the temperature of the bodies formerly in the mouth.

The change of temperature that the food undergoes in the mouth is only an accessory phænomenon: its trituration, and its mixture more or less intimate with the fluids poured into this cavity, are what merit particular attention.

As soon as an aliment is introduced into the mouth, it is pressed by the tongue, applying it against the palate, or against some other part of the sides of the mouth. If the aliment is soft, if its parts cohere but little, this simple pressure is enough to break it: if the alimentary substance is composed of liquid and solid, the liquid is expressed by this pressure, and the solid part only remains in the mouth. The tongue produces the effect, of which we speak, so much better in proportion as its membrane is muscular, and as a great number of muscles are destined to move it.

It might astonish us that the tongue which is so soft could be capable of breaking a body offering even small resistance; but, on the one hand, it hardens in contracting, like all the muscles, and, besides, it presents, under the mucous membrane which covers its superior aspect, a dense and thick fibrous layer.

Such are the phænomena that take place if the food has but little resistance; but if it presents a considerable resistance, it then undergoes the action of the masticating organs. The essential agents of mastication are the muscles that move the jaws, the tongue, the cheeks, and the lips: the *maxillary* bones and the teeth serve only as simple instruments.

Though the motions of both jaws may contribute to mastication, it is produced almost always by those of the inferior one. This bone may be lowered, raised, and pressed strongly against the upper jaw; carried forward, backward, and even directed a little towards the sides. These different motions are produced by the numerous muscles which are attached to the jaw.

But the jaws could never have produced the necessary effect in mastication if they had not been furnished with teeth, the physical properties of which are particularly suited to this digestive action.

Mechanism of mastication. — For the commencement of mastication, the inferior jaw must be lowered, an effect which is produced by the relaxation of its elevating, and the contraction of its depressing muscles. The food must then be placed between the dental arches, either by the tongue or some other agent: the inferior jaw is then raised by the masseter, internal pterygoid, and temporal muscles, the intensity of whose contraction depends upon the resistance of the food. This being pressed between two unequal surfaces whose asperities fit into each other, is divided into small portions, the number of which is in proportion to the facility with which they have given way.

But a motion of this kind reaches only a part of the food contained in the mouth, and it must be all equally divided. This takes place by the successive motions of the inferior jaw, and by the contraction of the muscles of the cheeks, of those of the tongue and lips, which bring the food between the teeth successively and promptly during the separation of the jaws, that it may be bruised when they come together.

When the alimentary substances are soft and easily bruised, two or three masticatory motions are sufficient to divide all that is in the mouth: the three kinds of teeth are employed in it. A longer continued mastication is necessary when the substances are more resisting, fibrous, or tough: in this case we chew only with the *molares*, and often only with one side at a time, to allow the other to rest. In employing the grinders there is an advantage of shortening the arm of the lever represented by the jaw, and by so doing of rendering it more advantageous for the power that moves it.

In the mastication, the teeth have sometimes to support very considerable efforts, which would inevitably shake, or else displace them, were it not for the extreme solidity of their articulation with the jaws. Each root acts like a wedge, in transmitting to the sides of the sockets the force by which it is pressed.

The advantage of the conical form of the roots is not doubtful. By reason of this form, the force by which the tooth is pressed, and which tends to thrust it into the jaw, is decomposed: one part tends to separate the sides of the sockets, the other to lower them; and the transmission, instead of being carried to the extremity of the root, which could not have failed to take place in a cylindric form, is distributed over all the surface of the socket. The grinders, that have more considerable efforts to sustain, have a number of roots, or at least one very large. The incisors and eye-teeth, that have only one small root, have never any great pressure to support.

If the gums had not presented a smooth surface and a dense tissue, placed as they are round the neck of the teeth and filling their intervals, they would have been torn every instant; for, in the mastication of hard and irregular substances, they are constantly exposed to the pressure of their edges and angles. This inconvenience happens whenever their tissue becomes soft, as in scorbutic affections.

During the time of mastication the mouth is shut behind by the curtain of the palate, the anterior surface of which is pressed against the base of the tongue: the food is retained before by the teeth and the lips.

Insalivation of the aliments. — Whenever we have an appetite, the view of food determines

a considerable afflux of saliva into the mouth: in some people it is so strong as to be projected to the distance of several feet.

Whilst the aliments are bruised and triturated by the masticating organs, they imbibe and are penetrated completely by the fluids that are poured into the mouth, and particularly by the saliva. It is easy to conceive that the division of the food, and the numerous displacements that it suffers during mastication, singularly favour its mixture with the mucous and salivary juices.

Most of the alimentary substances submitted to the action of the mouth are dissolved or suspended wholly or in part in the saliva, and immediately they become proper for being introduced into the stomach, and are forthwith swallowed.

On account of its viscosity, the saliva absorbs air, by which it is swept in the different motions necessary for mastication; but the quantity of air absorbed in this circumstance is inconsiderable, and has been generally exaggerated.

Of what use is the trituration of food and its mixture with the saliva? Is it a simple division which renders the aliments more proper for the alterations which they undergo in the stomach, or do they suffer the first degree of animalisation in the mouth? On this point there is nothing certain known.

Let us remark, that mastication and insalivation change the savour and odour of the food; that mastication, sufficiently prolonged, generally renders digestion more quick and easy; that, on the contrary, people who do not chew their food have often, on this account, very painful and slow digestion.—*Magendie's Physiology.*

MASTICATORY. (*Masticatorium, ii.* n.; from *mastico*, to chew.) A medicine intended for chewing.

MA'STICHE. (*e, es.* f.; from μασσω, to express.) See *Pistacia lentiscus.*

Mastich-herb. See *Thymus mastichina.*

Mastich, Syrian. See *Teucrium.*

Mastich-tree. See *Pistacia lentiscus.*

Mastich wood. See *Pistacia lentiscus.*

MASTICHELÆ'UM. (From μαστιχη, mastich, and ελαιον, oil.) Oil of mastich.

MASTI'CHINA. (Diminutive of *mastiche.*) See *Thymus mastichina.*

Masticot. See *Massicot.*

MASTI'TIS. (*is, idis.* f.; from μαστος, the breast, and ιτις, which implies inflammation.) Phlegmonous inflammation of the breast of women. This disease may take place at any period of life, but it most commonly affects those who give suck. It is characterised by tumefaction, tension, heat, redness, and pain; and comes sometimes in both breasts, but most commonly in one. Fever generally attends the disease. It is sometimes very quickly formed, and in general without any thing preceding to show it; but now and then a slight shivering is the forerunner. This disease terminates either in resolution, in suppuration, or scirrhus: if left to itself, it generally terminates in suppuration.

The causes which give rise to this disease, are those which produce most of the phlegmasiæ, as cold, violent blows, &c. In women who are lying-in, or giving suck, it mostly arises either from a suppression of the lochia or a retention of milk. Mastitis is seldom of long continuance; it is a very painful disease, and generally proceeds to suppuration. It is no uncommon thing for the suppuration to take place in two or more points, so tha several abscesses form close together, and run into one another: and hence it happens that when one points, and an opening is made into it, or its pus let out, the matter from all escapes through this one opening.

The issue of this disease is always favourable, unless there be a morbid taint in the constitution, in which case, especially if the treatment be injudicious, or disease neglected, scrofulous, scirrhous, and carcinomatous tumours result. The termination of the disease by gangrene is never to be apprehended; at least few, if any, have seen the disease terminate in this way.

MA'STIX. See *Pistacia lentiscus.*

MASTODY'NIA. (*a, æ.* f.; from μαστος, a breast, and οδυνη, pain.) Pain in the mamma or breast of women. Often and mostly applied to inflammation of that organ. See *Mastitis.*

MASTOID. (*Mastoideus;* from μαστος, a breast, and ειδος, resemblance.) Nipple-like. 1. Those processes of bone are so termed that are shaped like the nipple of the breast; as the mastoid process of the temporal bone, &c.

2. The name of a muscle, from its being inserted into the mastoid process. See *Sterno-cleido-mastoideus.*

Mastoid foramen. Foramen mastoideum. A hole in the temporal bone of the skull, by the side of the mastoid process.

MASTOIDEUS LATERALIS. See *Trachelo-mastoideus.*

MATALI'STA RADIX. A root said to be imported from America, where it is given as a purgative, its action being rather milder than that of jalap.

MA'TER. (*er, ris.* f. Ματηρ, a mother: so called by the Arabians, who thought they gave origin to all other membranes of the body.) 1. Two membranes of the brain had this epithet given them.

2. A name of the herb mugwort, because of its virtue in disorders of the womb. See *Artemisia vulgaris.*

MATER HERBARUM. See *Artemisia.*

MATER METALLORUM. Quicksilver.

MATER PERLARUM. See *Margarita.*

MATE'RIA. (*a, æ.* f.; *quasi à mater.*) A term given to a substance that is selected for a particular experiment or purpose, which is expressed by adding the name of that purpose; hence, *materia medica, materia chemica,* &c.

MATERIA MEDICA. By this term is understood a general class of substances, both

natural and artificial, which are used in the cure of diseases.

Cartheuser, Newman, Lewis, Gleditsch, Linnæus, Vogel, Alston, Bergius, Cullen, Murray, Paris, in his excellent work on pharmacology, and other writers on the Materia Medica, have been at much labour to contrive arrangements of these articles. Some have disposed them according to their natural resemblances; others according to their real or supposed virtues; others according to their active constituent principles. These arrangements have their peculiar advantages. The first may be preferred by the natural historian, the second by the physiologist, and the last by the chemist. The pharmacopœias published by the Colleges of Physicians of London, Dublin, and Edinburgh, have the articles of the Materia Medica arranged in alphabetical order: this plan is also adopted by almost all the continental pharmacopœias.

Dr. Cullen has arranged the Materia Medica as follows:—

- Nutriments, which are
    - Food,
    - Drinks,
    - Condiments;
- Medicines which act on the
    - Solids,
        - Simple, as
            - *Astringents,*
            - *Tonics,*
            - *Emollients,*
            - *Corrosives;*
        - Living, as
            - *Stimulants,*
            - *Sedatives,*
                - *Narcotics,*
                - *Refrigerants,*
            - *Antispasmodics.*
    - Fluids,
        - Producing a change of fluidity,
            - *Attenuants,*
            - *Inspissants.*
        - Mixture,
            - Correctors of Acrimony,
                - *Demulcents,*
                - *Antacids,*
                - *Antalkalines,*
                - *Antiseptics.*
        - Evacuants; viz.
            - *Errhines,*
            - *Sialagogues.*
            - *Expectorants,*
            - *Emetics,*
            - *Cathartics,*
            - *Diuretics,*
            - *Diaphoretics,*
            - *Emmenagogues.*

The following is the list of articles which come under the preceding classes: —

I. NUTRIMENTS.

α. Fruits.

a. *Fresh, sweet, acidulous,*
Prunes
Oranges
Lemons
Raspberries
Red and black currants
Mulberries
Grapes, &c.

b. *Dried, sweet, acidulous,*
Raisins
Currants
Figs.

β. Oleraceous Herbs.
Water-cresses
Dandelion
Parsley
Artichoke.

γ. Roots.
Carrot
Garlick
Satyrion.

δ. Seeds and Nuts.
Almonds, sweet and bitter
Walnuts
Olives.

II. MEDICINES.

1. Astringents.
Red rose
Cinquefoil
Tormentil
Madder
Sorrel
Water-dock
Bistort
Fern
Pomegranate
Oak-bark
Galls
Logwood
Quince
Mulberry
Sloe
Gum-arabic
Catechu
Dragon's blood
Alkanet

Balaustine flower
St. John's wort
Millefoil
Plantain
Convallaria
Bear's berry.

2. Tonics.
Gentian
Lesser centaury
Quassia
Simarouba
Marsh trefoil
Fumitory
Camomile
Tansy
Wormwood
Southernwood
Sea-wormwood
Water-germander
Virginian snake-root
Leopard's bane
Peruvian bark.

3. Emollients.
Columniferous,
Marsh mallow
Mallow.
Farinaceous,
Quince-seeds
Fænugreek-seed
Linseed.
Various emollients,
Pellitory
Verbascum
White lily.

4. Corrosives.

5. Stimulants.
Verticellated,
Lavender
Balm
Marjoram
Sweet marjoram
Syrian herb mastich
Rosemary
Hyssop
Ivy
Mint
Peppermint
Pennyroyal
Thyme
Mother of thyme
Sage.
Umbellated,
Fennel
Archangel
Anise
Caraway
Coriander
Cumin
Dill
Saxifrage.
Siliquose,
Horse-radish
Water-cress
Mustard
Scurvy-grass.
Alliaceous,
Garlick.
Coniferous,
Fir
Juniper.
Balsamics,
Venice turpentine
Common turpentine
Canada balsam
Copaiba balsam
Tolu balsam
Balm of Gilead.
Resinous,
Guaiacum
Ladanum
Storax
Benzoin.
Aromatics,
Cinnamon
Nutmeg
Mace
Clove
Allspice
Canella
Cascarilla
Black pepper
Long pepper
Indian pepper
Ginger
Lesser cardamom
Zedoary
Virginian snake-root
Ginseng
Aromatic reed.
Acrids,
Wake-robin
Pellitory
Stavesacre.

6. Narcotics.
Rhœadaceous,
White poppy
Red poppy.
Umbellated,
Hemlock
Water hemlock.
Solanaceous,
Belladonna
Henbane
Tobacco
Bitter sweet
Stramonium.
Varia,
Laurel
Camphire
Saffron
Wine.

7. Refrigerants.
Fruits of plants
Acidulous herbs and roots.

8. Antispasmodics.
Fœtid herbs,
Wormwood
Fœtid goosefoot
Cumin
Pennyroyal
Rue
Savine.
Fœtid gums,
Assafœtida
Galbanum
Opoponax
Valerian.

9. Diluents.
Water.

10. Attenuants.
Alkalies
Sugar
Liquorice
Dried fruits.

11. Inspissants.
Acids
Farinaceous and mucilaginous demulcents.

12. Demulcents.
Mucilaginous,
Gum arabic
—— tragacanth.
Farinaceous,
Starch
Bland oils.

13. Antacids.
Alkalies and earths.

14. Antalkalines.
Acids.

15. Antiseptics.
Acid parts of plants
Acescent herbs
Sugar
Siliquose plants
Alliaceous plants
Astringents
Bitters
Aromatics
Essential oils
Camphire
Gum resins
Saffron
Contrayerva
Valerian
Opium
Wine.

16. Errhines.
Asarabacca
White hellebore
Water iris
Pellitory.

17. Sialagogues.
Archangel
Cloves
Masterwort
Tobacco
Pepper
Pellitory.

18. Expectorants.
Ivy
Horehound
Pennyroyal
Elecampane
Florentine orris-root
Tobacco
Squill
Coltsfoot
Benzoin
Storax
Canada balsam
Tolu balsam.

19. Emetics.
Asarabacca
Ipecacuan

Tobacco
Squill
Mustard
Horse-radish
Bitters.

20. Catharticus.

Milder,
Mild acid fruits
Cassia pulp
Tamarind
Sugar
Manna
Sweet roots
Bland oils
Damask rose
Violet
Polypody
Mustard
Bitters
Balsamics

Acrid,
Rhubarb
Seneka
Broom
Elder
Castor oil
Senna
Black hellebore
Jalap
Scammony
Buckthorn
Tobacco
White hellebore
Coloquintida
Elaterium.

21. Diuretics.

Parsley
Carrot
Fennel
Pimpinel
Eryngo
Madder
Burdock
Bitter-sweet
Wake-robin
Asarabacca
Foxglove
Tobacco
Rue
Savine
Snake-root
Squill
Bitters
Balsamics
Siliquosæ
Alliaceæ.

22. Diaphoretics.

Saffron
Bitter-sweet
Opium
Camphire
Contrayerva
Serpentaria
Sage
Water germander
Guaiacum
Sassafras
Seneka
Vegetable acids
Essential oil
Wine
Diluents.

23. Emmenagogues.

Aloes
Fœtid gums
Fœtid plants
Saffron.

The following is the arrangement of the Materia Medica, according to J. Murray, in his Elements of Materia Medica and Pharmacy:—

A. General stimulants.
- *a.* Diffusible { Narcotics, Antispasmodics.
- *b.* Permanent { Tonics, Astringents.

B. Local stimulants. Emetics, Cathartics, Emmenagogues, Diuretics, Diaphoretics, Expectorants, Sialagogues, Errhines, Epispastics.

C. Chemical remedies. Refrigerants, Antacids, Lithontriptics, Escharotics.

D. Mechanical remedies. Anthelmintics, Demulcents, Diluents, Emollients.

Under the head of Narcotics are included,—

Alkohol. Ether. Camphire. Papaver somniferum. Hyoscyamus niger. Atropa belladonna. Aconitum napellus. Conium maculatum. Digitalis purpurea. Nicotiana tabacum. Lactuca virosa. Datura stramonium. Rhododendron chrysanthemum. Rhus toxicodendron. Arnica montana. Strychnos nux vomica. Prunus lauro-cerasus.

Under the second class, Antispasmodics, are included,—Moschus. Castoreum. Oleum animale empyreumaticum. Petroleum. Ammonia. Ferula assafœtida. Sagapenum. Bubon galbanum. Valeriana officinalis. Crocus sativus. Melaleuca leucadendron.

Narcotics used as Antispasmodics,—

Ether. Camphire. Opium.

Tonics used as Antispasmodics,—

Cuprum. Zincum. Hydrargyrus. Cinchona.

The head of Tonics embraces,—

1. From the *mineral* kingdom,

Hydrargyrum. Ferrum. Zincum. Cuprum. Arsenicum. Barytes. Calx. Acidum. Nitricum. Oxymurias potassæ.

2. From the *vegetable* kingdom,

Cinchona officinalis. Cinchona caribæa. Cinchona floribunda. Cusparia. Aristolochia serpentaria. Dorstenia contrayerva. Croton eleutheria. Calumba. Quassia excelsa. Quassia simarouba. Swietenia febrifuga. Swietenia mahagoni. Gentiana lutea. Anthemis nobilis. Artemisia absinthium. Chironia centaurium. Marrubium vulgare. Menyanthes trifoliata. Centaurea benedicta. Citrus aurantium. Citrus medica. Laurus cinnamomum. Laurus cassia. Canella alba. Acorus calamus. Amomum zinziber. Kæmferia rotunda. Santalum album. Pterocarpus santalinus. Myristica moschata. Caryophyllus aromaticus. Capsicum annuum. Piper nigrum. Piper longum. Piper cubeba. Myrtus pimenta. Amomum repens. Carum carui. Coriandrum sativum. Pimpinella anisum. Anethum fæniculum. Anethum graveolens. Cuminum cyminum. Angelica archangelica. Mentha piperita. Mentha viridis. Mentha pulegium. Hyssopus officinalis.

The class of Astringents comprehends the following:—

1. From the *vegetable* kingdom,

Quercus robur. Quercus cerris. Tormentilla erecta. Polygonum bistorta. An-

chusa tinctoria. Hæmatoxylon campechianum. Rosa gallica. Arbutus uva ursi. Mimosa catechu. Kino. Pterocarpus draco. Ficus indica. Pistachia lentiscus.

2. From the *mineral* kingdom,

Acidum sulphuricum. Argilla. Supersulphas argillæ et potassæ. Calx. Carbonas calcis. Plumbum. Zincum. Ferrum. Cuprum.

The articles which come under the head of Emetics are,

1. From the *vegetable* kingdom,

Calliocca ipecacuanha. Scilla maritima. Anthemis nobilis. Sinapis alba. Asarum europæum. Nicotiana tabacum.

2. From the *mineral* kingdom,

Antimonium. Sulphas zinci. Sulphas cupri. Subacetas cupri. Ammonia. Hydrosulphuretum ammoniæ.

Cathartics include,

Laxatives:— Manna. Cassia fistula. Tamarindus Indica. Ricinus communis. Sulphur. Magnesia.

Purgatives: — Cassia senna. Rheum palmatum. Convolvulus jalapa. Helleborus niger. Bryonia alba. Cucumis colocynthis. Momordica elaterium. Rhamnus catharticus. Aloë perfoliata. Convolvulus scammonia. Gambojia gutta. Submurias hydrargyri. Sulphas magnesiæ. Sulphas sodæ. Sulphas potassæ. Supertartras potassæ. Tartras potassæ et sodæ. Murias sodæ. Terebinthina veneta. Nicotiana tabacum.

The medicines arranged under Emmenagogues, are—

1. From the class of Antispasmodics,

Castoreum. Ferula assafœtida. Bubon galbanum.

2. From the class of Tonics,

Ferrum. Hydrargyrus. Cinchona officinalis.

3. From the class of Cathartics.

Aloë. Helleborus niger. Sinapis alba. Rosmarinus officinalis. Rubia tinctorum. Ruta graveolens. Juniperus sabina.

The class of Diuretics includes,

1. Saline diuretics:

Supertartras potassæ. Nitras potassæ. Murias ammoniæ. Acetas potassæ. Potassa.

2. From the *vegetable* kingdom,

Scilla maritima. Digitalis purpurea. Nicotiana tabacum. Solanum dulcamara. Lactuca virosa. Colchicum autumnale. Gratiola officinalis. Spartium scoparium. Juniperus communis. Copaifera officinalis. Pinus balsamea. Pinus larix.

3. From the *animal* kingdom,

Meloe vesicatorius.

Under the class Diaphoretics, are —

Ammonia. Murias ammoniæ. Acetas ammoniæ. Citras ammoniæ. Submurias hydrargyri. Antimonium. Opium. Camphora. Guaiacum officinale. Daphne mezereum. Smilax sarsaparilla. Laurus sassafras. Cochlearia armoracia. Salvia officinalis.

The class Expectorants comprehends, —

Antimonium. Ipecacuanha. Nicotiana tabacum. Digitalis purpurea. Scilla maritima. Allium sativum. Polygala senega. Ammoniacum. Myrrha. Styrax benzoin. Styrax officinalis. Toluifera balsamum. Myrroxylon peruiferum. Amyris gileadensis.

The articles of the class Sialagogues are,— Hydrargyrum. Anthemis pyrethrum. Arum maculatum. Amomum zinziber. Daphne mezereum. Nicotiana tabacum.

The class of Errhines are,—Iris florentina. Æsculus hippocastanum. Origanum majorana. Lavendula spica. Asarum europæum. Veratrum album. Nicotiana tabacum. Euphorbia officinalis.

In the class Epispastics and Rubefacients are,—Meloe vesicatorius. Ammonia. Pix burgundica. Sinapis alba. Allium sativum.

Refrigerants are constituted by the following articles: — Citrus aurantium. Citrus medica. Tamarindus indica. Acidum acetosum. Supertartras potassæ. Nitras potassæ. Boras sodæ.

The list of articles that come under the class Antacids are,— Potassa. Soda. Ammonia. Calx. Carbonas calcis. Magnesia.

In the class Lithontriptics are, — Potassa. Carbonas potassæ. Soda. Carbonas sodæ. Sapo albus. Calx.

In the class Escharotics are,— Acida mineralia. Potassa. Nitras argenti. Murias antimonii. Sulphas cupri. Acetas cupri. Murias hydrargyri. Subnitras hydrargyri. Oxydum arsenici album. Juniperus sabina.

In the class Anthelmintics are, — Dolichos pruriens. Ferri limatura. Stannum pulveratum. Olea europæa. Artemisia santonica. Spigelia marilandica. Polypodium filix mas. Tanacetum vulgare. Geoffræa inermis. Gambojia gutta. Submurias hydrargyri.

Demulcents are,— Mimosa nilotica. Astragalus tragacantha. Linum usitatissimum. Althæa officinalis. Malva sylvestris. Glycyrrhiza glabra. Cycas circinalis. Orchis mascula. Maranta arundinacea. Triticum hybernum. Ichthyocolla. Olea europæa. Amygdalus communis. Sevum ceti. Cera.

Water is the principal article of the class Diluents; and as for the last class, Emollients, heat, conjoined with moisture, is the principal, though all unctuous applications may be included.

The last London Pharmacopœia has the following list for the Materia Medica: —

Abietis resina	Acidum aceticum fortius	Allii radix
Absinthium	Acidum citricum	Aloes spicatæ extractum
Acaciæ gummi	Acidum sulphuricum	Althææ folia et radix
Acetosæ folia	Aconita folia	Alumen
Acetosella	Adeps	Ammoniacum
Acetum	Ærugo	Ammoniæ murias

Amygdala amara et dulcis
Amylum
Anethi semina
Anisi semina
Anthemidis flores
Antimonii sulphuretum
Antimonii vitrum
Argentum
Armoraciæ radix
Arsenicum album
Asari folia
Assafœtidæ gummi resina
Avenæ semina
Aurantii baccæ
Aurantii cortex
Balsamum peruvianum
Balsamum tolutanum
Belladonnæ folia
Benzoinum
Bismuthum
Bistorta radix
Cajuputi oleum
Calamina
Calami radix
Calumba
Camphora
Canellæ cortex
Cantharis
Capsici baccæ
Carbo ligni
Cardamines flores
Cardamomi semina
Caricæ fructus
Carui semina
Caryophylli
Caryophyllorum oleum
Cascarillæ cortex
Cassiæ pulpa
Castoreum
Catechu extractum
Centaurii cacumina
Cera alba
Cera flava
Cerevisiæ fermentum
Cetaceum
Cinchonæ lancifoliæ, cordifoliæ et oblongifoliæ cortex
Cinnamomi cortex
Cinnamomi oleum
Coccus
Colchici radix et semina
Colocynthidis pulpa
Conii folia et semina
Contrayervæ radix
Copaiba
Coriandri semina
Cornua
Creta
Croci stigmata
Cubeba
Cumini semina
Cupri sulphas
Cuspariæ cortex
Cydoniæ semina
Dauci radix
Dauci semina
Digitalis folia et semina
Dolichi pubes
Dulcamaræ caulis
Elaterii pepones
Elemi
Euphorbiæ gummi resina
Farina
Fœniculi semina
Ferrum
Filicis radix
Fucus
Galbani gummi resina
Gallæ
Gentianæ radix
Glycyrrhizæ radix
Granati cortex
Guaiaci resina et lignum
Hæmatoxyli lignum
Helenium
Hellebori fœtidi folia
Hellebori nigri radix
Hordei semina
Humuli strobili
Hydrargyrum
Hyoscyami folia et semina
Ipecacuanhæ radix
Jalapæ radix
Juniperi baccæ et semina
Kino
Krameriæ radix
Lactuca
Lavendulæ flores
Lauri baccæ et folia
Lichen
Limones
Limonum cortex et oleum
Linum catharticum
Lini usitatissimi semina
Magnesiæ subcarbonas
Magnesiæ sulphas
Malva
Manna
Marmor album
Marrubium
Mastiche
Mel
Mentha piperita
Mentha viridis
Menyanthes
Mezerei cortex
Mori baccæ
Moschus
Myristicæ nuclei et oleum expressum
Myrrha
Olibanum
Olivæ oleum
Opium
Opopanacis gummi resina
Origanum
Ovum
Papaveris capsulæ
Petroleum
Pimentæ baccæ
Piperis longi fructus
Piperis nigri baccæ
Pix abietina
Pix liquida
Pix nigra
Plumbi subcarbonas
Plumbi oxydum semivitreum.
Porri radix
Potassa impura
Potassæ nitras
Potassæ sulphas
Potassæ supertartras
Pruna
Pterocarpi lignum
Pulegium
Pyrethri radix
Quassiæ lignum
Quercûs cortex
Resina flava
Rhamni baccæ
Rhei radix
Rhœados petala
Ricini semina et oleum
Rosæ caninæ pulpa
Rosæ centifoliæ petala
Rosæ gallicæ petala
Rosmarini cacumina
Rubiæ radix
Rutæ folia
Sabinæ folia
Saccharum
——— purificatum
Salicis cortex
Sagapenum
Sambuci flores
Sapo durus et mollis
Sarsaparillæ radix
Sassafras lignum et radix
Scammoneæ gummi resina
Scillæ radix
Senegæ radix
Sennæ folia
Serpentariæ radix
Sevum
Simaroubæ cortex
Sinapis semina
Sodæ murias
Sodæ subboras
Sodæ sulphas
Soda impura
Spartii cacumina
Spigeliæ radix
Spiritus rectificatus et tenuior
Spongia
Stramonii folia et semina
Stannum
Staphisagriæ semina
Styracis balsamum
Succinum
Sulphur et sulphur sublimatum
Tabaci folia
Tamarindi pulpa
Taraxaci radix
Tartarum
Terebinthina Canadensis
——— Chia
——— vulgaris
Terebinthinæ oleum
Testæ
Tiglii oleum
Tormentillæ radix
Toxicodendri folia
Tragacantha

Tussilago
Valerianæ radix
Veratri radix
Ulmi cortex
Uvæ passæ
Uvæ ursi folia
Zincum
Zingiberis radix.

MATERIA PERLATA. If, instead of crystallising the salts contained in the liquor separated from diaphoretic antimony, an acid be poured into it, a white precipitate is formed, which is nothing else but a very refractory calx of antimony.

MATERIATU'RA. Castellus explains *morbi materiaturæ* to be diseases of intemperance.

MATLOCK. A village in Derbyshire. It affords a mineral water of the acidulous class: which issues from a limestone rock, near the banks of the Derwent. Several of the springs possess a temperature of 66°. Matlock water scarcely differs from common good spring water, in sensible properties. It is extremely transparent, and exhales no vapour, excepting in cold weather. It holds little or no excess of aërial particles; it curdles soap, when first taken up, but it loses this effect upon long keeping, perhaps from the deposition of its calcareous salts; it appears to differ very little from good spring water when tasted; and its effects seem referable to its temperature. It is from this latter circumstance that it forms a proper tepid bath for the nervous and irritable, and those of a debilitated constitution; hence it is usually recommended after the use of Bath and Buxton waters, and as preparatory to sea-bathing.

MATRICA'LIS. (*is, is.* f.; from *matrix*, the womb.) A medicine appropriated to disorders of the uterus.

MATRICA'RIA. (*a, æ.* f.; from *matrix*, the womb: so called from its uses in disorders of the womb.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua.*

2. The pharmacopœial name of the Matricaria parthenium. See *Matricaria parthenium.*

MATRICARIA CHAMOMILLA. *Chamæmelum vulgare. Chamomilla nostras. Lucanthemum* of Dioscorides. Common wild corn, or dog's camomile. The plant directed under this name in the pharmacopœias, is the *Matricaria —receptaculis conicis radiis patentibus; squamis calycinis, margine æqualibus,* of Linnæus. Its virtues are similar to those of the *Matricaria parthenium,* but in a much inferior degree.

MATRICARIA PARTHENIUM. *Parthenium febrifuga.* Common fever-few, or febrifuge, and often, but very improperly, feather-few. Mother's wort. The leaves and flowers of this plant, *Matricaria —foliis compositis, planis; foliolis ovatis, incisis; pedunculis ramosis,* have a strong, not agreeable smell, and a moderately bitter taste, both which they communicate, by warm infusion, to water and rectified spirit. The watery infusions, inspissated, leave an extract of considerable bitterness, and which discovers also a saline matter, both to the taste, and in a more sensible manner, by throwing up to the surface small crystalline efflorescences in keeping. The peculiar flavour of the matricaria exhales in the evaporation, and impregnates the distilled water, on which also a quantity of essential oil is found floating. The quantity of spirituous extract, according to Cartheuser's experiments, is only about one sixth the weight of the dry leaves, whereas the watery extract amounts to nearly one half. This plant is evidently the *Parthenium* of Dioscorides, since whose time it has been very generally employed for medical purposes. In natural affinity, it ranks with camomile and tansy, and its sensible qualities show it to be nearly allied to them in its medicinal character. Bergius states its virtues to be tonic, stomachic, resolvent, and emmenagogue. It has been given successfully as a vermifuge, and for the cure of intermittents; but its use is most celebrated in female disorders, especially in hysteria; and hence it is supposed to have derived the name matricaria. Its smell, taste, and analysis, prove it to be a medicine of considerable activity; we may therefore say, with Murray — *Rarius hodie præscribitur, quam debetur.*

MATRISY'LVA. (*a, æ.* f.; from *mater*, and *silva*, the mother of the wood.) See *Asperula.*

MA'TRIX. (*ix, icis.* f. Μητηρ.) 1. The womb. See *Uterus.*

2. The earthy or stony matter which accompanies ores, or envelopes them in the earth.

MATRONA'LIS. (From *matrona*, a matron: so called, because its smell is grateful to women.) The violet.

MATTED. Thickly interwoven together, as the fibres in turf-bogs: applied sometimes to express many stems rising from the same root. See *Cæspetosus.*

MATTHIOLUS, PETER ANDREW, was born at Sienna in 1501. He left several works, chiefly relating to the virtues of plants: and that by which he principally distinguished himself, was a *Commentary on the Writings of Dioscorides.*

MATU'RANS. (From *maturo*, to ripen.) That which promotes the suppuration of tumours.

MATURATION. (*Maturatio*; from *maturo*, to make ripe.) That process which succeeds inflammation, by which pus is collected in an abscess.

Maudlin. See *Achillea ageratum.*

Maudlin tansey. See *Achillea.*

MAURICEAU, FRANCIS, was born at Paris, where he studied surgery with great industry for many years, especially at the Hôtel-Dieu. He had acquired so much experience in widwifery, before he commenced public practice, that he rose almost at once to the head of his profession. He published

several works relating to that branch of the art, containing a great store of useful facts.

MAURO-MARSON. See *Marrubium.*

MAW-WORM. See *Ascaris.*

MAXI'LLA. (*a, æ.* f.; from μασσαω, to chew.) The jaw, both upper and lower.

MAXILLA INFERIOR. The lower jaw.

MAXILLA SUPERIOR. The upper jaw.

MAXILLARE INFERIUS OS. *Maxilla inferior. Mandibula.* The maxilla inferior, or lower jaw, which, in its figure, may be compared to a horse-shoe, is at first composed of two distinct bones; but these, soon after birth, unite together at the middle of the chin, so as to form only one bone. The superior edge of this bone has, like the upper jaw, a process, called the *alveolar* process. This, as well as that of the upper jaw, to which it is in other respects a good deal similar, is likewise furnished with cavities for the reception of the teeth. The posterior part of the bone, on each side, rises perpendicularly into two processes, one of which is called the *coronoid*, and the other the *condyloid* process. The first of these is the highest: it is thin and pointed; and the temporal muscle, which is attached to it, serves to elevate the jaw. The condyloid process is narrower, thicker, and shorter than the other, terminating in an oblong, rounded head, which is formed for a moveable articulation with the cranium, and is received into the fore-part of the fossa described in the temporal bone. In this joint there is a moveable cartilage, which, being more closely connected to the condyle than to the cavity, may be considered as belonging to the former. This moveable cartilage is connected with both the articulating surface of the temporal bone, and the condyle of the jaw, by distinct ligaments arising from its edges all round. These attachments of the cartilage are strengthened, and the whole articulation secured, by an external ligament, which is common to both, and which is fixed to the temporal bone, and to the neck of the condyle. On the inner surface of the ligament, which attaches the cartilage to the temporal bone, and backwards in the cavity, is placed what is commonly called the gland of the joint; at least the ligament is there found to be much more vascular than at any other part. At the bottom of each coronoid process, on its inner part, is a foramen, or canal, which extends under the roots of all the teeth, and terminates at the outer surface of the bone near the chin. Each of these foramina affords a passage to an artery, vein, and nerve, which send off branches to the several teeth.

This bone is capable of a great many motions. The condyles, by sliding from the cavity towards the eminences on each side, bring the jaw horizontally forwards, as in the action of biting; or the condyles only may be brought forwards, while the rest of the jaw is tilted backwards, as is the case when the mouth is open. The condyles may also slide alternately backwards and forwards from the cavity to the eminence, and *vice versâ;* so that while one condyle advances, the other moves backwards, turning the body of the jaw from side to side, as in grinding the teeth. The great use of the cartilages seems to be that of securing the articulation, by adapting themselves to the different inequalities in these several motions of the jaw, and to prevent any injuries from friction. This last circumstance is of great importance where there is so much motion, and, accordingly, this cartilage is found in the different tribes of carnivorous animals, where there is no eminence and cavity, nor other apparatus for grinding.

The alveolar processes are formed of an external and internal plate, united together by thin bony partitions, which divide the processes at the fore-part of the jaw, into as many sockets as there are teeth. But at the posterior part, where the teeth have more than one root, each root has a distinct cell. These processes, in both jaws, begin to be formed with the teeth, accompany them in their growth, and disappear when the teeth fall; so that the loss of the one seems constantly to be attended with the loss of the other.

MAXILLARE SUPERIUS OS. *Maxilla superior.* The superior maxillary bones constitute the most considerable portion of the upper jaw, are two in number, and generally remain distinct through life. Their figure is exceedingly irregular, and not easily to be described. On each of these bones are observed several eminences. One of these is at the upper and fore part of the bone, and, from its making part of the nose, is called the *nasal* process. Internally, in the inferior portion of this process, is a fossa, which, with the os unguis, forms a passage for the lachrymal duct. Into this nasal process, likewise, is inserted the short round tendon of the *musculus orbicularis palpebrarum.* Backwards and outwards, from the root of the nasal process, the bone helps to form the lower side of the orbit, and this part is therefore called the *orbitar* process. Behind this orbitar process, the bone forms a considerable tuberosity; and at the upper part of this tuberosity is a channel, which is almost a complete hole. In this channel passes a branch of the fifth pair of nerves, which, together with a small artery, is transmitted to the face through the external orbiter foramen, which opens immediately under the orbit. Where the bone on each side is joined to the os malæ, and helps to form the cheeks, is observed what is called the *malar* process. The lower and anterior parts of the bone make a kind of circular sweep, in which are the *alveoli*, or sockets for the teeth: this is called the *alveolar* process. This alveolar process has, posteriorly, a considerable tuberosity on its internal surface. Above this alveolar process, and just behind the fore-teeth, is an irregular hole, called the *foramen incisivum,* which, separating into two, and sometimes more holes, serves to transmit small arteries and veins, and a minute branch of the fifth pair

of nerves to the nostrils. There are two horizontal lamellæ behind the alveolar process, which, uniting together, form part of the roof of the mouth, and divide it from the nose. This partition, being seated somewhat higher than the lower edge of the alveolar process, gives the roof of the mouth a considerable hollowness. Where the ossa maxillaria are united to each other, they project somewhat forwards, leaving between them a furrow, which receives the inferior portion of the septum nasi. Each of these bones is hollow, and forms a considerable sinus under its orbitar part. This sinus, which is usually, though improperly, called *antrum Highmorianum*, is lined with the pituitory membrane. It answers the same purposes as the other sinuses of the nose, and communicates with the nostrils by an opening, which appears to be a large one in the skeleton, but which in the recent subject is much smaller. In the fœtus, instead of these sinuses, an oblong depression only is observed at each side of the nostrils, nor is the tuberosity of the alveolar process then formed. On the side of the palate, in young subjects, a kind of fissure may be noticed, which seems to separate the portion of the bone which contains the dentes incisores from that which contains the dentes canini. This fissure is sometimes apparent till the sixth year, but after that period it in general wholly disappears.

The ossa maxillaria not only serve to form the cheeks, but likewise the palate, nose, and orbits; and, besides their union with each other, they are connected with the greatest part of the bones of the face and cranium, viz. with the ossa nasi, ossa malarum, ossa unguis, ossa palati, os frontis, os sphenoides, and os ethmoides.

MAXILLARY. (*Maxillaris*; from *maxilla*, the jaw.) Appertaining to the jaw.

MAXILLARY ARTERY. *Arteria maxillaris.* A branch of the external carotid. The *external maxillary* is the fourth branch of the carotid; it proceeds anteriorly, and gives off the facial or mental, the coronary of the lips, and the angular artery. The *internal maxillary* is the next branch of the carotid; it gives off the spheno-maxillary, the inferior alveolar, and the spinous artery.

Maxillary bone, inferior. See *Maxillare inferius os.*

Maxillary bone, superior. See *Maxillare superius os.*

MAXILLARY GLAND. *Glandula maxillaris.* The gland so called is conglomerate, and situated under the angles of the lower jaw. The excretory ducts of these glands are called Warthonian, after their discoverer.

MAXILLARY NERVE. *Nervus maxillaris.* The superior and inferior maxillary nerves are branches of the fifth pair, or trigemini. The former is divided into the spheno-palatine, posterior alveolar, and the infra-orbital nerve. The latter is divided into two branches, the internal lingual, and one, more properly, called the inferior maxillary.

MAY-LILY. See *Convallaria majalis.*

MAY-WEED. See *Anthemis cotula.*

MAYERNE, SIR THEODORE TURQUET DE, BARON D'AUBONNE, was born at Geneva in 1573. In 1610 he was appointed physician to James I., and passed the remainder of his life in this country. He was admitted to the degree of doctor in both universities, and into the College of Physicians, and met with very general respect. He died in 1655, and bequeathed his library to the College of Physicians. Several papers, written by him, were published after his death; among which are the cases of many of his distinguished patients, well drawn up.

MAYOW, JOHN, was born in Cornwall in 1645, and studied at Oxford. He died in London at the age of 34. These are the only records of the life of a man who went before his age in his views of chemical physiology, and anticipated, though obscurely, some of the most remarkable discoveries in pneumatic chemistry, which have since been made. He published at Oxford, in 1669, two tracts, one on *Respiration*, the other on *Rickets*; which were reprinted five years after, with three additional dissertations, one on the *Respiration of the Fœtus in Utero et Ovo*, another on *Muscular Motion and the Animal Spirits*, and the remaining one on *Saltpetre and the Nitro-aërial Spirit*. On this latter his claim above mentioned chiefly rests, the existence of the nitro-aërial spirit being proved, by many ingenious experiments, as a constituent of air and of nitre, the food of life and flame, agreeing with the oxygene of modern chemists. Much vague speculation, indeed, occurs in the work; but he clearly maintains that this spirit is absorbed by the blood in the lungs, and proves the source of the animal heat, as also of the nervous energy and of muscular motion. He likewise anticipated the mode of operating with aërial fluids in vessels inverted over water, and transferring them from one to another.

Mays, Indian. See *Zea mays.*

MEAD. 1. The name of a physician, Dr. RICHARD, born near London in 1673. He graduated at Padua in 1695. His first publication, *A Mechanical Account of Poisons*, appeared in 1702, and displayed much ingenuity; though he afterwards candidly retracted some of his opinions, as inadequate to explain the functions of a living body. In 1704, he published a treatise, maintaining the *influence of the sun and moon on the human body*, arguing from the Newtonian theory of the tides, and the changes effected by those bodies in the atmosphere. The *plague* raging at Marseilles in 1719, he was officially consulted on the means of prevention, which led to a publication by him, in the following year, decidedly maintaining its infectious nature, which had been questioned in France, and recommending suitable precautions. This work passed rapidly through many editions. In 1721, he superintended the experiment of

inoculating the small-pox in the persons of some criminals; and his report being favourable, the practice was rapidly diffused. It was not till 20 years after, that he printed his treatise on *Small-pox and Measles*, written in a pure Latin style, with a translation in the same language of Rhaze's Commentary on the former disease. In 1749, he published a treatise on the *Scurvy*, ascribing the disease to moisture and putridity, and recommending Mr. Sutton's ventilator, which was, in consequence of his interposition, received into the navy. His *Medicina Sacra* appeared in the same year, containing remarks on the diseases mentioned in the Scriptures. His last work was a summary of his experience, entitled *Monita et Præcepta Medica*, in 1751; it was frequently reprinted, and translated into English. His life terminated in 1754; and a monument was erected to him in Westminster Abbey. He distinguished himself not only in his profession, but he was the greatest patron of science and polite literature of his time; and he made an ample collection of scarce and valuable books, manuscripts, and literary curiosities, to which all respectable persons had free access.

2. An old English liquor made from the honeycombs from which honey has been drained out, by boiling in water, and then fermenting. This is often confounded with metheglin.

MEADOW. (*Pratum, i.* n.; from πρατια, a green field.) Mostly employed by botanists as a trivial name for plants which flourish in such a situation: hence, meadow saffron, meadow-sweet, &c.

Meadow crowfoot. See *Ranunculus acris.*

Meadow, queen of the. See *Spiræa.*

Meadow saffron. See *Colchicum.*

Meadow saxifrage. See *Peucedanum.*

Meadow-sweet. See *Spiræa ulmaria.*

Meadow thistle, round leaved. See *Cnicus.*

MEASLES. See *Rubeola.*

MEASURE. (*Mensura, æ.* f.) The English measures of capacity are according to the following table:—

One gallon, wine measure, is equal to	four quarts.
One quart, - -	two pints.
One pint, - -	28·875 cubic inches.

The pint is subdivided by chemists and apothecaries into 16 ounces.

MEA'TUS. (*us, ûs.* m.) An opening which leads to a canal or duct.

Meatus auditorius externus. The external passage of the ear is lined with the common integuments, under which are a number of glands, which secrete the wax. The use of this duct is to admit the sound to the tympanum, which is at its extremity.

Meatus auditorius internus. The internal auditory passage is a small bony canal, beginning internally by a longitudinal orifice at the posterior surface of the petrous portion of the temporal bone, running towards the vestibulum and cochlea, and there being divided into two less cavities by an eminence. The superior and smaller of these is the orifice of the aqueduct of Fallopius, which receives the portio dura of the auditory nerve: the other inferior and larger cavity is perforated by many small holes, through which the portio mollis of the auditory nerve passes into the labyrinth.

Meatus cæcus. A passage in the throat to the ear, called Eustacian tube.

Meatus cuticularis. A pore of the skin.

Meatus cysticus. The gall-duct.

Meatus urinarius. In women, this is situated in the vagina, immediately below the symphysis of the pubes, and behind the nymphæ. In men, it is at the end of the glans penis.

Mecca balsam. See *Amyris gileadensis.*

MECHOACA'NNA. (From *Mechoacan*, a province in Mexico, whence it is brought.) See *Convolvulus mechoacanna.*

Mechoacanna nigra. See *Convolvulus jalapa.*

ME'CON. (From μηκος, bulk: so named from the largeness of its head.) The poppy. See *Papaver somniferum.*

MECONIC. (*Meconicus*: so called from μηκων, the poppy, from which it is procured.) The name of an acid.

Meconic acid. *Acidum meconicum.* This acid is a constituent of opium. It was discovered by Sertuerner, who procured it in the following way:— After precipitating the *morphia*, from a solution of opium, by ammonia, he added to the residual fluid a solution of the muriate of barytes. A precipitate is in this way formed, which is supposed to be a quadruple compound of barytes, morphia, extract, and the meconic acid. The extract is removed by alkohol, and the barytes by sulphuric acid, when the meconic acid is left merely in combination with a portion of the morphia; and from this it is purified by successive solutions and evaporations. The acid, when sublimed, forms long colourless needles; it has a strong affinity for the oxide of iron, so as to take it from the muriatic solution, and form with it a cherry-red precipitate. It forms a crystallisable salt with lime, which is not decomposed by sulphuric acid; and, what is curious, it seems to possess no particular power over the human body, when received into the stomach. The essential salt of opium, obtained in Derosne's original experiments, was probably the meconiate of morphia.

Robiquet has made a useful modification of the process for extracting meconic acid. He treats the opium with magnesia, to separate the morphia, while meconiate of magnesia is also formed. The magnesia is removed by adding muriate of barytes, and the barytes is afterwards separated by dilute sulphuric acid. A larger proportion of meconic acid is thus obtained.

Me'conis. (From μηκων, the poppy: so called because its juice is soporife us, like the poppy.) The lettuce.

MECO'NIUM. (*um, ii.* n.; from μηκων,

the poppy.) 1. Opium. The inspissated juice of the poppy.

2. The green excrementitious substance that is found in the large intestines of the fœtus.

MEDIAN. *Medianus.* This term is applied to vessels, &c. from their situation between others.

MEDIAN NERVE. The second branch of the brachial plexus.

MEDIAN VEIN. The situation of the veins of the arms is extremely different in different individuals. When a branch proceeds near the bend of the arm, inwardly from the basilic vein, it is termed the *basilic median*; and when a vein is given off from the cephalic in the like manner, it is termed the *cephalic median.* When these two veins are present, they mostly unite just below the bend of the arm, and the common trunk proceeds to the cephalic vein.

MEDIA'NUM. See *Mediastinum.*

MEDIASTI'NUM. (*um, i.* n.; *quasi in medio stans,* as being in the middle.) The membraneous septum, formed by the duplicature of the pleura, that divides the cavity of the chest into two parts. It is divided into an anterior and posterior portion.

MEDIASTINUM CEREBRI. The falciform process of the dura mater.

MEDIATE. *Mediatus.* A term of relation to two extremes: applied to a third which is in the middle between them. Intermediate has the same meaning.

ME'DICA. 1. (From *Media,* its native soil.) A sort of trefoil.

2. (From *medicus,* one who practises the healing art.) A midwife.

MEDICA'GO. (*o, inis.* f.; from *medica,* which is indeed the proper name of the plant—μηδικη, of Dioscorides.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria.*

2. The herb trefoil.

MEDICAL. *Medicinalis.* Appertaining to the practice of medicine.

MEDICAMENTA'RIA. (*a, æ.* f.) The art of making and preparing medicines.

MEDICAME'NTUM. (*um, i.* n.; from *medico,* to heal.) A medicine.

MEDICA'STER. (*er, ri.* m.) A pretender to the knowledge of medicine; the same as quack.

MEDICINA DIÆTETICA. That department of medicine which regards the regulation of the non-naturals, especially diet.

MEDICINA DIASOSTICA. That part of medicine which preserves health.

MEDICINA GYMNASTICA. That part of medicine which relates to exercise.

MEDICINA HERMETICA. The application of chemical remedies to the cure of diseases.

MEDICINA PROPHYLACTICA. That part of medicine which relates to preservation of health, or prevention of diseases.

MEDICINA TRISTITIÆ. Common saffron.

MEDICINAL. (*Medicinalis*; from *medicina,* medicine.) Having a power to restore health, or remove disease: hence medicinal properties, &c.

MEDICINAL DAYS. Such days were so called by some writers, wherein the crisis or change is expected, so as to forbid the use of medicines, in order to wait nature's effort, and require all the assistance of art to help forward, or prepare the humours for such a crisis: but it is most properly used for those days wherein purging, or any other evacuation, is most conveniently complied with.

MEDICINAL HOURS. Are those wherein it is supposed that medicines may be taken to the greatest advantage, commonly reckoned in the morning fasting, about an hour before dinner, about four hours after dinner, and at going to bed; but in acute cases, the times are to be governed by the symptoms and aggravation of the distemper.

MEDICINE. (*Medicina, æ.* f.; from *medico,* to heal.) 1. The medical art: applied to the profession generally, when it comprehends anatomy, physiology, and pathology.

2. That division which comprehends only the cure of diseases not surgical.

3. Any substance that is exhibited with a view to cure or allay the violence of a disease.

MEDICUS. (*us, i.* m.; from *medico,* to heal.) 1. A physician, or one who cures diseases.

2. (Adjective.) Belonging to medicine; as *materia medica,* &c.

MEDINA. A species of ulcer, mentioned by Paracelsus.

MEDINE'NSIS VENA. (*Medinensis*; so called because it is frequent at *Medina,* and improperly called *vena* for *vermis*; and sometimes *nervus medinensis,* and no one knows why.) See *Gordius medinensis.*

MEDITU'LLIUM. (From *medius,* the middle.) See *Diploë.*

ME'DIUS VENTER. The middle venter, which is the thorax, or chest.

MEDLAR. See *Mespilus.*

MEDU'LLA. (*a, æ.* f.; *quasi in medio ossis.*) 1. The marrow. See *Marrow,* and *Adeps.*

2. The pith or pulp of vegetables. The centre or heart of a vegetable within the wood. " This," says Dr. E. Smith, " in parts most endowed with life, as roots and young growing stems or branches, is a tolerably firm juicy substance, of a uniform texture, and commonly a pale green or yellowish colour. In many annual stems the petal, abundant and very juicy while they are growing, becomes little more than a web, lining the hollow of the complete stem; as in some thistles. Concerning the nature and functions of this part various opinions have been held. Du Hamel considered it as merely cellular substance, connected with what is diffused through the whole plant, combining its various parts, but not performing any remarkable office in the vegetable economy. Linnæus, on the contrary, thought it the seat of life, and source of vegetation; that its vigour was the main cause of the propulsion of the branches, and that the

seeds were more especially formed from it. This latter hypothesis is not better founded than his idea of the pith adding new layers to the wood. In fact, the pith is soon obliterated in the trunk of many trees, which, nevertheless, keep increasing for a long series of years, by layers of wood added every year from the bark, even after the heart of the tree is become hollow from decay.

Some considerations have led Sir James Smith to hold a medium opinion between these two extremes. There is in certain respects, he observes, an analogy between the medulla of plants and the nervous system of animals. It is no less assiduously protected than the spinal marrow or principal nerve. It is branched off and diffused through the plant, as nerves are through the animal: hence it is not absurd to presume that it may, in like manner, give life and vigour to the whole, though by no means, any more than nerves, the organ or source of nourishment. It is certainly most vigorous and abundant in young and growing branches, and must be supposed to be subservient, in some way or other, to their increase.

Mr. Lindsay, of Jamaica, thought he demonstrated the medulla in the leafstalk of the *Mimosa pudica*, or sensitive plant.

Knight supposes the medulla may be a reservoir of moisture, to supply the leaves whenever an excess of perspiration renders such assistance necessary: but it should be recollected that all the moisture in the medulla of a whole plant is, in some cases, too little to supply one hour's perspiration of a single leaf; and it is not found that the moisture of the medulla varies, let the leaves be ever so flaccid.

3. The white substance of the brain is called medulla, or the medullary part, to distinguish it from the cortical.

Medulla cassiæ. See *Cassia*.

Medulla oblongata. *Cerebrum elongatum*. The medullary substance that lies within the cranium, upon the basillary process of the occipital bone. It is formed by the connection of the crura cerebri and crura cerebelli, and terminates in the spinal marrow. It has several eminences, viz. pons varolii, corpora pyramidalia, and corpora olivaria. See *Cerebrum*.

Medulla spinalis. *Cerebrum elongatum*. *Æon*. The spinal marrow. A continuation of the medulla oblongata, which descends into the specus vertebralis from the foramen magnum occipitale, to the third vertebra of the loins, where it terminates in a number of nerves, which, from their resemblance, are called *cauda equina*. The spinal marrow is composed, like the brain, of a cortical and medullary substance: the former is placed internally. It is covered by a continuation of the dura mater, pia mater, and tunica arachnoidea. The use of the spinal marrow is to give off, through the lateral or intervertebral foramina, thirty pairs of nerves, called cervical, dorsal, lumbar, and sacral nerves.

MEDULLARY. (*Medullaris*; from *medulla*, marrow.) Like unto marrow.

Medullary substance. *Substantia medullaris*. The white or internal substance of the brain. See *Cerebrum*.

MEDULLIN. The name given by Dr. John to the pith of the sun-flower.

MEERSCHAUM. *Kessecil*, of Kirwan. A mineral composed of silica, magnesia, lime-water, and carbonic acid, of a yellowish and greyish white colour, and greasy feel, and soft when first dry. It lathers like soap, and is used by the Tartars for washing. In Turkey they make tobacco pipes from meerschaum, dug in Natolia and near Thebes.

MEGALOSPLA'NCHNUS. (From μεγας, great, and σπλαγχνον, a bowel.) Big-bowel. An enlargement of any of the abdominal viscera.

ME'GRIM. A species of headache, generally affecting one side, towards the eye, or temple.

MEIBOMIUS, Henry, was born at Lubeck in 1638. He published several works, and commentaries on those of others. That which chiefly illustrates his name is entitled, *De Vasis Palpebrarum novis*, printed in 1666.

Meibomius's glands. *Meibomii glandulæ*. The small glands which are situated between the conjunctive membrane of the eye and the cartilage of the eyelid, first described by Meibomius.

MEIONITE. Prismatico-pyramidal felspar. This mineral occurs along with ceylanite, and nepheline, in granular limestone, at Monte Somma, near Naples.

MEL. (*Mel, mellis*. n.) Honey. A substance collected by bees from the nectary of flowers, resembling sugar in its elementary properties. See *Apis mellifica*. It has a white or yellowish colour, a soft and grained consistence, and a saccharine and aromatic smell. It is supposed to consist of sugar, mucilage, and an acid. Honey is an excellent food, and a softening and slightly aperient remedy: mixed with vinegar, it forms *oxymel*, and is used in various forms in medicine and pharmacy. It is particularly recommended to the asthmatic, and those subject to gravel complaints, from its detergent nature. Founded upon the popular opinion of honey, as a pectoral remedy, Dr. Hill's balsam of honey, a quack medicine, was once in demand; but this, besides honey, contained balsam of Tolu, or gum benjamin, in solution.

Mel acetatum. See *Oxymel*.

Mel boracis. Honey of borax.—Take of borax, powdered, a drachm; clarified honey, an ounce. Mix. This preparation is found very useful in aphthous affections of the fauces.

Mel despumatum. Clarified honey, which is directed to be made by melting honey in a water-bath, and then removing the scum.

Mel rosæ. Rose honey.—Take of red-rose petals, dried, four ounces; boiling water, three pints; clarified honey, five pounds. Macerate the rose petals in the water for six hours, and strain; then add the honey to the

strained liquor, and, by means of a water-bath, boil it down to a proper consistence. An admirable preparation for the base of various gargles and collutories. It may also be employed with advantage, mixed with extract of bark, or other medicines, for children who have a natural disgust to medicines.

Mel scillæ. See *Oxymel scillæ.*

Me'la. (From μαω, to search.) A probe.

MELÆ'NA. (*a, æ.* f.; from μελας, black.) Μελαινα νουσος, of the Greeks. The black vomit. The black disease. The disease, so called by Hippocrates, consists in the vomiting of a concrete blood of a blackish red colour, and mixed with a large quantity of insipid acid, or viscid phlegm. This evacuation is generally preceded by a pungent tensive pain, in both the hypochondria; and the appearance of the disease is attended with anxiety, a compressive pain in the præcordia, and fainting, which last is more frequent and violent when the blood which is evacuated is fœtid and corrupt.

Melæna cholæa. The black jaundice.

Melæna cruenta. The black vomit.

MELALEU'CA. (*a, æ.* f.; from μελας, black, and λευκος, white: so named by Linnæus, because the principal, and indeed original, species was called *leucadendron,* and *arbor alba;* words synonymous with its appellation in the Malay tongue, *Caja-puti,* or white tree: but it is not known why the idea of black was associated with white.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Icosandria.*

Melaleuca leucadendron. The systematic name of the plant which is said to afford the cajeput oil, *oleum cajeputæ, oleum Wittnebianum, oleum volatile melaleucæ, oleum cajeput.* Thunberg says cajeput oil has the appearance of inflammable spirit, is of a green colour, and so completely volatile, that it evaporates entirely, leaving no residuum; its odour is of the camphoraceous kind, with a terebinthinate admixture. Goetz says it is limpid, or rather yellowish. It is a very powerful medicine, and in high esteem in India and Germany, in the character of a general remedy in chronic and painful diseases: it is used for the same purposes for which we employ the officinal æthers, to which it seems to have a considerable affinity: the cajeput, however, is more potent and pungent: taken into the stomach, in the dose of five or six drops, it heats and stimulates the whole system, proving, at the same time, a very certain diaphoretic, by which, probably, the good effects it is said to have in dropsies and intermittent fevers are to be explained. For its efficacy in various convulsive and spasmodic complaints, it is highly esteemed. It has also been used, both internally and externally, with much advantage in several other obstinate disorders; as palsies, hypochondriacal and hysterical affections, deafness, defective vision, toothache, gout, rheumatism, &c. The dose is from two to six, or even twelve drops. The tree which affords this oil, by distillation of its leaves, generally was supposed to be the *Melaleuca leucadendron* of Linnæus, but it appears from the specimens of the tree producing the true oil, sent home from India, by Christopher Smith, that it is another species, which is therefore named *Melaleuca cajaputi.*

MELAMEMA. (*a, atis.* n.; from μελας, black, and αιμα, blood.) A term applied to blood when it is of a morbidly dark colour.

MELAMPHY'LLUM. (*um, i.* n.; from μελας, black, and φυλλον, a leaf: so named from the blackness of its leaf.) *Melamphyllon.* See *Acanthus mollis.*

MELAMPO'DIUM. (*um, ii.* n.; from *Melampus,* the shepherd who first used it.) See *Helleborus niger.*

MELANAGO'GUS. (From μελας, black, and αγω, to expel.) That which purges off black bile.

Melanchlo'rus. Μελαγχλωρος. 1. A livid colour of the skin.

2. The black jaundice.

MELANCHO'LIA. (*a, æ.* f.; from μελας, black, and χολη, bile: because the ancients supposed that it proceeded from a redundance of black bile.) Melancholy. A disease characterised by erroneous judgment, but not merely respecting health, from imaginary perceptions, or recollection influencing the conduct and depressing the mind with ill-grounded fears; not combined with either fever or comatose affections; often appearing without dyspepsia, yet attended with costiveness, chiefly in persons of rigid fibres and torpid insensibility. See *Mania.*

MELANE. (*Melanus;* from μελας, black.) Black.

MELANITE. A velvet-black coloured mineral, in roundish or crystallised grains, found in a rock at Frascate, near Rome.

MELANO'MA. (*a, atis.* n.; from μελας, black.) *Melanosis.* A rare disease which is found under the common integuments, and in the viscera, in the form of a tubercle, of a dark soot-black colour.

MELANO'PIPER. (*er, eris.* n.; from μελας, black, and πεπερι, pepper.) See *Piper nigrum.*

MELANORRHI'ZON. (*um, i.* n.; from μελας, black, and ριζα, a root.) A black root: applied to a species of hellebore with black roots. See *Helleborus niger.*

MELANO'SIS. See *Melanoma.*

Melante'ria. (From μελας, black: so called because it is used for blacking leather.) Green vitriol, or sulphate of iron.

MELANTHELÆ'UM. (From μελανθιον, the name of a plant, and ελαιον, oil.) Oil expressed from the seeds of the *Nigella sativa.*

MELA'NTHIUM. (From μελας, black, and ανθος, a flower, so named from its black seed.) See *Nigella sativa.*

ME'LAS. (*as, anos.* n.; from μελας, black.) *Vitiligo nigra. Morphæa nigra. Lepra maculosa nigra.* A disease that appears upon the skin in black or brown spots, which very frequently penetrate deep, even to the bone,

and do not give any pain, or uneasiness. It is a disease very frequent in, and endemial to, Arabia, where it is supposed to be produced by a peculiar miasma.

MELA'SMA. (From μελας, black.) *Melasmus.* A disease that appears not unfrequently upon the tibia of aged persons, in form of a livid black spot, which, in a day or two, degenerates into a very foul ulcer.

MELASPE'RMUM. (*um, i.* n.; from μελας, black, and σπερμα, seed.) See *Nigella sativa.*

MELASSIC. (*Melassicus;* from *melasses,* a name of treacle.) Appertaining to treacle.

MELASSIC ACID. *Acidum melassicum.* The name of the acid that is present in treacle, which is by most believed to be the acetic.

ME'LCA. (From αμελγω, to milk.) Milk. A food made of acidulated milk.

ME'LE. (*e, es.* f.; from μαω, to search after: because by it we search for the direction, extent, &c. of wounds.) A probe.

MELEA'GRIS. (*is, idis.* f.; from *Meleager,* whose sisters were fabled to have been turned into this bird.) A genus of birds of the order *Gallinæ.* 1. The guinea-fowl.

2. A species of *fritillaria:* so called because its flowers are spotted like a guinea-fowl.

MELEAGRIS GALLIPOVA. The turkey.

MELEGE'TA. *Meleguetta.* Grains of paradise. See *Amomum granum paradisi.*

MELEI'OS. (From *Melos,* the island where it is made.) A species of alum.

MELI. Μελι. Honey. See *Mel.*

MELICE'RIA. See *Meliceris.*

MELI'CERIS. (*is, idis.* f.; from μελι, honey, and κερος, wax.) *Meliceria.* An encysted tumour, the contents of which resemble honey in consistence and appearance.

MELICHRONE. (*Melichronus;* from μελι, honey, and χρωμα, colour.) Honey-coloured.

MELI'CRATON. (*um, i.* n.; from μελι, honey, and κεραννυμι, to mix.) Wine impregnated with honey.

MELIGEI'ON. (From μελι, honey.) A fœtid humour, discharged from ulcers attended with a caries of the bone, of the consistence of honey.

MELILOT. See *Melilotus.*

MELILO'TUS. (*us, i.* f.; from μελι, honey, and λωτος, the lotus: so called from its smell, being like that of honey.) *Melilotos.* See *Trifolium melilotus officinalis.*

MELIME'LUM. (From μελι, honey, and μηλον, an apple: so named from its sweetness.) Paradise apple, the produce of a dwarf wild apple-tree.

MELI'NUM. (From μηλον, an apple.) Oil made from the flowers or the fruit of the apple-tree.

MELIPHY'LLUM. (*um, i.* n.; from μελι, honey, and φυλλον, a leaf: so called from the sweet smell of its leaf, or because bees gather honey from it.) See *Melissa.*

MELI'SSA. (*a, æ.* f.; from μελισσα, a bee; because bees gather honey from it.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.* Balm.

MELISSA CALAMINTHA. The systematic name of the common calamint. *Calamintha. Calamintha vulgaris, Calcimintha officinarum. Melissa — pedunculis axillaribus, dichotomis, longitudine foliorum,* of Linnæus. This plant smells strongly like wild mint, though more agreeable; and is often used by the common people, in form of tea, against weakness of the stomach, flatulent colic, uterine obstructions, hysteria, &c.

MELISSA CITRINA. See *Melissa officinalis.*

MELISSA GRANDIFLORA. The systematic name of the mountain calamint. *Calamintha magno flore. Calamintha montana.* This plant has a moderately pungent taste, and a more agreeable aromatic smell than the common calamint, and appears to be more eligible as a stomachic.

MELISSA NEPETA. Field calamint. Spotted calamint. *Calamintha anglica. Calamintha pulegii odore. Nepeta agrestis.* It was formerly used as an aromatic.

MELISSA OFFICINALIS. The systematic name of balm. *Citrago. Citraria. Melissophyllum. Mellitis. Cedronella. Apiastrum. Melissa citrina. Erotion.* A native of the southern parts of Europe, but very common in our gardens. In its recent state, it has a roughish aromatic taste, and a pleasant smell of the lemon kind. It was formerly much esteemed in nervous diseases, and very generally recommended in melancholic and hypochondriacal affections; but, in modern practice, it is only employed when prepared as tea, as a grateful diluent drink in fevers, &c.

MELISSA TURCICA. See *Dracocephalum.*

MELISSOPHY'LLUM. (*um, i.* n.; from μελισσα, baum, and φυλλον, a leaf.) A species of melittis, with leaves resembling baum. See *Melittis melissophyllum.*

MELITI'SMUS. (From μελι, honey.) A linctus, prepared with honey.

MELI'TTIS. (*is, is.* f.; from μελιττα, which, in the Attic dialect, is the name of a bee; so that this word is, in fact, equivalent to *Melissa,* and was adopted by Linnæus, therefore, for the bastard balm.) The name of a genus of plants. Class, *Didynamia;* Order, *Gymnospermia.* Bastard balm.

MELITTIS MELISSOPHYLLUM. The systematic name of the mountain balm, or nettle. *Sophyllum.* This elegant plant is seldom used in the present day: it is said to be of service in uterine obstructions and calculous diseases.

MELITTO'MA. (From μελι, honey.) A confection made with honey. Honey-dew.

MELIZO'MUM. (*um, i.* n.; from μελι, honey, and ζωμος, broth.) Honey-broth. A drink prepared with honey, like mead.

MELLA'GO. (*o, inis.* f.; from *mel,* honey.) Any medicine which has the consistence and sweetness of honey.

MELLATE. *Mellas.* A compound of mellitic acid with salifiable bases.

Melliceris. See *Melicceris.*

Mellilo'tus. See *Melilotus.*

MELLI'NA. (*a, æ.* f.; from *mel*, honey.) Mead. A sweet drink prepared with honey.

MELLITE. Mellilite. Honey-stone. A mineral of a honey yellow colour, slightly resino-electric by friction, hitherto found only at Artern in Teuringia.

MELLITIC. (*Melliticus;* from *mellite*, the honey-stone, from which it is obtained.) Of or belonging to the mellite, or honey-stone, or to honey.

Mellitic acid. *Acidum melliticum.* Klaproth discovered in the mellilite, or honey-stone, what he conceives to be a peculiar acid of the vegetable kind, combined with alumina. This acid is easily obtained by reducing the stone to powder, and boiling it in about seventy times its weight of water, when the acid will dissolve, and may be separated from the alumina by filtration.

MELLI'TUS. (From *mel*, honey.) A preparation of honey.

ME'LO. (*o, onis.* m.; *ά μηλον*, an apple, which it resembles.) 1. See *Cucumis melo.*

2. A disorder of the eye, in which the ball of the eye is pressed forward from the socket.

MELOCA'RPUS. (From *μηλον*, an apple, and *καρπος*, fruit; from its resemblance to an apple.) The fruit of the aristolochia, or its roots.

ME'LOE. The name of a genus of the order *Coleoptera.* The blossom-eater. Some of its species were formerly used medicinally.

Meloe vesicatorius. See *Cantharis.*

MELON. See *Cucumis melo.*

Melon, musk. See *Cucumis melo.*

Melon, water. See *Cucurbita citrullus.*

MELO'NGENA. (*a, æ.* f.) *Mala insana. Solanum pomiferum.*) Mad apple. The Spaniards and Italians eat it in sauce and in sweetmeats. The taste somewhat resembles citron. See *Solanum melongena.*

MELO'SIS. (Μηλωσις; from *μηλη*, a probe.) A term which frequently occurs in Hippocrates, De Capitis Vulneribus, for that search into wounds which is made by surgeons with the probe.

Melo'tis. Μηλωτις. A little probe, and that particular instrument contrived to search or cleanse the ear with, commonly called *Auriscalpium.*

MELO'THRIA. (*a, æ.* f.; borrowed by Linnæus, in his *Hortus Cliffortianus*, from the *μηλωθρον*, of Dioscorides.) The name of a genus of plants. Class, *Triandria;* Order, *Monogynia.*

Melothria pendula. The systematic name of the small creeping cucumber plant. The American bryony. The inhabitants of the West Indies pickle the berries of this plant, and use them as we do capers.

MEMBRA'NA. See *Membrane.*

Membrana adiposa. See *Adipose membrane.*

Membrana arachnoidea. See *Arachnoid membrane.*

Membrana cellulosa. See *Membrane.*

Membrana hyaloidea. The transparent membrane which includes the vitreous humour of the eye.

Membrana pinguldinosa. See *Adipose membrane.*

Membrana pupillaris. *Velum pupillæ.* A very delicate membrane of a thin and vascular texture, and an ash colour, arising from the internal margin of the iris, and totally covering the pupil in the fœtus before the sixth month.

Membrana reticularis. See *Membrane.*

Membrana ruyschiana. The celebrated anatomist Ruysch discovered that the choroid membrane of the eye was composed of two laminæ. He gave the name of Ruyschiana to the internal lamina, leaving the old name of choroides to the external.

Membrana schneideriana. The vascular membrane which lines the nose and its cavities, secretes the mucus of that cavity, and is the bed of the olfactory nerves.

Membrana tympani. The membrane covering the cavity of the drum of the ear, and separating it from the meatus auditorius externus. It is of an oval form, convex below the middle, towards the hollow of the tympanum, and concave towards the meatus auditorius, and convex above the meatus, and concave towards the hollow of the tympanum. According to the observations of anatomists, it consists of six laminæ: the first, and most external, is a production of the epidermis; the second is a production of the skin lining the auditory passage; the third is cellular membrane, in which the vessels form an elegant network; the fourth is shining, thin, and transparent, arising from the periosteum of the meatus; the fifth is cellular membrane, with a plexus of vessels like the third; and the sixth lamina, which is the innermost, comes from the periosteum of the cavity of the tympanum. This membrane, thus composed of several laminæ, has lately been discovered to possess muscular fibres.

MEMBRANA'CEUS. (From *membrana*, a membrane.) Membranaceous. A term in very general use in *Anatomy* and *Botany;* applied to ligaments, tunics, &c. and to leaves, pods, &c. of a thin and pliable texture; as the leaf of the *Magnolia purpurea.*

MEMBRANE. (*Membrana, æ.* f.; *quod membra tegat:* because it covers the limbs.) I. In *Anatomy*, a thin expanded substance, composed of cellular texture, the elastic fibres of which are so arranged and woven together, as to allow of great pliability. The membranes of the body are various; as the skin, peritonæum, pleura, dura mater, &c. &c.

Membrane is the most simple in its structure of any of the organised parts of the body: it is the most extensively diffused, and exists in the greatest proportion. The coverings, not only of the body at large, but of each of its individual parts, both external and internal, are principally composed of membrane, and it lines all the cavities in which the different organs are situated. It constitutes the main bulk of the bones, and determines their

figure, the earthy matter, upon which their strength and hardness depend, being deposited in a tissue of membraneous cells. Membrane also enters into the structure of muscles, not only affording them an external sheath, in which they are each of them enclosed, but the same matter is also interposed between their fibres, separating them into bundles, to which it, in like manner, affords a distinct covering, and these into still smaller bundles, until it appears at length to envelope each individual fibre. The membraneous matter composes very nearly the whole bulk of the tendons by which the muscles are attached to the bones; of the ligaments by which the bones and other solid parts are connected to each other; and of the cartilages which form the basis of many parts of the body, supplying the place of bone, and which also cover the ends of the bones, and assist in the formation of the joints. It also enters very largely into the composition of the hair, the nails, and other similar parts connected with the surface. It likewise composes what is called the cellular texture, a series of cells or interstices, which extends over a great portion of the body, fills up its intervals, and serves to unite the different parts to each other. Membraneous matter is the chief ingredient in the glands, both those which are attached to the absorbent system, and those which are appropriated to the office of secretion. The brain is also enveloped in a covering of membrane; and it is probable that the nerves are composed of a series of fibres enclosed in membraneous sheaths, analogous to those of the muscles. The pouches or sacs, which are found in different parts of the body, such as the stomach and bladder, are almost entirely composed of membrane; and, what perhaps must be regarded as the most important of all the purposes which it serves, this substance composes the principal part of the tubes or vessels with which the animal body is so plentifully furnished.

From this account of the extent and distribution of membrane, we find that it must exceed in quantity all the other solids of the body taken together, and that it enters as a principal ingredient into almost every part of the animal frame; the enamel of the teeth being, as we are informed, the only solid in which it cannot be detected. This is, indeed, so completely the case, that were it possible to remove the earth of the bones, the muscular fibre, the nervous matter, and the fat from the soft parts, to empty the vessels, and to carry off the fluids generally, the size and figure of the body would remain nearly unchanged. Membrane may, therefore, be considered as the connecting medium between the different parts of the body by which they are held together, the basis to which they are all attached, and the mould in which the particles of the other kinds of matter are deposited.

The mechanical structure of membrane, as it exists in the different parts of the body, has been minutely examined by various anatomists, and was particularly attended to by Haller. He described it as composed of a vast assemblage of lines or fibres, in their state of ultimate division too small to be perceived by the eye, but which, by the union of a sufficient number of them, are formed either into visible fibres, or into plates, according to the structure of the parts in which they are situated. He was at much pains to detect this fibrous structure in all the organs of the body, and to show that the membranes, however differing in their apparent structure, or whatever degree of firmness they possessed, were all resolvable into the same substance. This he calls *tela cellulosa*, or cellular web; and although his idea of its structure may not be entirely correct, yet he made considerable advances upon the knowledge of his predecessors. All the solid parts of the body, he supposes, by mechanical division or by maceration in water, may be made to assume the fibrous appearance. In its most simple state, the fibre is to be regarded as a straight line; and by the approximation of these lines, in different directions with respect to each other, all the various forms are produced that enter into the composition of the animal body. He further conceives that the greatest part of the solids, in their primary state of aggregation, compose plates with interstices between them, and that the most compact membraneous body consists of this texture in a condensed state.

Properties. — The properties which more especially belong to membrane, are, cohesion, flexibility, extensibility, and elasticity.

From all the observations of physiologists it appears that membrane has a perfect organisation, although one which is more simple than that of some other parts of the body, as being possessed of fewer powers, and made up of fewer component parts. Some writers seem to regard organisation as necessarily connected with contractility and sensibility; and to consider those parts which are neither contractile nor sensitive as inorganic.

Species 1. *Cellular texture.*—This is the most extensively diffused, and is that which has been conceived to form the basis of all the rest, or to constitute, as it were, the original structure, from which the others have all been produced.

2. Another species are those that are especially denominated *membranes*, to which the generic term was originally applied. They consist of thin semitransparent sheets or plates, which generally form the coats or coverings of some other parts, and which differ from the cellular texture in the greater continuity of their structure. These proper membranes are arranged by Bichât, in an elaborate publication, into, —

a. The *mucous*, so named from the peculiar semifluid substance with which their surface is covered, proceeding from numerous small glands which are imbedded in them. This kind of membrane always lines those cavities which are disposed in the form of irregular pas-

sages or canals, that open into the atmosphere; and are connected with the skin at their extremities.

b. The *serous*, which differ materially from the mucous in their seat, their texture, and their properties. They are always found in close cavities that do not communicate with the atmosphere, as those of the thorax and abdomen. They form coats for most of the individual organs which are essential to the animal economy, as the heart, the lungs, and the abdominal viscera. In their texture they are dense, smooth, and compact, comparatively thin, but of considerable strength in proportion to their bulk. No glandular apparatus has been detected in them, on which account the fluid found on their surface has been ascribed to secretion from extremities of arteries, or a kind or infiltration.

c. The *fibrous membranes*. These are named from their obvious texture, as consisting of a visible assemblage of fibres, united into a continuous extended surface. They differ from both the former kinds in not being moistened by any fluid; but in their general aspect they are more similar to the serous, being dense, thin, and smooth. Among the most important of these are the periosteum, which surrounds the bones; the dura mater, which lines the skull; the aponeuroses, those membraneous expansions which surround certain muscles; the capsules of joints, and the sheaths of tendons.

II. In *Botany*. See *Testa*.

MEMBRANEOUS. (*Membranosus*; from *membrana*.) Of the nature of membrane.

MEMBRANO'LOGY. (*Membranologia*, *æ*. f.; from *membrana*, a membrane, and λογος, a discourse.) That which relates to the common integuments and membranes.

MEMBRANO'SUS. See *Tensor vaginæ femoris*.

MEMBRA'NUS. See *Tensor vaginæ femoris*.

MEMO'RIÆ OS. See *Occipital bone*.

MEMORY. *Memoria*. The brain is not only capable of perceiving sensations, but it possesses the faculty of reproducing those it has already perceived. This cerebral action is called remembrance, when the ideas are reproduced which have not been long received: it is called recollection, when the ideas are of an older date. An old man who recalls the events of his youth, has recollection; he who recalls the sensations which he had last year, has memory, or remembrance.

In childhood and youth memory is very vivid as well as sensibility: it is, therefore, at this age that the greatest variety of knowledge is acquired, particularly that sort which does not require much reflection; such as history, languages, the descriptive science, &c. Memory afterwards weakens along with age: in adult age it diminishes; in old age it fails almost completely. There are, however, individuals who preserve their memory to a very advanced age; but if this does not depend on great exercise, as happens with actors, it exists often only to the detriment of the other intellectual faculties.

The sensations are recalled with ease in proportion as they are vivid. The remembrance of internal sensations is almost always confused. Certain diseases of the brain destroy the memory entirely.

MENACHANITE. A mineral of a greyish black colour, found accompanied with fine quartz sand in the bed of a rivulet, which enters the valley of Manaccan, in Cornwall.

MENAGOGUE. See *Emmenagogue*.

MENDO'SUS. (From *mendax*, counterfeit.) This term is used, by some, in the same sense as spurious, or illegitimate; *Mendosæ costæ*, false or spurious ribs; *Mendosa sutura*, the squamous or bastard suture of the skull.

MENILITE. A subspecies of indivisible quartz. It is of two kinds, the brown and the grey.

MENINGO'PHYLAX. (From μηνιγξ, a membrane, and φυλασσω, to guard.) An instrument to guard the membranes of the brain, while the bone is cut, or rasped, after the operation of the trepan.

ME'NINX. (*x*, *gis*. f.; from μενο, to remain.) Before the time of Galen, meninx was the common term of all the membranes of the body; afterwards it was appropriated to those of the brain. See *Dura* and *Pia mater*.

MENISPERMIC. (*Menispermicus*; from *menispermum*, the name of the plant.) The name of an acid.

MENISPERMIC ACID. *Acidum menispermicum*. The seeds of *Menispermum cocculus* being macerated for twenty-four hours in five times their weight of water, first cold, and then boiling hot, yield an infusion, from which solution of subacetate of lead throws down a menispermate of lead. This is to be washed and drained, diffused through water, and decomposed by a current of sulphuretted hydrogene gas. The liquid, thus freed from lead, is to be deprived of sulphuretted hydrogene by heat, and then forms solution of menispermic acid. By repeated evaporations and solutions in alkohol, it loses its bitter taste, and becomes a purer acid. It occasions no precipitate with lime-water; with nitrate of barytes it yields a grey precipitate; with nitrate of silver, a deep yellow; and with sulphate of magnesia, a copious precipitate.

MENISPE'RMUM. (*um*, *i*. n.; from μηνη, the moon, and σπερμα, seed, in allusion to the crescent-like form of the seed.) The name of a genus of plants. Class, *Diœcia*; Order, *Dodecandria*. Moon-seed.

MENISPERMUM COCCULUS. The name of the plant, the berries of which are well known by the name of *Cocculus indicus*. Indian berries, or Indian cockles. *Coccus indicus*. *Cocculæ officinarium*. *Cocci orientales*. The berry, the produce of the *Menispermum*—*foliis cordatis, retusis, mucronatis; caule lacero*, of Linnæus, is rugous and kidney-shaped, and contains a white nucleus. It is brought from Malabar and the East Indies. It is poisonous if swallowed, bringing on nausea, fainting, and convulsions. The berries possess an in-

ebriating quality, and are supposed to impart that power to most of the London porter. Whilst green, they are used by the Indians to catch fish, which they have the power of intoxicating, and killing. In the same manner they catch birds, making the berry into a paste, forming it into small seeds, and putting these in places where they frequent. A peculiar acid, called *menispermic*, is obtained from these berries.

By recent chemical analysis, this seed is found to contain, 1st, about one half of its weight of a concrete fixed oil; 2d, an albuminous vegeto-animal substance; 3d, a peculiar colouring matter; 4th, one fiftieth of *picrotoxia*; 5th, one half its weight of fibrous matter; 6th, bimalate of lime and potash; 7th, sulphate of potash; 8th, muriate of potash; 9th, phosphate of lime; 10th, a little iron and silica. It is poisonous, and is frequently employed to intoxicate or poison fishes. The deleterious ingredient is the picrotoxia. See *Picrotoxia.*

MENORRHA'GIA. (*a, æ.* f.; from μηνια, the menses, and ρηγνυμι, to break out.) *Hæmorrhagia uterina.* Flooding. An immoderate flow of the menses or blood from the uterus, characterised by pains in the back, loins, and belly, similar to those of labour, attended with a preternatural flux of blood from the vagina, or a discharge of menses, more copious than natural. Dr. Cullen distinguishes six species: —

1. *Menorrhagia rubra;* bloody, from women neither with child nor in childbirth.

2. *Menorrhagia alba,* serous; usually called the fluor albus. See *Leucorrhœa.*

3. *Menorrhagia vitorium,* from some local disease; as ulcer, cancer, &c.

4. *Menorrhagia lochialis,* from women after delivery. See *Lochia.*

5. *Menorrhagia abortus.* See *Abortion.*

6. *Menorrhagia nabothi,* a serous discharge from the vagina in pregnant women.

This disease seldom occurs before the age of puberty, and is often an attendant on pregnancy. It is in general a very dangerous disease, more particularly if it occur at the latter period, as it is then often so rapid and violent as to destroy the female in a very short time, where proper means are not soon adopted. Abortions often give rise to floodings, and at any period of pregnancy, but more usually before the fifth month than at any other time. Moles, in consequence of an imperfect conception becoming detached, often give rise to a considerable degree of hæmorrhage.

The causes which most frequently give rise to floodings, are violent exertions of strength, sudden surprises and frights, violent fits of passion, great uneasiness of mind, uncommon longings during pregnancy, over-fulness of blood, profuse evacuations, general weakness of the system, external injuries, as blows and bruises, and the death of the child, in consequence of which the placenta becomes partially or wholly detached from the uterus, leaving the mouths of the vessels of the latter, which anastomosed with those of the former, perfectly open. It is necessary to distinguish between an approaching miscarriage and a common flooding, which may be readily done by enquiring whether or not the hæmorrhage has proceeded from any evident cause, and whether it flows gently, or is accompanied with unusual pains. The former usually arises from some fright, surprise, or accident, and does not flow gently and regularly; but bursts out of a sudden, and again stops all at once, and also is attended with severe pains in the back and the bottom of the belly; whereas the latter is marked with no such occurrence. The further a woman is advanced in pregnancy, the greater will be the danger if floodings take place, as the mouths of the vessels are much enlarged during the last stage of pregnancy, and of course a quantity will be discharged in a short time.

The treatment must differ according to the particular causes of the disease, and according to the different states of constitution under which it occurs. The hæmorrhage is more frequently of the active kind, and requires the antiphlogistic plan to be strictly enforced, especially obviating the accumulation of heat in every way, giving cold acidulated drink, and using cold local applications; the patient must remain quiet in the horizontal posture; the diet be of the lightest and least stimulant description; and the bowels kept freely open by cooling laxatives, as the neutral salts, &c. It may be sometimes advisable in robust, plethoric females, particularly in the pregnant state, to take blood at an early period, especially where there is much pain, with a hard pulse; digitalis and antimonials in nauseating doses would also be proper under such circumstances. But where the discharge is rather of a passive character, tonic and astringent medicines ought to be given: rest and the horizontal position are equally necessary, costiveness must be obviated, and cold astringent applications may be materially useful, or the escape of the blood may be prevented mechanically. In alarming cases, perhaps, the most powerful internal remedy is the superacetate of lead, combined with opium; which latter is often indicated by the irritable state of the patient. A nourishing diet, with gentle exercise in a carriage, and the prudent use of the cold bath, may contribute to restore the patient, when the discharge has subsided.

MENS. (*s, tis.* f.; from μενος, *animus.*) See *Mind.*

ME'NSA. The second lobe of the liver was so called by the ancients.

ME'NSES. (From *mensis,* a month.) See *Menstruation.*

Menses, immoderate flow of the. See *Menorrhagia.*

Menses, interruption of. See *Amenorrhœa.*

Menses, retention of. See *Amenorrhœa.*

MENSIS PHILOSOPHICUS. A philosophical, or chemical month. According to some, it is three days and nights; others say it is ten;

and there are who reckon it to be thirty or forty days.

MENSTRUATION. (*Menstruatio*, *onis*. f.; from *menses*.) From the uterus of every healthy woman who is not pregnant, or who does not give suck, there is a discharge of a red fluid, at certain periods, from the time of puberty to the approach of old age; and from the periods or returns of this discharge being monthly, it is called *menstruation*; and the discharge is called *catamenia*, and *menses*. There are several exceptions to this definition. It is said that some women never menstruate; some menstruate while they continue to give suck; and others are said to menstruate during pregnancy; some are said to menstruate in early infancy, and others in old age; but such discharges, Dr. Denman is of opinion, may with more propriety be called morbid, or symptomatic; and certainly the definition is generally true.

At whatever time of life this discharge comes on, a woman is said to be at puberty, though of this state it is a consequence, and not a cause. The early or late appearance of the menses may depend upon the climate, the constitution, the delicacy or hardness of living, and upon the manners of those with whom young women converse. In Greece, and other hot countries, girls begin to menstruate at eight, nine, and ten years of age, but, advancing to the northern climates, there is a gradual protraction of the time till we come to Lapland, where women do not menstruate till they arrive at maturer age, and then in small quantities, at long intervals, and sometimes only in the summer. But, if they do not menstruate according to the genius of the country, it is said they suffer equal inconveniences as in warmer climates, where the quantity discharged is much greater, and the periods shorter. In this country, girls begin to menstruate from the fourteenth to the eighteenth year of their age, and sometimes at a later period, without any signs of disease; but if they are luxuriously educated, sleeping upon down beds, and sitting in hot rooms, menstruation usually commences at a more early period.

Many changes in the constitution and appearance of women are produced at the time of their first beginning to menstruate. Their complexion is improved, their countenance is more expressive and animated, their attitudes graceful, and their conversation more intelligent and agreeable; the tone of their voice becomes more harmonious, their whole frame, but particularly their breasts, are expanded and enlarged, and their minds are no longer engaged in childish pursuits and amusements.

Some girls begin to menstruate without any preceding indisposition; but there are generally appearances or symptoms which indicate the change which is about to take place. These are usually more severe at the first than in the succeeding periods; and they are similar to those produced by uterine irritation from other causes, as pains in the back and inferior extremities, complaints of the viscera, with various hysteric and nervous affections. These commence with the first disposition to menstruate, and continue till the discharge comes on, when they abate, or disappear, returning, however, with considerable violence in some women, at every period during life. The quantity of fluid discharged at each evacuation, depends upon the climate, constitution, and manner of living; but it varies in different women in the same climate, or in the same woman at different periods: in this country it amounts to about five or six ounces.

There is also a great difference in the time required for the completion of each period of menstruation. In some women the discharge returns precisely to a day, or an hour, and in others there is a variation of several days, without inconvenience. In some it is finished in a few hours, and in others it continues from one to ten days; but the intermediate time, from three to six days, is most usual. Many have questioned whether this discharge arose from a mere rupture of vessels, or whether it was owing to a secretory action. There can be little doubt of the truth of the latter. The secretory organ is composed of the arterial vessels situated in the fundus of the uterus. The dissection of women, who have died during the time of their menstruating, proves this. Sometimes, though very rarely, women, during pregnancy, menstruate, and, when this happens, the discharge takes place from the arterial vessels of the vagina. During pregnancy and lactation, when the person is in good health, the catamenia, for the most part, cease to flow. The quantity a female menstruates at each time is very various, depending on climate, and a variety of other circumstances. It is commonly in England from five to six ounces; it rarely exceeds eight. Its duration is from three to four, and sometimes, though rarely, five days. With respect to the nature of the discharge, it differs very much from pure blood: it never coagulates; but is sometimes grumous, and membranes like the decidua are formed in difficult menstruations: in some women it always smells rank and peculiar; in others it is inodorous. The use of this monthly secretion is said to be, to render the uterus fit for the conception and nutrition of the fœtus; therefore girls rarely conceive before the catamenia appear, and women rarely after their entire cessation; but very easily soon after menstruation.

There has been an opinion, probably derived from the Jewish legislature, afterwards adopted by the Arabian physicians, and credited in other countries, that the menstruous blood possessed some peculiar malignant properties. The severe regulations which have been made in some countries for the conduct of women at the time of menstruation;—the expression used, Isaiah, chap. xxx., and in Ezekiel;—the disposal of the blood discharged, or of any thing contaminated with it;—the complaints of women attributed to

its retention;—and the effects enumerated by grave writers, indicate the most dreadful apprehensions of its baneful influence. Under peculiar circumstances of health, or states of the uterus, or in hot climates, if the evacuation be slowly made, the menstruous blood may become more acrimonious or offensive than the common mass, or any other secretion from it; but in this country and age no malignity is suspected: the menstruous woman mixes in society as at all other times, and there is no reason for thinking otherwise than that this discharge is of the most inoffensive nature.

At the approach of old age, women cease to menstruate; but the time of cessation is commonly regulated by the original early or late appearance of the menses. With those who began to menstruate at ten or twelve years of age, the discharge will often cease before they arrive at forty; but if the first appearance was protracted to sixteen or eighteen years of age, independently of disease, such women may continue to menstruate till they have passed the fiftieth, or even approach the sixtieth year of their age. But the most frequent time of the cessation of the menses in this country, is between the forty-fourth and forty-eighth year; after which women never bear children. By this constitutional regulation of the menses, the propagation of the species is in every country confined to the most vigorous part of life; and, had it been otherwise, children might have become parents, and old women might have had children, when they were unable to supply them with proper or sufficient nourishment.

ME'NSTRUUM. (*um, i.* n.) Solvent. All liquors are so called which are used as dissolvents, or to extract the virtues of ingredients by infusion, decoction, &c. The principal *menstrua* made use of in *Pharmacy*, are water, vinous spirits, oils, and acid and alkaline liquors. Water is the *menstruum* of all salts, of vegetable gums, and of animal jellies. Of the first it dissolves only a determinate quantity, though of one kind of salt more than of another; and being thus saturated, leaves any additional quantity of the same salt untouched. It is never saturated with the two latter, but unites readily with any proportion of them, forming, with different quantities, liquors of different consistencies. It takes up, likewise, when assisted by trituration, the vegetable gummy resins, as ammoniacum and myrrh; the solutions of which, though imperfect, that is, not transparent, but turbid and of a milky hue, are nevertheless applicable to valuable purposes in medicine. Rectified spirit of wine is the *menstruum* of the essential oils and resins of vegetables; of the pure distilled oils of animals, and of soaps, though it does not act upon the expressed oil, and fixed alkaline salt, of which soap is composed. Hence, if soap contains any superfluous quantity of either the oil or salt, it may, by means of this *menstruum*, be excellently purified therefrom. It dissolves, by the assistance of heat, volatile alkaline salts, and more readily the neutral ones, composed either of fixed alkali and the acetic acid, as the sal diureticus, or of volatile alkali and the nitric acid. Oils dissolve vegetable resins and balsams, wax, animal fats, mineral bitumens, sulphur, and certain metallic substances, particularly lead. The expressed oils are, for most of these bodies, more powerful *menstrua* than those obtained by distillation; as the former are more capable of sustaining, without injury, a strong heat, which is, in most cases, necessary to enable them to act. All acids dissolve alkaline salts, alkaline earths, and metallic substances. The different acids differ greatly in their action upon these last: one dissolving some particular metals, and another others. The vegetable acids dissolve a considerable quantity of zinc, iron, copper, and tin; and extract so much from the metallic part of antimony, as to become powerfully emetic: they likewise dissolve lead, if previously calcined by fire; but more copiously if corroded by their steam. The muriatic acid dissolves zinc, iron, and copper; and though it scarcely acts on any other metallic substance in the common way of making solutions, it may nevertheless be artfully combined with them all. The corrosive sublimate and antimonial caustic of the shops, are combinations of it with the oxides of mercury and antimony, effected by applying the acid in the form of fume to the subjects at the same time strongly heated. The nitric acid is the common *menstruum* of all metallic substances, except gold and antimony, which are soluble only in a mixture of the nitric and muriatic. The sulphuric acid easily dissolves zinc, iron, and copper; and may be made to corrode, or imperfectly dissolve most of the other metals. Alkaline lixivia dissolve oils, resinous substances, and sulphur. Their power is greatly promoted by the addition of quick-lime, instances of which occur in the preparation of soap and in the common caustic. Thus assisted, they reduce the flesh, bones, and other solid parts of animals, into a gelatinous matter. Solutions made in water and spirit of wine, possess the virtue of the body dissolved; whilst oils generally sheathe its activity, and acids and alkalies vary its quality. Hence watery and spirituous liquors are the proper *menstrua* of the native virtues of vegetable and animal matters. Most of the foregoing solutions are easily effected, by pouring the *menstruum* on the body to be dissolved, and suffering them to stand together for some time, exposed to a suitable warmth. A strong heat is generally requisite to enable oils and alkaline liquors to perform their office; nor will acids act on some metallic bodies without its assistance. The action of watery and spirituous *menstrua* is likewise expedited by a moderate heat, though the quantity which they afterwards keep dissolved is not, as some suppose, by this means increased. All that heat occasions these to take up, more than they would do in a longer time in the cold, will, when the heat ceases, subside again. The action of acids

on the bodies which they dissolve, is generally accompanied with heat, effervescence, and a copious discharge of fumes. The fumes which arise, during the dissolution of some metals in the sulphuric acid, prove inflammable; hence, in the preparation of the artificial vitriols of iron and zinc, the operator ought to be careful, especially where the solution is made in a narrow-mouthed vessel, lest, by the imprudent approach of a candle, the exhaling vapour be set on fire. There is another species of solution in which the moisture of air is the *menstruum*. Fixed alkaline salts, and those of the neutral kind, composed of alkaline salts and certain vegetable acids, or of alkaline earths, and any acid except the sulphuric; and some metallic salts, on being exposed for some time to a moist air, gradually attract its humidity, and at length become liquid. Some substances, not dissoluble in water in its grosser form, as the butter of antimony, are easily liquified by this slow action of the aërial moisture. This process is termed *deliquation*. The cause of solution assigned by some naturalists, namely, the admission of the fine particles of one body into the pores of another, whose figure fits them for their reception, is not just or adequate, but hypothetical and ill-presumed; since it is found that some bodies will dissolve their own quantity of others, as water does of Epsom salt, alkohol of essential oils, mercury of metals, one metal of another, &c.; whereas the sum of the pores or vacuities of every body must be necessarily less than the body itself, and, consequently, those pores cannot receive a quantity of matter equal to the body wherein they reside.

How a *menstruum* can suspend bodies much heavier than itself, which very often happens, may be conceived by considering, that the parts of no fluids can be so easily separated, but they will a little resist or retard the descent of any heavy bodies through them; and that this resistance is, *cæteris paribus*, still proportional to the surface of the descending bodies. But the surfaces of bodies do by no means increase or decrease in the same proportion as their solidities do: for the solidity increases as the cube, but the surface only as the square of the diameter; wherefore it is plain, very small bodies will have much larger surfaces, in proportion to their solid contents, than larger bodies will, and consequently, when grown exceedingly small, may easily be buoyed up in the liquor.

MENTA. (*a, æ.* f.) The penis.

MENTA'GRA. (*a, æ.* f.; from *mentum*, the chin, and αγρα, a prey.) An eruption about the chin, forming a tenacious crust, like that on scald heads.

MENTAL. *Mentalis.* Pertaining to the mind.

Mental faculties. Man is possessed of a body, answering completely, both in matter and texture, as well as in vital powers, the purposes of its formation; he is endowed likewise with a mind, a *divinæ particula auræ*, intimately connected with the body, and developing, by education and exercise, various kinds of faculties, which are perception, attention, memory, imagination, abstraction, judgment, and reason. The combination of these constitutes the intellectual or mental faculty.

ME'NTHA. (*a, æ.* f.; from *Minthe*, the harlot, who was changed into this herb.) *Hedyosmus* of the Greeks. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*. Mint.

Mentha aquatica. *Menthastrum. Sisymbrium menthrastrum. Mentha rotundifolia palustris.* Water-mint. This plant is frequent in moist meadows, marshes, and on the banks of rivers. It is less agreeable than the spearmint, and in taste bitterer and more pungent. It may be used with the same intentions as the spearmint, to which, however, it is much inferior.

Mentha cataria. See *Nepeta cataria.*

Mentha cervina. The systematic name of the hart's penny-royal. *Pulegium cervinum.* This plant possesses the virtues of penny-royal in a very great degree, but is remarkably unpleasant. It is seldom employed but by the country people, who substitute it for penny-royal.

Mentha crispa. *Colymbifera minor. Achillea ageratum.* This species of mentha has a strong and fragrant smell; its taste is warm, aromatic, and slightly bitter. In flatulence of the primæ viæ, hypochondriacal and hysterical affections, it is given with advantage.

Mentha piperita. The systematic and pharmacopœial name of peppermint. *Mentha piperitis. Mentha—floribus capitatis, foliis ovatis petiolatis, staminibus corolla brevioribus*, of Linnæus. The spontaneous growth of this plant is said to be peculiar to Britain. It has a more penetrating smell than any of the other mints; a strong pungent taste, glowing like pepper, sinking, as it were, into the tongue, and followed by a sense of coolness. The stomachic, antispasmodic, and carminative properties of peppermint, render it useful in flatulent colics, hysterical affections, retchings, and other dyspeptic symptoms, acting as a cordial, and often producing an immediate relief. Its officinal preparations are an essential oil, a simple water, and a spirit.

Mentha pulegium. The systematic name of the penny-royal. *Pulegium. Pulegium regale. Pulegium latifolium. Glechon.* Pudding-grass. *Mentha—floribus verticillatis, foliis ovatis obtusis subcrenatis, caulibus subteretibus repentibus*, of Linnæus. This plant is considered as a carminative, stomachic, and emmenagogue, and is in very common use in hysterical disorders. The officinal preparations of penny-royal are, a simple water, a spirit, and an essential oil.

Mentha saracenica. See *Tanacetum.*

Mentha sativa. See *Mentha viridis.*

Mentha spicata. See *Mentha viridis.*

Mentha viridis. *Mentha vulgaris. Men-*

tha spicata. Spearmint. *Mentha—spicis oblongis, foliis lanceolatis nudis serratis sessilibus, staminibus corolla longioribus,* of Linnæus. This plant grows wild in many parts of England. It is not so warm to the taste as peppermint, but has a more agreeable flavour, and is therefore preferred for culinary purposes. Its medicinal qualities are similar to those of peppermint; but the different preparations of the former, though more pleasant, are, perhaps, less efficacious. The officinal preparations of spearmint are, an essential oil, a conserve, a simple water, and a spirit.

MENTHA'STRUM. (Diminutive of *mentha.*) See *Mentha aquatica.*

ME'NTI LEVATOR. See *Levator.*

ME'NTULA. (*a, æ.* f.; from *matah,* a staff, Hebrew.) The penis.

MENTULA'GRA. (*a, æ.* f.; from *mentula,* the penis, and αγρα, a prey.) A disorder of the penis, induced by a contraction of the erector muscles, and causing impotence.

MENYA'NTHES. (*es, eos.* or *is.* f.; from μην, a month, and ανθος, a flower, and so called because it generally keeps in flower about a month.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

MENYANTHES TRIFOLIATA. The systematic name of the buck-bean. *Trifolium paludosum. Trifolium aquaticum. Trifolium fibrinum. Menyanthes.* Water-trefoil, or buck-bean. *Menyanthes—foliis ternatis,* of Linnæus. The whole plant is so extremely bitter, that in some countries it is used as a substitute for hops, in the preparation of malt liquor. It is sometimes employed in country places as an active eccoprotic bitter in hydropic and rheumatic affections. Cases are related of its good effects in some cutaneous diseases of the herpatic and seemingly cancerous kind.

MEPHITIC. *Mephiticus.* Having a disagreeable noxious smell or vapour.

Mephitic acid. The carbonic acid.

Mephitic air. See *Nitrogene.*

MEPHI'TIS. (*is, is.* f.; from *mephuhith,* a blast, Syr.) A poisonous exhalation.

MERCURIALI, GIROLAMO, was born at Torli, in Romagna, in 1530. He produced, in 1569, a learned and elegant work, *De Arte Gymnastica,* which was many times reprinted. He was a voluminous writer, and, among many other publications, edited a classified collection of the works of Hippocrates, with a learned commentary; but he was bigoted to ancient authority and hypothesis. He wrote on the *diseases of the skin, those peculiar to women and children,* on *poisons,* and several other subjects.

MERCURIA'LIS. (*is, is.* f.; from *Mercurius,* its discoverer.) 1. The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Enneandria.*

2. The pharmacopœial name of the French mercury. See *Mercurialis annua.*

MERCURIALIS ANNUA. The systematic name of the French mercury. The leaves of this plant have no remarkable smell, and very little taste. It is ranked among the emollient oleraceous herbs, and is said to be gently aperient. Its principal use has been in clysters.

MERCURIALIS MONTANA. See *Mercurialis perennis.*

MERCURIALIS PERENNIS. The systematic name of what is also called *Cynocrambe, Brassica canina, Mercurialis sylvestris,* and *Mercurialis montana sylvestris.* The dog's mercury. A poisonous plant, very common in our hedges. It produces vomiting and purging, and the person then goes to sleep, from which he does not often awake.

MERCURIALIS SYLVESTRIS. See *Mercurialis perennis.*

MERCU'RIUS. (*us, i.* m.; so called from some supposed relation it bears to the planet of that name.) Mercury. See *Mercury.*

MERCURIUS ACETATUS. See *Hydrargyri acetas.*

MERCURIUS ALKALIZATUS. See *Hydrargyrum cum cretâ.*

MERCURIUS CALCINATUS. See *Hydrargyri oxydum rubrum.*

MERCURIUS CHEMICORUM. Quicksilver.

MERCURIUS CINNABARINUS. See *Sulphuretum hydrargyri rubrum.*

MERCURIUS CORROSIVUS. See *Hydrargyri oxymurias.*

MERCURIUS CORROSIVUS RUBER. See *Hydrargyri nitrico-oxydum.*

MERCURIUS CORROSIVUS SUBLIMATUS. See *Hydrargyri oxymurias.*

MERCURIUS DULCIS SUBLIMATUS. See *Hydrargyri submurias.*

MERCURIUS EMETICUS FLAVUS. See *Hydrargyri sulphas.*

MERCURIUS MORTIS. See *Algaroth.*

MERCURIUS PRÆCIPITATUS ALBUS. See *Hydrargyrum præcipitatum album.*

MERCURIUS PRÆCIPITATUS DULCIS. See *Hydrargyri submurias.*

MERCURIUS PRÆCIPITATUS RUBER. See *Hydrargyri nitrico-oxydum.*

MERCURIUS VITÆ. See *Algaroth.*

MERCURY. *Hydrargyrum. Hydrargyrus. Mercurius.* A metal found in five different states in nature.

1. Native,—*native mercury,* adhering in small globules to the surface of cinnabar ores, or scattered through the crevices or over the surfaces of different kinds of stones.

2. It is found united to silver, in the ore called *amalgam of silver,* or *native amalgam of silver.* This ore exhibits thin places, or grains; it sometimes crystallises in cubes, parallelopipeda, or pyramids. Its colour is of a silver white, or grey; its lustre is considerably metallic.

3. Combined with sulphur, it constitutes *native cinnabar,* or sulphuret of mercury. This ore is the most common. It is frequently found in veins, and sometimes crystallised in tetrahedra, or three-sided pyramids. Its colour is red. Its streak metallic.

4. Mercury oxidised, and united either to muriatic or sulphuric acid, forms the ore called *horn quicksilver*, or corneous mercury. These ores are, in general, semi-transparent, of a grey or white colour, sometimes crystallised, but more frequently in grains.

5. United to oxygene, it constitutes the ore called *native oxide of mercury*. Mercurial ores particularly abound in Spain, Hungary, China, and South America.

Properties.—Mercury, or quicksilver, is the only one of the metals that remains fluid at the ordinary temperature of the atmosphere; but when its temperature is reduced to 40 degrees below 0 on Fahrenheit's thermometer, it assumes a solid form. This is a degree of cold, however, that only occurs in high northern latitudes; in our climate, mercury cannot be exhibited in a solid state, but by means of artificial cold. When rendered solid, it possesses both ductility and malleability. It crystallises in octahedra, and contracts strongly during congelation. It is divisible into very small globules. It presents a convex appearance in vessels to which it has little attraction, but is concave in those to which it more strongly adheres. It becomes electric and phosphorescent by rubbing upon glass and by agitation in a vacuum. It is a very good conductor of caloric, of electricity, and of galvanism. The specific gravity of mercury is 13·563. Although fluid, its opacity is equal to that of any other metal, and its surface, when clean, has considerable lustre. Its colour is white, similar to silver. Exposed to the temperature of somewhat above 600° Fahr., it is volatilised. When agitated in the air, especially in contact with viscous fluids, it becomes converted into a black oxide. At a temperature nearly the same as that at which it boils, it absorbs about 14 or 15 per cent. of oxygene, and then becomes changed into a red crystallisable oxide, which is spontaneously reducible by light and caloric at a higher temperature. The greater number of the acids act upon mercury, or are at least capable of combining with its oxides. It combines with sulphur by trituration, but more intimately by heat. It is acted on by the alkaline sulphurets. It combines with many of the metals: these compounds are brittle or soft when the mercury is in large proportion. There is a slight union between mercury and phosphorus. It does not unite with carbon or the earths.

Method of obtaining Mercury.—Mercury may be obtained pure by decomposing cinnabar, by means of iron filings. For that purpose, take two parts of red sulphuret of mercury; reduce it to powder, and mix it with one of iron filings; put the mixture into a stone retort; direct the neck of it into a bottle, or receiver, filled with water, and apply heat. The mercury will then be obtained in a state of purity.

In this process, the sulphuret of mercury, which consists of sulphur and mercury, is heated in contact with iron, the sulphur quits the mercury and unites to the iron, and the mercury becomes disengaged; the residue in the retort is a sulphuret of iron.

Medical use.—This metal and its combinations are very important articles in the materia medica. There is scarcely a disease against which some of its preparations are not exhibited; and over the venereal disease it possesses a specific power. It is considered to have first gained repute in curing this disease from the good effects it produced in eruptive diseases. In the times immediately following its first appearance, practitioners only attempted to employ this remedy with timorous caution; so that, of several of their formulæ, mercury scarcely composed a fourth part, and few cures were effected. On the other hand, empirics who noticed the little efficacy of these small doses, ran into the opposite extreme, and exhibited mercury in such large quantities, and with such little care, that most of their patients became suddenly attacked with the most violent salivations, attended with dangerous consequences. From these two very opposite modes of practice, there originated such uncertainty respecting what could be expected from mercury, and such fears of the consequences which might result from its employment, that every plan was eagerly adopted which offered the least chance of cure without having recourse to this mineral. A medicine, however, so powerful, and whose salutary effects were seen by attentive practitioners, amid all its inconveniences, could not sink into oblivion. After efforts had been made to discover a substitute for it, and it was seen how little confidence those means deserved on which the highest praises had been lavished, the attempts to discover its utility were renewed. A medium was pursued, between the too timid methods of those physicians who had first administered it, and the inconsiderate boldness of the empirics. Thus the causes from which both parties failed were avoided; the character of the medicine was revived in a more durable way, and from this period its reputation has always been maintained.

It was about this epoch that mercury began to be internally given: hitherto it had only been externally employed, which was done in three manners. The first was in the form of liniment, or ointment; the second as a plaster; and the third as a fumigation. Of the three methods just described only the first is at present much in use, and even this is very much altered. Mercurial plasters are now only used as topical discutient applications to tumours and indurations. Fumigations, as anciently managed, were liable to many objections, particularly from its not being possible to regulate the quantity of mercury to be used, and from the effect of the vapour on the organs of respiration frequently occasioning trembling, palsies, &c. Frictions with ointment have always been regarded as the most efficacious mode of administering mercury.

Mercury is carried into the constitution in the same way as other substances, either by being absorbed from the surface of the body, or that of the alimentary canal. It cannot, however, in all cases be taken into the constitution in both ways, for sometimes the absorbents of the skin will not readily receive it; at least no effect is produced, either on the disease or constitution, from this mode of application. On the other hand, the internal absorbents will sometimes not take up the medicine, or, at least, no effect is produced either on the disease or constitution. In many persons the bowels can hardly bear mercury at all; and it should then be given in the mildest form possible, conjoined with such medicines as will lessen or correct its violent effects, although not its specific ones, on the constitution. When mercury can be introduced into the constitution by the external method, it is preferable to the internal plan; because the skin is not nearly so essential to life as the stomach, and is, therefore, in itself capable of bearing much more than the stomach. The constitution is also less injured. Many courses of mercury would kill the patient if the medicine were only given internally, because it proves hurtful to the stomach and intestines when given in any form, or joined with the greatest correctors.

Mercury has two effects: one as a stimulus on the constitution and particular parts, the other as a specific on a diseased action of the whole body, or of parts. The latter action can only be computed by the disease disappearing.

In giving mercury in the venereal disease, the first attention should be to the quantity, and its visible effects in a given time; which, when brought to a proper pitch, are only to be kept up, and the decline of the disease to be watched: for by this we judge of the invisible or specific effects of the medicine, and know what variation in the quantity may be necessary. The visible effects of mercury affect either the whole constitution, or some parts capable of secretion. In the first, it produces universal irritability, making it more susceptible of all impressions. It quickens the pulse, increases its hardness, and occasions a kind of temporary fever. In some constitutions it operates like a poison. In some it produces a hectic fever; but such effects commonly diminish on the patient becoming accustomed to the medicine.

Mercury often produces pains like those of rheumatism, and nodes of a scrofulous nature. The quantity of mercury necessary for the cure of any venereal complaint, must be proportioned to the violence of the disease. A small quantity used quickly, will have equal effects to those of a large one employed slowly; but if these effects are merely local, that is, upon the glands of the mouth, the constitution at large not being equally stimulated, the effects upon the diseased parts must be less, which may be known by the local disease not giving way in proportion to the effects of mercury on some particular part. If it be given in very small quantities, and increased gradually, so as to steal insensibly on the constitution, a vast quantity at a time may at length be thrown in, without any visible effects at all.

The constitution, or parts, are more susceptible of mercury at first than afterwards.

Mercury occasionally attacks the bowels, and causes violent purging, even of blood. This effect is remedied by intermitting the use of the medicine, and exhibiting opium. At other times, it is suddenly determined to the mouth, and produces inflammation, ulceration, and an excessive flow of saliva. To obtain relief in this circumstance, purgatives, nitre, sulphur, gum-arabic, lime-water, camphire, bark, sulphuret of potash, blisters, &c. have been advised. Pearson, however, does not place much confidence in the efficacy of such means; and, the mercury being discontinued for a time, he recommends the patient to be freely exposed to cold air, with the occasional use of cathartics, mineral acids, Peruvian bark, and the assiduous application of astringent gargles. The most material objection (says Mr. Pearson) which I foresee against the method of treatment I have recommended, is the hazard to which the patient will be exposed of having the saliva suddenly checked, and of suffering some other disease in consequence of it.

The hasty suppression of a ptyalism may be followed by serious inconveniences, as violent pains, vomiting, and general convulsions.

Cold liquids taken into the stomach, or exposure of the body to the cold air, must be guarded against during a course of mercury. Should a suppression of the ptyalism take place, from any act of indiscretion, a quick introduction of mercury should be had recourse to, with the occasional use of the warm bath.

Mercury, when it falls on the mouth, sometimes produces inflammation, which now and then terminates in mortification. The ordinary operation of mercury does not permanently injure the constitution; but, occasionally, the impairment is very material; mercury may even produce local diseases, and retard the cure of chancres, buboes, and certain effects of the lues venerea, after the poison has been destroyed. Occasionally mercury acts on the system as a poison, quite unconnected with its agency as a remedy, and neither proportionate to the inflammation of the mouth, nor actual quantity of the mineral absorbed. Pearson has termed this morbid state of the system erethismus: it is characterised by great depression of strength, a sense of anxiety about the præcordia, irregular action of the heart, frequent sighing, trembling, a small, quick, and sometimes intermitting pulse, occasional vomiting, a pale contracted countenance, a sense of coldness; but the tongue is seldom furred, and neither the natural or vital functions are much disturbed.

When this effect of mercury takes place, its use should be discontinued, whatever may be the stage, extent, or violence of the venereal disease. The patient should be exposed to a dry and cool air, in such a way as not to give fatigue; in this way, the patient will often recover in ten or fourteen days. In the early stage, the erethismus may often be averted by leaving off the mercury, and giving camphire mixture with volatile alkali. Occasionally, the use of mercury brings on a peculiar eruption, which has received the names of mercurial rash, eczema mercuriale, lepra mercurialis, mercurial disease, and erythema mercuriale.

In order that mercury should act on the human body, it is necessary that it should be oxidised, or combined with an acid. The mercury contained in the unguentum hydrargyri is an oxide. This, however, is the most simple and least combined form of all its preparations, and hence (says Mr. S. Cooper) it not only operates with more mildness on the system, but with more specific effect on the disease. Various salts of mercury operate more quickly, when given internally, than mercurial frictions; but few practitioners of the present day confide in the internal use of mercury alone, particularly when the venereal virus has produced effects in consequence of absorption. Rubbing in mercurial ointment is the mode of affecting the system with mercury in the present day; and, as a substitute for this mode of applying mercury, Mr. Abernethy recommends the mercurial fumigation, where the patient has not strength to rub in the ointment, and whose bowels will not bear the internal exhibition of it.

The preparations of mercury now in use are,

1. The nitric oxide.
2. The grey oxide.
3. The red oxide.
4. The oxymuriate.
5. The submuriate.
6. The red sulphuret.
7. The black sulphuret.
8. The acetate.
9. The sulphate.
10. Hydrargyrum cum cretâ.
11. Hydrargyrum precipitatum album.
12. Hydrargyrum purificatum.

Mercury, dog's. See *Mercurialis.*

Mercury, English. See *Chenopodium.*

Mercury, French. See *Mercurialis.*

MEROBA'LNEUM. (From μερος, a part, and βαλανειον, a bath.) A partial bath, as a hip-bath, bath for the feet, &c.

MEROCE'LE. (*e, es.* f.; from μερος, the thigh, and κηλη, a tumour.) A femoral hernia. See *Hernia.*

ME'ROS. (*Meros, i* m.; pl. *mera.*) The thigh.

MERRET, Christopher, was born at Winchcombe in 1614. His first publication was a Collection of Acts of Parliament, &c. in proof of the exclusive rights of the College, printed in 1660, which afforded the basis of Dr. Goodall's history; this was followed nine years after by *A Short View of the Frauds of Apothecaries,* which involved him in much controversy. He published also a *Catalogue of the Natural Productions of this Island.*

ME'RUS. Applied to several things in the same sense as genuine, or unadulterated; as *merum vinum,* neat wine.

MERY, John, was born at Vatau, in France, in 1645. Besides many valuable communications to the Academy of Sciences, he published a description of the ear; Observations on Frère Jacques' Method of Cutting for the Stone, the general principle of which he approved; a tract on the Fœtal Circulation, controverting the received opinion, that part of the blood passes from the right to the left ventricle, through the foramen ovale, and even assigning it an opposite course; and physical problems, concerning the connection of the fœtus with the mother, and its nutrition.

MESARÆ'UM. (From μεσος, the middle, and αραια, the belly.) The mesentery.

MESEMBRYA'NTHEMUM. (*um, i.* n.; so called from the circumstance of its flowers expanding at mid-day.) The name of a vast genus of plants. Class, *Icosandria;* Order, *Pentagynia.*

Mesembryanthemum crystallinum. The juice of this plant, in a dose of four spoonfuls every two hours, it is asserted, has removed an obstinate spasmodic affection of the neck of the bladder, which would not yield to other remedies.

MESENTERIC. *Mesentericus.* Belonging to the mesentery. See *Mesentery.*

Mesenteric artery. *Arteria mesenterica.* Two branches of the aorta in the abdomen are so called. The superior mesenteric is the second branch; it is distributed upon the mesentery, and gives off the superior or right colic artery. The inferior mesenteric is the fifth branch of the aorta; it sends off the internal hæmorrhoidal.

Mesenteric glands. *Glandulæ mesentericæ.* These are conglobate, and are situated here and there in the cellular membrane of the mesentery. The chyle from the intestines passes through these glands to the thoracic duct.

Mesenteric nerves. *Nervorum plexus mesentericus.* The superior, middle, and lower mesenteric plexuses of nerves are formed by the branches of the great intercostal nerves.

Mesenteric veins. *Venæ mesentericæ.* They all run into one trunk, that evacuates its blood into the vena portæ. See *Vena portæ.*

MESENTERI'TIS. (*is, idis.* f.; from μεσεντεριον, the mesentery.) An inflammation of the mesentery. See *Peritonitis.*

ME'SENTERY. (*Mesenterium, ii.* n.; from μεσος, the middle, and εντερον, an intestine.) A membrane in the cavity of the abdomen attached to the vertebræ of the loins, and to which the intestines adhere. It is formed of a duplicature of the peritonæum, and contains within it adipose membrane, lac-

teals, lymphatics, lacteal glands, mesenteric arteries, veins, and nerves. Its use is to sustain the intestines in such a manner that they possess both mobility and firmness; to support and conduct with safety the blood-vessels, lacteals, and nerves; to fix the glands, and give an external coat to the intestines.

It consists of three parts: one uniting the small intestines, which is the proper mesentery; another connecting the colon, termed mesocolon; and a third, attached to the rectum, termed mesorectum. See *Mesocolon*.

MESERAIC. *Meseraicus.* The same as mesenteric.

MESE'RION. See *Daphne mezereum.*

MESI'RE. A disorder of the liver, mentioned by Avicenna, accompanied with a sense of heaviness, tumour, inflammation, pungent pain, and blackness of the tongue.

MESOCO'LON. (*on, i.* m.; from μεσος, the middle, and κωλον, the colon.) The portion of the mesentery to which the colon is attached. The mesentery and mesocolon are the most important of all the productions of the peritonæum. In the pelvis, the peritonæum spreads itself shortly before the rectum. But where that intestine becomes loose, and forms the semilunar curve, the peritonæum there rises considerably from the middle iliac vessels, and region of the psoas muscle, double, and with a figure adapted for receiving the hollow colon. But above, on the left side, the colon is connected with almost no intermediate loose production to the peritonæum, spread upon the psoas muscle as high as the spleen, where this part of the peritonæum, which gave a coat to the colon, being extended under the spleen, receives and sustains that viscus in a hollow superior recess.

Afterwards the peritonæum, from the left kidney, from the interval between the kidneys, from the large vessels, and from the right kidney, emerges forwards under the pancreas, and forms a broad and sufficiently long continuous production, called the transverse mesocolon, which, like a partition, divides the upper part of the abdomen, containing the stomach, liver, spleen, and pancreas, from the lower part. The lower plate of this transverse production is continued singly from the right mesocolon to the left, and serves as an external coat to a pretty large portion of the liver, and descending part of the duodenum. But the upper plate, less simple in the course, departs from the lumbar peritonæum at the kidney, and region of the vena cava, farther to the right than the duodenum, to which it gives an external membrane, not quite to the valve of the pylorus; and beyond this intestine, and beyond the colon, it is joined with the lower plate, so that a large part of the duodenum lies within the cavity of the mesocolon. Afterwards, in the region of the liver, the mesocolon is inflected, and descending over the kidney of the same side much shorter, it includes the right of the colon, as far as the intestinum cæcum, which rests upon the iliac muscle and the appendix, which is provided with a peculiar long curved mesentery. There the mesocolon terminates, almost at the bifurcation of the aorta.

The whole of the mesocolon and of the mesentery is hollow, so that the air may be forced in between its two laminæ, in such a manner as to expand them into a bag. At the place where it sustains the colon, and also from part of the intestinum rectum, the mesocolon, continuous with the outer membrane of the intestine, forms itself into small slender bags, resembling the omentum, for the most part in pairs, with their loose extremities thicker and bifid, and capable of admitting air blown in between the plates of the mesocolon.

MESOCRA'NIUM. (*um, ii.* n.; from μεσος, the middle, and κρανιον, the skull.) The crown of the head, or vertex.

MESOGA'STRIUM. (*um, ii.* n.; from μεσος, the middle, and γαστηρ, the stomach.) The concave part of the stomach, which attaches itself to the adjacent parts.

MESOGLO'SSUS. (*us, i.* m.; from μεσος, the middle, and γλωσσα, the tongue.) A muscle inserted in the middle of the tongue.

MESOME'RA. (From μεσος, the middle, and μηρος, the thigh.) The parts between the thighs. See *Meros.*

MESOMPHA'LIUM. (*um, ii.* n.; from μεσος, the middle, and ομφαλος, the navel.) The middle of the navel.

MESO'PHRYUM. (*um, i.* n.; from μεσος, the middle, and οφρυα, the eyebrows.) The part between the eyebrows.

MESOPLEU'RUM. (*um, i.* n.; from μεσος, the middle, and πλευρον, a rib.) The space or muscles between the ribs.

MESORE'CTUM. (*um, i.* n.; from μεσος, the middle, and *rectum*, the straight gut.) The portion of peritonæum which connects the rectum to the pelvis.

MESO'THENAR. (*ar, aris.* n.; from μεσος, the middle, and θεναρ, the palm of the hand.) The muscle situated in the middle of the palm of the hand.

MESO'TICUS. (From μεσος, *medius.*) Affecting the middle structure or parenchyma.

MESOTYPE. Prismatic zeolite. A species of the genus zeolite.

ME'SPILUS. (*us, i.* f. Οτι εν τω μεσω πιλος, because it has a cap or crown in the middle of it.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Pentagynia.*

2. The pharmacopœial name of the medlar. See *Mespilus germanica.*

MESPILUS GERMANICA. The medlar tree. The fruit, and also its seeds, have been used medicinally. The immature fruit is serviceable in checking diarrhœas; and the seeds were formerly esteemed in allaying the pain attendant on nephritic diseases.

MESUE, one of the early physicians among the Arabians. He was author of some works, which are cited by Rhazes and others, but appear to have perished.

META'BASIS. (From μεταβαινω, to

digress.) *Metabole.* A change of remedy, of practice, or disease; or any change from one thing to another, either in the curative indications, or the symptoms of a distemper.

META'BOLE. See *Metabasis.*

METACARPAL. *Metacarpalis.* Belonging to the metacarpus.

METACA'RPUS. (From μετα, after, and καρπος, the wrist.) *Metacarpium.* That part of the hand which is between the wrist and the fingers. It has five longitudinal bones that are situated between the wrist and the fingers, which are distinguished into the metacarpal bone of the thumb, fore-finger, &c.

METACERA'SMA. (From μετα, after, and κεραννυμι, to mix.) *Cerasma.* A mixture tempered with any additional substance.

METACHEIRI'XIS. (From μεταχειριζω, to perform by the hand.) Surgery, or any manual operation.

METACHORE'SIS. (From μεταχωρεω, to digress.) The translation of a disease from one part to another.

METACINE'MA. (From μετα, and κινεω, to remove.) A distortion of the pupil of the eye.

METACO'NDYLUS. (From μετα, after, and κονδυλος, a knuckle.) The last joint of a finger, which contains the nail.

META'LLAGE. (From μεταλλαττω, to change.) A change in the state or treatment of a disease.

METALLU'RGIA. (*a, æ.* f.; from μεταλλον, a metal, and εργον, work.) That part of chemistry which concerns the operations of metals.

METAL. (*Metallum, i.* n.) Metals are the most numerous class of undecompounded chemical bodies, distinguished by the following general characters: —

1. They possess a peculiar lustre, which continues in the streak, and in their smallest fragments.

2. They are fusible by heat; and in fusion retain their lustre and opacity.

3. They are all, except selenium, excellent conductors both of electricity and caloric.

4. Many of them may be extended under the hammer, and are called malleable; or under the rolling press, and are called laminable; or drawn into wire, and are called ductile. This capability of extension depends, in some measure, on a tenacity peculiar to the metals, and which exists in the different species with very different degrees of force.

5. When their saline combinations are electrised, the metals separate at the resino-electric or negative pole.

6. When exposed to the action of oxygene, chlorine, or iodine, at an elevated temperature, they generally take fire; and, combining with one or other of these three elementary dissolvents in definite proportions, are converted into earthy or saline-looking bodies, devoid of metallic lustre and ductility, called oxides, chlorides, or iodides.

7. They are capable of combining in their melted state with each other, in almost every proportion, constituting the important order of metallic alloys; in which the characteristic lustre and tenacity are preserved.

8. From this brilliancy and opacity conjointly, they reflect the greater part of the light which falls on their surface, and hence form excellent mirrors.

9. Most of them combine in definite proportions with sulphur and phosphorus, forming bodies frequently of a semi-metallic aspect; and others unite with hydrogene, carbon, and boron, giving rise to peculiar gaseous or solid compounds.

10. Many of the metals are capable of assuming, by particular management, crystalline forms; which are, for the most part, either cubes or octohedrons.

All the metals are found in the bowels of the earth, though sometimes they are on the surface. They are met with in different combinations with other matters, such as sulphur, oxygene, and acids; particularly with the carbonic, muriatic, sulphuric, and phosphoric acids. They are also found combined with each other, and sometimes, though rarely, in a pure metallic state, distinguishable by the naked eye.

In their different states of combination, they are said to be mineralised, and are called *ores.* The ores of metals are, for the most part, found in nature in mountainous districts; and always in such as form a continued chain. There are mountains which consist entirely of iron ore, but, in general, the metallic part of the mountain bears a very inconsiderable proportion to its bulk. Ores are also met with in the cavities or crevices of rocks, forming what are termed *veins,* which are more easily discovered in these situations than when they lie level in plains.

The metallic matter of ores is very generally incrusted, and intermingled with some earthy substance, different from the rock in which the vein is situated; which is termed its *matrix.* This, however, must not be confounded with the mineralising substance with which the metal is combined, such as sulphur, &c.

The relations of the metals to the various objects of chemistry, are so complex and diversified, as to render their classification a task of peculiar difficulty.

General Table of the Metals.

NAMES.	Sp. gr.	Precipitants.	Colour of Precipitates by Ferroprussiate of potash.	Infusion of galls.	Hydrosulphurets.	Sulphuretted hydrogene.
1 Platinum	21·47	Mur. ammon.	0	0		Black met. powd.
2 Gold	19·30	{ Sulph. iron Nitr. mer. }	Yellowish-white	Green; met.	Yellow	Yellow
3 Silver	10·45	Common salt	White	Yel.-brown	Black	Black
4 Palladium	11·8	Prus. Mercury	Deep orange		Blackish-brown	Black-brown
5 Mercury	13·6	{ Common salt Heat	White passing to yellow }	Orange-yellow	Brownish-black	Black
6 Copper	8·9	Iron	Red-brown	Brown	Black	Ditto
7 Iron	7·7	{ Succin. soda with perox.	Blue or White passing to blue	Protox. 0. Perox. black }	Black	0
8 Tin	7·29	Cor. sublim.	White	0	Protox. black Perox. yellow }	Brown
9 Lead	11·35	Sulph. soda	Ditto	White	Black	Black
10 Nickel	8·4	Sulph. potash ?	Ditto	Grey-white	Ditto	0
11 Cadmium	8·6	Zinc	Ditto	0	Orange-yellow	Orange-yellow
12 Zinc	6·9	Alk. carbonates	Ditto	0	White	Yellowish-white
13 Bismuth	9·88	Water	Ditto	Yellow	Black-brown	Black-brown
14 Antimony	6·70	{ Water Zinc	With dilute solutions white.	White from water. }	Orange	Orange
15 Manganese	8	Tartr. pot.	White	0	White	Milkiness
16 Cobalt	8·6	Alk. carbonates	Brown-yellow	Yellow-white	Black	0
17 Tellurium	6·115	{ Water Antimony }	0	Yellow	Blackish	
18 Arsenic	{ 8·35 ? 5·76 ? }	Nitr. lead	White		Yellow	Yellow
19 Chromium	5·90	Ditto	Green	Brown	Green	
20 Molybdenum	8·6	Ditto ?	Brown	Deep brown		Brown
21 Tungsten	17·4	Mur. lime ?	Dilute acids			
22 Columbium	5·6 ?	Zinc or inf. galls	Olive	Orange	Chocolate	
23 Selenium	4·3 ?	{ Iron Sulphite amm.				
24 Osmium	?	Mercury		{ Purple passing to deep blue		
25 Rhodium	10·65	Zinc ?	0		0	
26 Iridium	18·68	Do. ?	0	0		
27 Uranium	9·0	Ferropr. pot.	Brown-red	Chocolate	Brown-yellow	0
28 Titanium	?	Inf. galls.	Grass-green	Red-brown	Grass-green	0
29 Cerium	?	Oxal. amm.	Milk-white	0	White	0
30 Potassium	0·865	{ Mur. plat. Tart. acid. }	0	0	0	0
31 Sodium	0·972					
32 Lithium						
33 Calcium						
34 Barium						
35 Strontium						
36 Magnesium						
37 Yttrium						
38 Glucinum						
39 Aluminum						
40 Thorinum						
41 Zirconium						
42 Silicium						

The first 12 are malleable; and so are the 30th, 31st, and 32d in their congealed state.

The first 16 yield oxides which are neutral salifiable bases.

The metals 17, 18, 19, 20, 21, 22, and 23, are acidifiable by combination with oxygene. Of the oxides of the rest, up to the 30th, little is known. The remaining metals form, with oxygene, the alkaline and earthy bases.

METAMORPHO'PSIA. (*a, æ.* f.; from μεταμορφωσις, a change, and οψις, sight.) Disfigured vision. A defect in vision, by which persons perceived objects changed in their figures. See *Pseudoblepsis.*

METAPE'DIUM. (*um, ii.* n.; from μετα, after, and πους, the foot.) See *Metatarsus.*

META'PHRENUM. (*um, i.* n.; from μετα, after, and φρενες, the diaphragm.) That part of the back which is behind the diaphragm.

METAPOROPOIE'SIS. (From μετα, πορος, a duct, and ποιεω, to make.) A change in the pores of the body.

METAPTO'SIS. (From μεταπιπτω, to digress.) A change from one disease to another.

META'STASIS. (From μεθιστημι, to change, to translate.) The translation of a disease from one place to another.

METASY'NCRISIS. (From μετασυγκρινω, to transmute.) Any change of constitution.

METATARSAL. *Metatarsalis.* Belonging to the metatarsus.

METATA'RSUS. (From μετα, after, and ταρσος, the tarsus.) That part of the foot between the tarsus and toes. It consists of five longitudinal bones, which are distinguished into the metatarsal bone of the great toe, fore-toe, &c.

METE'LLA NUX. See *Strychnos nux vomica.*

METEO'RISMUS. (*us, i.* m.; from μετεωρος, a vapour.) 1. A dropsy of the belly, accompanied by a considerable distension from wind in the bowels.

2. A tympanitic state of the abdomen, that

takes place in acute diseases suddenly and unexpectedly, as does the appearance of a meteor in the heavens.

METEOROLITE. Meteoric stone. A peculiar solid compound of earthy and metallic matters, of singular aspect and composition, which occasionally descends from the atmosphere, usually from the bosom of a luminous meteor.

METEO'ROS. (Μετεωρος; from μετα, and αειρω, to elevate.) Elevated, suspended, erect, sublime, tumid. Galen expounds pains of this sort, as being those which affect the peritonæum, or other more superficial parts of the body: these are opposed to the more deep-seated ones.

METHE'GLIN. A drink prepared from honey by fermentation. It is often confounded with mead. It is made in the following way: Honey, one hundred weight; boiling water, enough to fill a thirty-two gallon cask, or half a hogshead: stir it well for a day or two, then add yeast and ferment. Some boil the honey in water with one ounce of hops to each gallon, for an hour or two; but this boiling hinders its fermentation.

METHEMERI'NUS. (From μετα, and ημερα, a day.) A quotidian fever.

METHO'DIC MEDICINE. That practice which was conducted by rules, such as are taught by Galen and his followers, in opposition to the empirical practice.

ME'THODUS. (*us, i.* m.; from μετα, and οδος, a way.) The method or ratio by which any operation or cure is conducted.

METHODUS MEDENDI. See *Therapia.*

METO'PION. Μετωπιον. 1. An oil, or an ointment, made by Dioscorides, which was thus called because it had galbanum in it, which was collected from a plant called *Metopium.*

2. American sumach, a species of *Rhus.*

3. A name of the bitter almond.

METO'PIUM. Μετωπιον. An ointment made of galbanum.

METO'PUM. (*um, i.* n.; from μετα, after, and ωψ, the eye.) The forehead.

METO'SIS. Applied formerly to a kind of amaurosis.

ME'TRA. (*a, æ.* f.; from μητηρ, a mother.) The womb. See *Uterus.*

METRE'NCHYTA. (From μητρα, the womb, and εγχυω, to pour into.) Injections into the womb.

METRE'NCHYTES. (From μητρα, the womb, and εγχυω, to pour in.) A syringe to inject fluids into the womb.

METRI'TIS. (*is, idis.* f.; from μητρα, the womb.) Inflammation of the womb. See *Hysteritis.*

METROCE'LIS. (*is, idis.* f.; from μητηρ, a mother, and κηλις, a blemish.) A mark impressed upon the child by the mother's imagination. See *Nævus maternus.*

METROMA'NIA. (*a, æ.* f.) A rage for reciting verses. In the Acta Societatis Medicæ Havniensis, published 1779, is an account of a tertian attended with remarkable symptoms, one of which was the *metro-mania*, by which the patient spoke verses extempore, having never before had the least taste for poetry; when the fit was off, he became stupid, and remained so till the return of the paroxysm, when the poetical powers returned again.

METROPTO'SIS. (*is, is.* f.; from μητρα, the uterus, and πιπτω, to fall down.) *Prolapsus uteri.* The descent of the uterus through the vagina.

METRORRHA'GIA. (*a, æ.* f.; from μητρα, the womb, and ρηγνυμι, to break out.) An excessive discharge from the womb. See *Menorrhagia rubra.*

ME'U. See *Æthusa meum.*

ME'UM. (*um, i.* n.; from μειων, less: so called, according to Minshew, from its diminutive size.) *Meu.* See *Æthusa meum.*

MEUM ATHAMANTICUM. See *Æthusa.*

Mexico seed. See *Ricinus.*

Mexico tea. See *Chenopodium ambrosioides.*

MEZEREON. See *Daphne mezereum.*

MEZE'REUM. (*um, ii.* n.; a word of some barbarous dialect.) See *Daphne.*

MEZEREUM ACETATUM. Thin slices of the bark of fresh mezereon root are to be steeped for twenty-four hours in common vinegar. Some practitioners direct this application to issues, when a discharge from them cannot be encouraged by the common means. It generally answers this purpose very effectually in the course of one night, the pea being removed, and a small portion of the bark applied over the opening. See *Daphne gnidium.*

MIA'SMA. (*a, atis.* n.; from μιαινω, to infect. Miasma is a Greek word, importing pollution, corruption, or defilement generally; and contagion a Latin word, importing the application of such miasm or corruption to the body by the medium of touch. There is hence, therefore, says Dr. Good, neither parallelism nor antagonism, in their respective significations; there is nothing that necessarily connects them, either disjunctively or conjunctively. Both equally apply to the animal and vegetable worlds, or to any source whatever of defilement or touch, and either may be predicated of the other; for we may speak correctly of the miasm of contagion, or of contagion produced by miasm.) See *Contagion.*

MICA. (*a, æ.* f.) A species of mineral, which Professor Jameson subdivides into ten subspecies; viz. mica, pinite, lepidolite, chlorite, green earth, talc, nacrite, potstone, steatite, and figure stone.

Mica comes in abundance from Siberia, where it is used for window glass.

MICROCOSMIC BEZOAR. See *Calculus.*

MICROCOSMIC SALT. A triple salt of soda, ammonia, and phosphoric acid, obtained from urine, and much used in assays with the blow-pipe.

MICROLEUCONYMPHÆA. (*a, æ.* f.; from μικρος, small, λευκος, white, and νυμφαια, the water-lily.) The small white water-lily.

MICRONYMPHÆ'A. (*a, æ.* f.; from μικρος, small, and νυμφαια, the water-lily.) The smaller water-lily.

MICRO'RCHIS. (*is, idis.* m.; from μικρος, small, and ορχις, a testicle.) One whose testicles are unusually small.

MICROSPHY'XIA. (*a, æ.* f.; from μικρος, small, and σφυξις, the pulse.) A debility and smallness of the pulse.

MIDRIFF. See *Diaphragma.*

MIEMITE. A mineral found at Miemo in Tuscany, and other places. There are two kinds, the granular and prismatic.

MI'GMA. (From μιγνυω, to mix.) A confection, or ointment.

MIGRA'NA. A corruption of hemicrania.

MILFOIL. See *Achillea millefolium.*

MILIA'RIA. (*a, æ.* f.; from *milium*, millet: so called because the small vesicles upon the skin resemble millet-seed.) Miliary fever. A disease characterised by fever; cold stage considerable; hot stage attended with anxiety and frequent sighing; perspiration of a strong and peculiar smell; eruption, preceded by a sense of pricking, first on the neck and breast, of small red pimples, which in two days become white vesicles, desquamate, and are succeeded by fresh pimples. Miliary fever has been observed to effect both sexes, and persons of all ages and constitutions: but females of a delicate habit are most liable to it, particularly in childbed. Moist variable weather is most favourable to its appearance, and it occurs most usually in the spring and autumn. It is by some said to be a contagious disease, and has been known to prevail epidemically.

Very violent symptoms, such as coma, delirium, and convulsive fits, now and then attend miliary fever, in which case it is apt to prove fatal. A numerous eruption indicates more danger than a scanty one. The eruption being steady is to be considered as more favourable than its frequently disappearing and coming out again, and it is more favourable when the places covered with the eruption appear swelled and stretched than when they remain flaccid. According to the severity of the symptoms, and depression of spirits, is the danger greater. The fever, and other symptoms of miliaria, point out the necessity of supporting the patient through the disease: but every thing that heats and stimulates the skin should be avoided. The bowels are to be kept open, by cooling laxatives of sulphate of magnesia in infusion of roses, cascarilla, colomba, and the like, which, with cooling drinks, light bedclothes, and a cool atmosphere, will, in most instances, effect a cure.

When miliary eruptions come out in other diseases, it is generally from continued sweating, and requires bark, wine, and acids.

MILI'OLUM. (Diminutive of *milium*, millet.) A small tumour on the eyelids, resembling in size a millet-seed.

MILITA'RIS. (From *miles*, a soldier: so called from its efficacy in curing fresh wounds.) See *Achillea millefolium.*

MILITARIS HERBA. See *Achillea.*

MI'LIUM. (*um, ii.* n.; from *mille*, a thousand. An ancient name for a sort of corn or grass, remarkable for the abundance of its seeds.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia.*

2. (From *milium*, a millet-seed.) A very white and hard tubercle, in size and colour resembling a millet-seed. Its seat is immediately under the cuticle, so that, when pressed, the contents escape, appearing of an atheromatous nature.

MILIUM SOLIS. See *Lithospermum.*

MILK. *Lac.* A fluid secreted by peculiar glands, in the breasts of the class of animals called *Mammalia*, for the nourishment of their young. It is of an opake white colour, a mild saccharine taste, and a slightly aromatic smell. It is separated immediately from the blood, in the breasts or udders of female animals. Man, quadrupeds, and cetaceous animals, are the only creatures which afford milk. All other animals are destitute of the organs which secrete this fluid. Milk differs greatly in the several animals.

The following are the general *Properties* of animal milk:—

Milk separates spontaneously into *cream, cheese,* and *serum of milk;* and that sooner in a warm situation than in a cold one. In a greater temperature than that of the air, it acesces and coagulates, but more easily and quicker by the addition of acid salts, or coagulating plants. *Lime-water* coagulates milk imperfectly. It is not coagulated by pure *alkali;* which indeed dissolves its caseous part. With carbonated *alkali* the caseous and cremoraceous parts of milk are changed into a liquid soap, which separates in the form of white flakes; such milk, by boiling, is changed into a yellow and then into a brown colour. Milk, distilled to dryness, gives out an insipid water, and leaves a whitish brown extract, called the *extract of milk*, which, dissolved in water, makes a milk of less value. Milk fresh drawn, and often agitated in a warm place, by degrees goes into the vinous fermentation, so that alkohol may be drawn over by distillation, which is called *spirit of milk.* It succeeds quicker if yeast be added to the milk. Mares' milk, as it contains the greatest quantity of the sugar of milk, is best calculated for vinous fermentation.

The *Principles* of milk are,

1. The *aroma*, or odorous volatile principle, which flies off from fresh-drawn milk in the form of visible vapour.

2. *Water*, which constitutes the greatest part of milk. From one pound, eleven ounces of water may be extracted by distillation. This water, with the sugar of milk, and some salts, forms the *serum of the milk.*

3. *Bland oil*, which, from its lightness, swims on the surface of milk after standing, and forms the *cream of milk.* See *Cream.*

4. *Cheese*, separated by coagulating milk, falls to the bottom of the vessel, and is the animal gluten.

5. *Sugar*, obtained from the serum of milk by evaporation. It unites the caseous and butyraceous part with the water of the milk.

6. Some *neutral salts*, as the muriate of potash and muriate of lime, which are accidental, not being found at all times, nor in every milk. These principles of milk differ widely in respect to quantity and quality, according to the diversity of the animals.

The *aroma* of the milk is of so different an odour, that persons accustomed to the smell, and those whose olfactory nerves are very sensible, can easily distinguish whether milk be that of the cow, goat, mare, ass, or human. The same may be said of the serum of the milk, which is properly the seat of the aroma. The *serum* of milk is thicker and more copious in the milk of the sheep and goat, than in that of the ass, mare, or human milk. The *butter* of goats' and cows' milk is easily separated, and will not again unite itself with the butter-milk. Sheep's butter is soft, and not of the consistence of that obtained from the cow and goat. Ass's, mare's, and human butter can only be separated in the form of cream; which cream, by the assistance of heat, is with ease again united to the milk from which it is separated. The *cheese* of cows' and goats' milk is solid and elastic, that from asses and mares soft, and that from sheep's milk almost as soft as gluten. It is never separated spontaneously from the milk of a woman, but only by art, and is wholly fluid. The *serum* abounds most in human, ass's, and mare's milk. The milk of the cow and goat contain less, and that of the sheep least of all. The *sugar* of milk is in the greatest quantity in the mare's and ass's, and somewhat less in the human milk.

When milk is left to spontaneous decomposition, at a due temperature, it is found to be capable of passing through the vinous, acetous, and putrefactive fermentations. It appears, however, probably on account of the small quantity of alkohol it affords, that the vinous fermentation lasts a very short time, and can scarcely be made to take place in every part of the fluid at once by the addition of any ferment. This seems to be the reason why the Tartars, who make a fermented liquor, or wine, from mare's milk, called *koumiss*, succeed by using large quantities at a time, and agitating it very frequently. They add as a ferment a sixth part of water, and an eighth part of the sourest cow's milk they can get, or a smaller portion of koumiss already prepared: cover the vessel with a thick cloth, and let it stand in a moderate warmth for 24 hours; then beat it with a stick, to mix the thicker and thinner parts, which have separated: let it stand again 24 hours in a high narrow vessel, and repeat the beating, till the liquor is perfectly homogeneous. This liquor will keep some months, in close vessels, and a cold place; but must be well mixed by beating or shaking every time it is used. They sometimes extract a spirit from it by distillation. The Arabs prepare a similar liquor by the name of *leban*, and the Turks by that of *yaourt*. Eton informs us, that, when properly prepared, it may be left to stand till it becomes quite dry; and in this state it is kept in bags, and mixed with water when wanted for use.

The saccharine substance, upon which the fermenting property of milk depends, is held in solution by the whey, which remains after the separation of the curd in making cheese. This is separated by evaporation in the large way, for pharmaceutical purposes, in various parts of Switzerland. When the whey has been evaporated by heat, to the consistence of honey, it is poured into proper moulds, and exposed to dry in the sun. If this crude sugar of milk be dissolved in water, clarified with whites of eggs, and evaporated to the consistence of syrup, white crystals, in the form of rhomboidal parallelopipedons, are obtained.

Sugar of milk has a faint saccharine taste, and is soluble in three or four parts of water. It yields by distillation the same products that other sugars do, only in somewhat different proportions. It is remarkable, however, that the empyreumatic oil has a smell resembling flowers of benzoin. It contains an acid frequently called the *saccholactic*; but, as it is common to all mucilaginous substances, it is more generally termed mucic. See *Mucic acid*.

Milk, according to Berzelius, consists of,

Water,	928·75
Curd, with a little cream,	28·00
Sugar of milk,	35·00
Muriate of potash,	1·70
Phosphate of potash,	0·25
Lactic acid, acetate of potash, with a trace of lactate of iron,	6·00
Earthy phosphates,	0·30
	1000·00

MILK, ASS'S. *Lac asininum*. Ass's milk has a very strong resemblance to human milk in colour, smell, and consistence. When left at rest for a sufficient time, a cream forms upon its surface, but by no means in such abundance as on women's milk. Ass's milk differs from cow's milk, in its cream being less abundant and more insipid; in its containing less curd; and in its possessing a greater proportion of sugar.

MILK, COW'S. *Lac vaccinum*. *Lac bubulum*. The milk of women, mares, and asses nearly agree in their qualities; that of cows, goats, and sheep, possess properties rather different. Of these, cow's milk approaches nearest to that yielded by the female breast, but differs very much in respect to the aroma; it contains a larger proportion of cream and cheese, and less serum, than human milk; also less sugar than mare's and ass's milk.

Cow's milk forms a very essential part of human sustenance, being adapted to every state and age of the body; but particularly to infants, after being weaned.

MILK, EWE'S. *Lac ovillum*. This resembles almost precisely that of the cow; its cream, however, is more abundant, and yields a butter not so consistent as cow's milk butter. It makes excellent cheese.

MILK, GOAT'S. *Lac caprinum. Lac capræ.* It resembles cow's, except in its greater consistence; like that milk, it throws up abundance of cream, from which butter is easily obtained.

MILK, HUMAN. *Lac humanum.* The white, sweetish fluid secreted by the glandular fabric of the breasts of women. The *secretory organ* is constituted by the great conglomerate glands situated in the fat of both breasts, above the musculus pectoralis major. From each acinus composing a mammary gland, there arises a radicle of a *lactiferous* or *galactiferous* duct. All these canals, gradually converging, are terminated, without anastomosis, in the papillæ of the breasts, by many orifices, which, upon pressure, pour forth milk. The smell of fresh-drawn milk is peculiar, animal, fatuous, and not disagreeable; its taste sweetish, soft, bland, agreeable. The specific gravity is greater than that of water, but it is lighter than blood; hence it swims on it. Its colour is white and opake. In consistence it is oily and aqueous. A drop put on the nail flows slowly down, if the milk be good.

Time of secretion. — The milk most frequently begins to be secreted in the last months of pregnancy: but on the third day after delivery, a serous milk, called *colostrum*, is separated; and at length pure milk is secreted very copiously into the breasts, that from its abundance often spontaneously drops from the nipples.

If the secretion of milk be daily promoted by suckling an infant, it often continues many years, unless a fresh pregnancy supervene. The quantity usually secreted within twenty-four hours, by nurses, is various, according as the nourishment may be more or less chylous. It appears that not more than two pounds of milk are obtained from five or six pounds of meat. But there have been known nurses who have given from their breasts two, or even more than three pounds, in addition to that which their child has sucked. That the origin of the milk is derived from chyle carried with the blood of the mammary arteries into the glandular fabric of the breasts, is evident from its more copious secretion a little after meals; its diminished secretion from fasting; from the smell and taste of food or medicines in the secreted milk; and, lastly, from its occasional spontaneous *acescence;* for humours perfectly animal become putrid.

The *milk of a woman* differs, — 1. In respect to *food*. The milk of a woman who suckles, living upon vegeto-animal food, never acesces nor coagulates spontaneously, although exposed for many weeks to the heat of a furnace. But it evaporates gradually in an open vessel, and the last drop continues thin, sweet, and bland. The reason appears to be that the caseous and cremoraceous parts cohere together by means of the sugar, more intimately than in the milk of animals, and do not so easily separate: hence its acescence is prevented. It does *acesce*, if mixed or boiled with vinegar, juice of lemons, supertartrate of potash, dilute sulphuric acid, or with the human stomach. It is *coagulated* by the acid of salt, or nitre, and by an acid gastric juice of the infant; for infants often vomit up the coagulated milk of the nurse. The milk of a sucking woman, who lives upon vegetable food only, like cow's milk, easily and of its own accord acesces, and is acted upon by all coagulated substances, like the milk of animals. 2. In respect *of the time of digestion.* During the first hours of digestion the chyle is crude, and the milk less subacted; but towards the twelfth hour after eating, the chyle is changed into blood, and then the milk becomes yellowish and nauseous, and is spit out by the infant. Hence the best time for giving suck is about the fourth or fifth hour after meals. 3. In respect *of the time after delivery.* The milk secreted immediately after delivery is serous, purges the bowels of the infant, and is called *colostrum*. But in the following days it becomes thicker and more pure, and the longer a nurse suckles, the thicker the milk is secreted; thus new-born infants cannot retain the milk of a nurse who has given suck for a twelvemonth, on account of its spissitude. 4. In respect *of food and medicines.* Thus if a nurse eat garlic, the milk becomes highly impregnated with its odour, and is disagreeable. If she indulge too freely in the use of wine or beer, the infant becomes ill. From giving a purging medicine to a nurse, the child also is purged; and, lastly, children affected with tormina of the bowels, arising from acids, are often cured by giving the nurse animal food. 5. In respect *of the affections of the mind.* There are frequent examples of infants being seized with convulsions from sucking mothers irritated by anger. An infant of one year old, while he sucked milk from his enraged mother, on a sudden was seized with a fatal hæmorrhage, and died. Infants at the breast in a short time pine away, if the nurse be afflicted with grievous care; and there are also infants who, after every coition of the mother, or even if she menstruate, are taken ill.

The uses of the mother's milk are, — 1. It affords the natural *aliment* to the new-born infant, as milk differs little from chyle. Those children are the strongest who are nourished the longest by the mother's milk. 2. The *colostrum* should not be rejected; for it relaxes the bowels, which, in new-born infants, ought to be open, to clear them of the *meconium*. 3. *Lactation* defends the mother from a dangerous reflux of the milk into the blood, whence lacteal metastasis, and leucorrhœa, are so frequent in lying-in women who do not give suck. The motion of the milk also being so hastened through the breast by the sucking of the child, prevents the very common induration of the breast, which arises in consequence of the milk being stagnated. 4. *Men* may *live* upon milk, unless they have been accustomed to the drinking of wine. For all nations, the

Japanese alone excepted, use milk, and many live upon it alone.

MILK, MARE'S. *Lac equinum.* This is thinner than that of the cow, but scarcely so thin as human milk. Its cream cannot be converted into butter by agitation. The whey contains sugar.

MILK-BLOTCH. An eruption of white vesicles, which assume a dark colour resembling the blackening of the small-pox, and are succeeded by scabs producing an ichorous matter, attended with considerable itching. It generally appears on the forehead and scalp, extending half over the face, and at times even proceeding farther. The period of its attack is the time of teething; and it is probably the same disease as the *crusta lactea.*

Milk-fever. See *Puerperal fever.*

Milk-teeth. See *Teeth.*

Milk-thistle. See *Carduus marianus.*

Milk-vetch. See *Astragalus excapus.*

Milk-wort. See *Polygala vulgaris.*

Milk-wort, rattle-snake root. See *Polygala senega.*

MILLEFO'LIUM. (*um, ii.* n.; from *mille,* a thousand, and *folium,* a leaf: named from its numerous leaves.) See *Achillea millefolium.*

MILLEMO'RBIA. (From *mille,* a thousand, and *morbus,* a disease: so called from its use in many diseases.) See *Scrofularia nodosa.*

MILLE'PEDA. (*a, æ.* f.) See *Millepes.*

MILLE'PES. (*es, edis.* m.; from *mille,* a thousand, and *pes,* a foot: named from their numerous feet.) See *Oniscus asellus.*

MILLET. See *Panicum miliaceum.*

Millet, Indian. See *Panicum italicum.*

MILL-MOUNTAIN. See *Linum.*

MILPHO'SIS. Μιλφωσις. A baldness of the eyebrows.

MI'LTOS. Μιλτος. Red lead.

MILTWASTE. See *Asplenium.*

MILZADE'LLA. (From *milza,* the Spanish for the spleen: so called from its supposed virtues in diseases of the spleen.) See *Angelica archangelica.*

MIMO'SA. (*a, æ.* f.; from *mimus,* an actor, or imitator, meaning a sort of imitative plant, the motions of which mimic the sensibility of animal life.) The name of a genus of plants in the Linnæan system. *Class, Polygamia;* Order, *Monœcia.* The sensitive plant.

MIMOSA CATECHU. The former name of the tree which affords catechu. See *Acacia catechu.*

MIMOSA NILOTICA. See *Acacia vera.*

MIMOSA SENEGAL. The tree from which the gum-senegal exudes. The gum is brought from the country through which the river Senegal runs, in loose or single drops, much larger than gum-arabic. It is similar in virtue and quality to the gum-arabic, and the gum which exudes in this climate from the cherry-tree. See *Acacia vera.*

MIND. *Mens.* "The human mind," says Dr. Rees, "is properly defined a thinking, rational substance: by thinking it is distinguished from body, and by reasoning from God and angels, who are supposed to see and know things intuitively, without the help of deduction and discourse."

MINDERER, RAYMOND, a physician of Augsberg, of the seventeenth century. He published *Medicina Militaris, De Pestilentiâ,* and several books on chemistry. His reputation is shown by the formation and exhibition of the acetate of ammonia, which bears his name to this day.

Mindererus spirit. See *Ammoniæ acetatis liquor.*

MINERAL. (*Mineralis;* from *mina,* a mine of metal.) A substance which does not possess organisation, or is not produced by an organised body, belongs to the division of the production of nature called minerals. Among this varied class of materials, which require the attention of the chemist and manufacturer, many are compounded of such principles, and formed under such circumstances and situations in the earth, that it is difficult to distinguish them without having recourse to the test of experiment; several are formed with considerable regularity as to the proportion of their principles, their fracture, their colour, specific gravity, and figure of crystallisation.

Mineral bodies which enter into the composition of the globe, are classed by mineralogists under four heads:—1. Earths. 2. Salts. 3. Inflammable fossils; and, 4. Metals and their ores. Under the term earths, are arranged stones and earths which have no taste, and do not burn when heated with contact of air.

Under the second, salts, or those saline substances which melt in water and do not burn: they require, according to Kirwan, less than two hundred times their weight of water to dissolve them.

By inflammable fossils are to be understood all those minerals not soluble in water, and exhibiting a flame more or less evident when exposed to fire in contact with air.

The fourth class, or ores, are compound bodies. Nature has bestowed their proper metallic appearance on some substances; and when this is the case, or they are alloyed with other metals, or semi-metals, they are called native metals. But such as are distinguished, as they commonly are, in mines, in combination with some other unmetallic substances, are said to be mineralised. The substance that sets them in that state, is called the mineraliser, and the compound of both an ore. For example, in the common ore of copper, this metal is found oxidised, and the oxide combined with sulphur. The copper may be considered as mineralised with oxygene and sulphur, and the compound of the three bodies forms an ore of copper.

Mineral caoutchouc. See *Caoutchouc.*

Mineral oil. Petroleum.

Mineral pitch. Bitumen.

Mineral poisons. See *Poisons.*

Mineral salts. See *Salts.*

MINERAL WATER. *Aqua mineralis. Aqua*

medicinalis. A water holding a mineral in solution. But as all water in a mineral state is impregnated, either more or less, with some mineral substances, the name *mineral waters* should be confined to such waters as are sufficiently impregnated with mineral matters to produce some sensible effects on the animal economy, and either to cure or prevent some of the diseases to which the human body is liable. On this account, these waters might be with much more propriety called *medicinal waters,* were not the name by which they are commonly known too firmly established by long use.

The mineral waters which are the most esteemed, and consequently the most resorted to for the cure of diseases, are those of,

1. Aix.	13. Malvern.
2. Barege.	14. Matlock.
3. Bath.	15. Moffat.
4. Bristol.	16. Pyrmont.
5. Buxton.	17. Scarborough.
6. Borset.	18. Spa.
7. Cheltenham.	19. Sedlitz.
8. Carlsbad.	20. Sea-water.
9. Epsom.	21. Seltzer.
10. Harrowgate.	22. Tunbridge.
11. Hartfell.	23. Vichy, and others
12. Holywell.	of less note.

For the properties and virtues of these, consult their respective heads.

Fourcroy divides all mineral and medicinal waters into nine orders; viz.

1. Cold acidulous waters.
2. Hot or thermal acidulous waters.
3. Sulphuric saline waters.
4. Muriatic saline waters.
5. Simple sulphureous waters.
6. Sulphuretted gaseous waters.
7. Simple ferruginous waters.
8. Ferruginous and acidulous waters.
9. Sulphuric ferruginous waters.

Dr. Saunders arranges mineral waters into the following classes: —

1. Simple cold.
2. ——— thermal.
3. ——— saline.
4. Highly carbonated alkaline.
5. Simple carbonated chalybeate.
6. Hot carbonated chalybeate.
7. Highly carbonated chalybeate.
8. Saline carbonated chalybeate.
9. Hot saline highly carbonated chalybeate.
10. Vitriolated chalybeate.
11. Cold, sulphureous.
12. Hot, alkaline, sulphureous.

In order to present the reader, under one point of view, with the most conspicuous features in the composition of the mineral water of this and some other countries, the following Synoptical Table is subjoined, from Dr. Saunders's work on mineral waters.

The reader will please to observe, that under the head of *Neutral Purging Salts,* are included the sulphates of soda and magnesia, and the muriates of lime, soda, and magnesia. The power which the earthy muriates may possess of acting on the intestinal canal, is not quite ascertained, but, from their great solubility, and from analogy with salts, with similar component parts, we may conclude that this forms a principal part of their operation.

The reader will likewise observe, that where the spaces are left blank, it signifies that we are ignorant whether any of the substance at the head of the column is contained in the water; that the word *none,* implies a certainty of the absence of that substance; and the term *uncertain,* means that the substance is contained, but that the quantity is not known.

TABLE, showing the Composition of MINERAL WATERS.

CLASS.	NAME.	Highest Temperature.	Contained in an English Wine Pint of 28·875 Cubic Inches.						
			Azotic Gas.	Carbonic Acid Gas.	Sulphuretted Hydrogene.	Carbonated Soda.	Neutral Purging Salts.	Selenite and Earthy Carbonates.	Oxide of Iron.
		Fahrenheit.	Cubic Inches.	Cubic Inches.	Cubic Inches.	Grains.	Grains.	Grains.	Grains.
Simple cold - - -	Malvern			uncertain	none	none	uncertain	uncertain	none
	Holywell				none	none	uncertain	uncertain	none
Simple thermal - -	Bristol	74°	uncertain	3·75	none	none	2·81	3·16	none
	Matlock	66°		uncertain	none	none	uncertain	uncertain	none
	Buxton	82°	0·474	uncertain	none	none	0·25	1·625	none
Simple saline - - -	Sedlitz			1·	none	none	185·6	8·68	none
	Epsom				none	none	40·?	8·?	none
	Sea				none	none	237·5	6·	none
Highly carbonated alkaline	Seltzer			17·	none	4·	17·5	8·	none
Simple carbonated chalybeate	Tunbridge		0·675	1·325	none	none	0·344	0·156	0·125
Hot carbonated chalybeate	Bath	116°	1·?	1·?	none	none	10·?	10·?	uncertain
Highly carbonated chalybeate - - - -	Spa			12.79	none	1·47	4·632	1·47	0·56
	Pyrmont			26·	none	none	7·13	23·075	0·56
Saline, carbonated chalybeate - - - -	Cheltenham		uncertain	5·687	uncertain	none	62·125	6·85	0·625
	Scarborough			uncertain	none	none	20·	10·	uncertain
Hot, saline, highly carbonated chalybeate - -	Vichy	120°?		uncertain	none	uncertain		uncertain	uncertain
	Carlsbad	165°		uncertain	none	11·76	47·04	4·15	uncertain
Vitriolated chalybeate -	Hartfell				none	none	none	none	4·815*
Cold sulphureous - -	Harrowgate		0·875	1·	2·375	none	91·25	3·	none
	Moffat		0·5	0·625	1·25	none	4·5	none	none
Hot, alkaline, sulphureous	Aix	143°		uncertain	uncertain	12·	5·	4·75	none
	Borset	132°		uncertain	uncertain	uncertain	uncertain		none
	Barege	120°			uncertain	2·5	0·5	uncertain	none

* That is, 2·94 contained in the sulphate of iron, (this salt, when crystallised, containing 28 per cent. of oxide of iron, according to Kirwan,) and 1·875 additional of oxide of iron.)

MINERA'LIS. See *Mineral.*

MINERALISE. Metallic substances are said to be mineralised when deprived of their usual properties by combination with some other substance.

MINERA'LOGY. (*Mineralogia, æ,* f.; from *mineralis,* a mineral, and *λογος,* a discourse.) That part of natural history which relates to minerals. See *Mineral.*

MINIATUS. A dull red: applied, in *Natural History,* to designate colour. See *Colour.*

MINIM. See *Minimum.*

MINIMUM. (*um, i.* n.) A minim. The sixtieth part of a fluid drachm. An important change has been adopted in the London Pharmacopœia, for the mensuration of liquids, and the division of the wine pint, to insure accuracy in the measurement of quantities of liquids below one drachm. The number of drops contained in one drachm has been assumed to be sixty; and taking water as a standard, this number, though by no means accurate, would still be sufficient for ordinary purposes; but when other liquids of less specific gravity are used, a much larger number is required to fill the same measure, as of proof spirit, 140 drops are required to equal the bulk of 60 of water, dropped from the same vessel. If, therefore, in the composition of medicines, measures suited to the standard of water were used occasionally only, and it was generally assumed that 60 drops were equal to one fluid drachm, and one fluid drachm was substituted for 60 drops prescribed, twice the dose intended would be given. There are further objections to the use of drops; that their bulk is influenced by the quantity of liquid contained in the bottle from which they fall, by the thickness of the lip, and even by the inequalities on the surface of the lip of the same bottle; that volatile liquids, to which this mode is most commonly applied, are thus exposed with extensive surfaces, and their evaporation promoted; and, on all these accounts, the adoption of some decisive, convenient, and uniform substitute became necessary. The subdivision of the wine pint has, therefore, been extended to the sixtieth part of the fluid drachm, which is termed minim; and glass measures, expressive of such subdivision, have been adopted by the college.

MI'NIUM. Red oxide of lead. See *Lead.*

MINIUM GRÆCORUM. Native cinnabar.

MINT. See *Mentha.*

Mint, pepper. See *Mentha piperita.*

Mint, water. See *Mentha aquatica.*

MISCARRIAGE. See *Abortion.*

MISERE'RE MEI. (*Have compassion on me:* so named from its unhappy torments.) Several agonising diseases had this appellation. See *Iliac passion.*

MISLAW. See *Musa paradisiaca.*

MISLETOE. See *Viscum.*

MISOCHY'MICUS. An enemy to chemists.

MISPICKLE. Common arsenical pyrites. A white, brilliant, granulated iron ore, composed of iron in combination with arsenic.

MISTU'RA. (*a, æ.* f.) A mixture. A fluid composed of two or more ingredients. It is mostly contracted in prescriptions thus, *mist.* e. g. —*f. mist.* which means, let a mixture be made.

MISTURA AMMONIACI. *Lac ammoniaci.* Mixture of ammoniacum. Take of ammoniacum, two drachms; of water, half a pint; rub the ammoniacum with the water gradually added, till they are thoroughly mixed.

MISTURA AMYGDALÆ. *Lac amygdalæ.* Almond mixture, or emulsion. Take of almond confection, two ounces; distilled water, a pint; gradually add the water to the almond confection, rubbing them together, till properly mixed; then strain.

MISTURA ASSAFŒTIDÆ. *Lac assafœtidæ.* Mixture of assafœtida. Take of assafœtida, two drachms; water, half a pint: rub the assafœtida with the water, gradually added, till they are thoroughly mixed.

MISTURA CAMPHORÆ. Camphire mixture. Take of camphire, half a drachm; rectified spirit, ten minims; water, a pint. First rub the camphire with the spirit, then with the water gradually added, and strain the liquor. A very elegant preparation of camphire, for delicate stomachs, and those who cannot bear it in substance, as an antispasmodic and nervine. There is a great loss of camphire in making it as directed by the pharmacopœia. Water can only take up a certain quantity. For its virtues, see *Laurus camphora.*

MISTURA CORNU USTI. *Decoctum album.* Decoction of hartshorn. Take of hartshorn, burnt and prepared, two ounces; acacia gum, powdered, an ounce; water, three pints. Boil down to two pints, constantly stirring, and strain. This is a much weaker absorbent than the mistura cretæ, but is much more agreeable to most people. It forms an excellent drink in fevers attended with diarrhœa, and acidities of the primæ viæ.

MISTURA CRETÆ. Chalk mixture. Take of prepared chalk, half an ounce; refined sugar, three drachms; gum-arabic, powdered, half an ounce; water, a pint. Mix. A very useful and pleasant form of administering chalk as an astringent and antacid. It is particularly calculated for children, in whom it allays the many deranged actions of the primæ viæ, which are produced by acidities. Dose, one ounce to three, frequently. See *Creta,* and *Carbonas calcis.*

MISTURA FERRI COMPOSITA.—Take of myrrh, powdered, a drachm; subcarbonate of potash, twenty-five grains; rose-water, seven fluid ounces and a half; sulphate of iron, powdered, a scruple; spirit of nutmeg, half a fluid ounce; refined sugar, a drachm. Rub together the myrrh, the subcarbonate of potash, and sugar; and, during the trituration, add gradually, first, the rose-water and spirit of nutmegs, and last, the sulphate of iron. Pour the mixture immediately into a proper glass bottle, and stop it close. This preparation is the celebrated mixture of Dr. Griffiths. A chemical decomposition is effected in form-

ing this mixture, a subcarbonate of iron is formed, and a sulphate of potash.

Mistura guaiaci. — Take of guaiacum gum-resin, a drachm and a half; refined sugar, two drachms; mucilage of acacia-gum, two fluid drachms; cinnamon-water, eight fluid ounces. Rub the guaiacum with the sugar, then with the mucilage; and, when they are mixed, pour on the cinnamon-water gradually, rubbing them together. For its virtues, see *Guaiacum.*

Mistura moschi. — Take of musk, acacia gum, powdered, refined sugar, of each a drachm; rose-water, six fluid ounces. Rub the musk first with the sugar, then with the gum, and add the rose-water by degrees. An excellent diaphoretic and antispasmodic. It is by far the best way of administering musk, when boluses cannot be swallowed. Dose, one ounce to three, frequently.

Mite. See *Acarus.*

Mithridate mustard. See *Thlaspi campestre.*

MITHRIDA'TIUM. (*um, ii.* n.; so named after Mithridates, king of Pontus and Bithynia, who, experiencing the virtues of the simples separately, afterwards combined them.) *Mithridate. Confectio. Damocratis. Theriaca Andromachi. Theriaca Veneti.* This composition originally consisted of but few ingredients; viz. twenty leaves of rue, two walnuts, two figs, and a little salt: of this we are informed that Mithridates took a dose every morning, to guard himself against the effects of poison. It was afterwards altered, and the number of ingredients increased to sixty-one. A preparation of this kind is still made at Apothecaries' Hall, though seldom used. There are, however, some physicians in the present day who prescribe it, in the dose of from ten grains to a scruple, against nervous irritations.

MITRAL. (*Mitralis*; from *mitra*, a mitre.) Mitre-like: applied by anatomists to parts which were supposed to resemble a bishop's mitre; as the mitral valves of the heart.

Mitral valves. *Valvulæ mitrales.* The valves of the left ventricle of the heart.

Mi'va. An ancient term for the form of a medicine, not unlike a thick syrup, now called *Marmalade.*

MIXED FEVER. This form of continued fever is so called because it has a mixture of the symptoms of an inflammatory fever with those of typhus, being a compound of the two types of febrile action; namely, synocha and typhus. Its systematic name is *synochus.* It is the most common fever in this climate, and it mostly resembles an inflammatory fever in its commencement, and becomes more typhoid in its progress. Or, at the very commencement, the greater number of its symptoms are of an inflammatory character, but there is one or more decidedly typhous.

Every thing which has a tendency to enervate the body, may be looked upon as a remote cause of it; and accordingly we find it often arising from great bodily fatigue, too great an indulgence in sensual pleasures, violent exertion, intemperance in drinking, and errors in diet, and now and then, likewise, from the suppression of some long-accustomed discharge: but all the causes of inflammatory fever may be adduced, and some pathologists are of opinion that the causes of typhus are equally capable of producing it; contending that much depends on the constitution of the individual. A reference to the account of inflammatory and typhus fever, will render it unnecessary to give a detailed account of this species of fever. The attack is generally marked by the patient's being seized with a considerable degree of languor or sense of debility, together with a sluggishness in motion, and frequent yawning and stretching; the face and extremities at the same time become pale, and the skin over the whole surface of the body appears constricted; he then perceives a sensation of cold in his back, passing from thence over his whole frame; and this sense of cold continues to increase, and rigors succeed.

With these there is a loss of appetite, want of taste in the mouth, slight pains in the head, back, and loins, and small and frequent respirations. The sense of cold and its effects after a little time becomes less violent, and are alternated with flushings, and at last, going off altogether, they are succeeded by great heat diffused generally over the whole body; the face looks flushed, the skin is dry, as likewise the tongue; universal restlessness prevails, with a violent pain in the head, oppression at the chest, sickness at the stomach, and an inclination to vomit. There is, likewise, a great thirst and costiveness, and the pulse is full and frequent, beating, perhaps, 90 or 100 strokes in a minute. When the symptoms run very high, and there is a considerable determination of blood to the head, a delirium will arise. In this fever, there is an increase of symptoms towards evening. In many cases there is much bilious vomiting, and disturbance of the hepatic function; the skin is yellowish, and there is great nausea and thirst. These circumstances, and certain other functional derangements of particular organs, give rise to the appellations of bilious, comatose, catarrhal synochus, &c.

If the disease is likely to prove fatal, either by its continuing a long time, or by the severity of its symptoms, then a starting of the tendons, picking at the bed-clothes, involuntary discharges by urine and stool, coldness of the extremities, and hiccoughs, will be observed: where no such appearances take place, the disease will go through its course.

This fever being of a mixed nature, the treatment must be modified accordingly. In the beginning, the same plan is to be pursued as in inflammatory fever, except that we must be more sparing in the use of the lancet, in proportion as there is less power in the system to maintain the increased action of the heart and arteries; although, if any important part should

be much affected, we must act more vigourously, to prevent its disorganisation, and the consequent destruction of life. When the character of the disease is changed, the means proper will be such as are pointed out under the head of Typhus.

MIXTURE. 1. In *Pharmacy.* See *Mistura.*

2. In *Chemistry,* mixture should be distinguished from solution: in the former, the aggregate particles can again be separated by mechanical means, and the proportion of the different particles determined; but, in solution, no mechanical power whatsoever can separate them.

MOCHA. A species of agate.

Mo'chlia. (From μοχλος, a lever.) A reduction of the bones from an unnatural to a natural situation.

Mo'chlicus. (From μοχλευω, to move.) Purging violently.

MODI'OLUS. (*us, i.* m.; diminutive of *modius,* a measure.) The nucleus, as it were, of the cochlea of the ear is so termed. It ascends from the basis of the cochlea to the apex.

Mofette. See *Nitrogene.*

MOFFAT. A village, situated about fifty-six miles south-west of Edinburgh. It affords a cold sulphureous water, of a very simple composition: when first drawn, it appears rather milky and bluish; the smell is exactly similar to that of Harrowgate; the taste is sulphureous and saline, without any thing bitter. It sparkles somewhat on being poured from one glass into another.

According to Dr. Garnett's analysis, a wine gallon of Moffat water contains thirty-six grains of muriate of soda, five cubic inches of carbonic acid gas, four of azotic gas, and ten of sulphuretted hydrogene, making altogether nineteen cubic inches of gas. Moffat water is, therefore, very simple in its composition; and hence it produces effects somewhat similar to those of Harrowgate. It is, perhaps, on this account also that it so soon loses the hepatic gas, on which depends the greatest part of its medicinal power. The only sensible effect of this water is that of increasing the flow of urine; when it purges, it appears rather to take place from the excessive dose than from its mineral ingredients. This water appears to be useful chiefly in cutaneous eruptions, and, as an external application at an increased temperature, scrofula in its early stage appears to be alleviated by it. It is also used as an external application to irritable ulcers, and is recommended in dyspepsia, and where there is inaction of the alimentary canal.

MOGIL'ALIA. (From μογις, difficulty, and λαλεω, to speak.) A difficulty of speech.

MO'LA. (Hebrew; or from μύλη, a millstone.) 1. The knee-pan: so named because it is shaped like a millstone.

2. A mole, or shapeless mass of flesh in the uterus. See *Mole.*

MOLA'RIS. (From *molaris,* a grindstone; because they grind the food.) A double-tooth. See *Teeth.*

Molares dentes. See *Teeth.*

Molares glandulæ. Molar glands. Two salival glands situated on each side of the mouth, between the masseter and buccinator muscles, the excretory ducts of which open near the last dens molaris.

MOLASSES. See *Saccharum officinale.*

MOLASSIC. See *Melassic.*

MOLDA'VICA. See *Dracocephalum.*

MOLE. *Mola.* By this term authors have intended to describe different productions of, or excretions from, the uterus.

By some it has been used to signify every kind of fleshy substance, particularly those which are properly called polypi; by others, those only which are the consequence of imperfect conception, or when the ovum is in a morbid or decayed state; and by many, which is the most popular opinion, every coagulum of blood which continues long enough in the uterus to assume somewhat of an organised form, and to have only the fibrous part, as it has been called, remaining, is denominated a mole. There is surely much impropriety, says Dr. Denman, in including, under one general name, appearances so contrary and substances so different.

1. For an account of the first kind, see *Polypus.*

2. Of the second kind, which has been defined as an *ovum deforme,* as it is the consequence of conception, it might more justly be arranged under the class of monsters: for though it has the appearance of a shapeless mass of flesh, if examined carefully with a knife, various parts of a child may be discovered, lying together in apparent confusion, but in actual regularity. The pedicle also, by which it is connected to the uterus, is not of a fleshy texture, like that of the polypus, but has a regular series of vessels like the umbilical cord, and there is likewise a placenta and membranes containing water. The symptoms attending the formation, growth, and expulsion of this apparently confused mass from the uterus, correspond with those of a well-formed child.

3. With respect to the third sort of mole, an incision into its substance will discover its true nature; for, although the external surface appears at the first view to be organised flesh, the internal part is composed merely of coagulated blood. As substances of this kind, which mostly occur after delivery, would always be expelled by the action of the uterus, there seems to be no reason for a particular enquiry, if popular opinion had not annexed the idea of mischief to them, and attributed their formation or continuance in the uterus to the negligence or misconduct of the practitioner. Hence the persuasion arose of the necessity of extracting all the coagula of blood out of the uterus, immediately after the expulsion of the placenta, or of giving medicines to force them away; but abundant experience has proved, that the retention of such coagula is not, under

any circumstances, productive of danger, and that they are most safely expelled by the action of the uterus, though at very different periods f ter their formation.

MOLENDINACEOUS. (From *mola*, a mill; *à molendo*.) Like a windmill: applied to the many-winged seeds of some umbelliferous plants.

Mo'lle. Indian mastich.

MOLLIFICA'TIO. A softening. Formerly applied to a palsy, because the flesh becomes soft in that disease.

MOLLI'TIES. (*es, ei.* f.; from *mollis*, soft.) A softness: applied to bones, nails, and other parts.

Mollities ossium. See *Malacosteon*.

Mollities unguium. A preternatural softness of the nails: it often accompanies chlorosis.

MOLLUSCUM. A tubercular disease of the skin, characterised by the appearance of numerous tubercles, of slow growth and little sensibility, and of various sizes, from that of a vetch to that of a pigeon's egg. These contain an atheromatous matter, and are of various forms, some being sessile, globular, or flattish, and some attached by a neck, and pendulous. The growth of the tubercles is apparently unconnected with any constitutional disorder: they show no tendency to inflammation or ulceration; but continue through life, having apparently no natural termination. A very extraordinary instance of this cutaneous deformity, which occurred in a poor man, who was living in good health at Muhlberg, in 1793, and whose body, face, and extremities were thickly studded with these atheromatous tubercles, has been described by Professor Tilesius, who has given portraits of the naked patient in three positions, in a pamphlet, edited at Leipsic, in that year, by Professor Ludwig.

Molucce'nse lignum. See *Croton*.

MOLY'BDATE. *Molybdas.* A salt formed by the union of the molybdic acid with salifiable bases: thus, *molybdate of antimony*, &c.

MOLYBDENUM. (*um, i.* n.; from μολυβδος, lead.) *Molybditis.* A metal which exists mineralised by sulphur in the ore, called *sulphuret of molybdena.* This ore, which is very scarce, is so similar in several of its properties to plumbago, that they were long considered as varieties of the same substance: and it is the only one known which contains this metal, for the accurate analysis of which we are indebted to Mr. Hatchet.

MOLYBDIC. (*Molybdicus*, from *molybdenum*, its base.) The name of an acid.

Molybdic acid. *Acidum molybdicum.* The native sulphuret of molybdenum being roasted for some time, and dissolved in water of ammonia, when nitric acid is added to this solution, the molybdic acid precipitates in fine white scales, which become yellow on melting and subliming them. It changes the vegetable blues to red, but less readily and powerfully than the molybdous acid. It has not yet, nor any of its combinations, been applied to medical purposes.

MOLYBDI'TIS. See *Molybdenum*.

MOLY'BDOS. (Οτι μολει εις βαθος; from its gravity.) Lead.

MOLYBDOUS. The name of an acid.

Molybdous acid. *Acidum molybdosum.* This forms salts with different alkaline, earthy, and metallic bases, but has not yet been used medicinally.

Moly'za. (Diminutive of μωλυ, moly.) Garlic; the head of which, like moly, is not divided into cloves.

Momiscus. (From μωμος, a blemish.) That part of the teeth which is next the gums, and which is usually covered with a foul tartareous crust.

MOMO'RDICA. (*a, æ.* f.; from *mordeo*, to bite: from its sharp taste.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Syngenesia*.

Momordica elaterium. The systematic name of the wild or squirting cucumber; called also, *Elaterium, Cucumis agrestis, Cucumis asininus, Cucumis sylvestris, Elaterium officinarum, Boubalios, Charantia,* and *Guarerba orba. Momordica—pomis hispidis cirrhis nullis,* of Linnæus. The dried sediment from the juice of this plant is the elaterium of the shops. It has neither smell nor taste, and is the most powerful carthartic in the whole Materia Medica. Its efficacy in dropsies is said to be considerable; it, however, requires great caution in the exhibition. From the eighth to the half of a grain should be given at first, and repeated at proper intervals until it operates. The cathartic power of this substance is derived from a small portion of a very active principle, which Dr. Paris, in his Pharmacologia, has called *elatin.* From ten grains of elaterium he obtained,

Water	0·4
Extractive	2·6
Fecula	2·8
Gluten	0·5
Woody matter............	2·5
Elatin .... } Bitter principle .... }	1·2
	10·

MONADE'LPHIA. (*a, æ.* f.; from μονος, alone, and αδελφια, a brotherhood.) A class of plants in the sexual system of Linnæus, consisting of plants with hermaphrodite flowers, in which all the stamina are united below into one body or cylinder, through which the pistil passes.

MONA'NDRIA. (*a, æ.* f.; from μονος, alone, and ανηρ, a husband.) The name of a class of plants in the sexual system of Linnæus, consisting of plants with hermaphrodite flowers, which have only one stamen.

MONA'RDA. (*a, æ.* f.; so called in honour of Nicholas Monardes, a Spanish physician and botanist.) The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.*

Monarda fistulosa. The purple monarda. The leaves of this plant have a fragrant smell, and an aromatic and somewhat bitter taste,

possessing nervine, stomachic, and deobstruent virtues. An infusion is recommended in the cure of intermittent fevers.

Mone'lli. A species of *Anagallis*.

MONEY-WORT. See *Lysimachia*.

MONILIFO'RMIS. (From *monile*, an ornament for any part of the body, especially a necklace or collar, and *forma*, likeness.) Moniliform: necklace-like. Applied to the pod of the *Hedysarum moniliferum*, from its necklace appearance.

Monk's rhubarb. See *Rumex alpinus*.

MONKSHOOD. See *Aconitum napellus*.

MONOCOTYLEDON. (*on*, *onis*. f.; from μονος, one, and κοτυληδων, a cotyledon.) Having one cotyledon.

Monocotyledones. A tribe of plants which are supposed to have only one cotyledon; as the grass and corn tribe, palms, and the orchis family. See *Cotyledon*.

MONO'CULUS. (*us*, *i*. m.; from μονος, one, and *oculus*, an eye.) *Monopia*.

1. A very uncommon species of monstrosity, in which there is but one eye, and that mostly above the root of the nose.

2. *Intestinum monoculum*, a name given to the cæcum, or blind gut, because it is perforated only at one end.

MONŒ'CIA. (*a*, *æ*. f.; from μονος, alone, and οικια, a house.) The name of a class of plants in the sexual system of Linnæus, consisting of those which have male and female organs in separate flowers, but on the same plant.

MONOGY'NIA. (*a*, *æ*. f.; from μονος, alone, and γυνη, a woman, or wife.) The name of an order of plants of the sexual system of Linnæus. It contains those plants which, besides their agreement in the classic character, have only one style.

Monohe'mera. (From μονος, single, and ημερα a day.) A disease of one day's continuance.

MONOICUS. (*us*, *i*. m.; from μονος, one, and οικια, a house.) Linnæus calls flowers *monoici*, monœcious, when the stamens and pistils are situated, in different flowers, on the same individual plant, because they are confined to one house, as it were, or dwelling; and if the barren and fertile flowers grow from separate roots, *flores dioici*, or diœcious flowers.

Mono'machon. The intestinum cæcum.

MONOMA'NIA. (*a*, *æ*. f.; from μονος, one, and μαινομαι, to rage: *i.e.* being irrational on one subject only.) That species of insanity in which the patient's delusion runs on one subject only, he being very rational on every other.

Monope'gia. (From μονος, single, and πηγνυμι, to compress.) A pain in only one side of the head.

MONOPE'TALOUS. (*Monopetalus*; from μονος, one, and πεταλον, a leaf.) One-petalled: applied to a flower which has only one petal; as that of the *Convolvulus*, *Primula*, &c.

MONOPHYLLOUS. (*Monophyllus*; from μονος, one, and φυλλον, a leaf.) One-leafed; having only one leaf: applied to the perianthium of flowers; thus the flower-cup of the *Datura stramonium* is monophyllous, or formed of one leaf.

MONO'PIA. (*a*, *æ*. f.; from μονος, single, and ωψ, the eye.) See *Monoculus*.

MONO'RCHIS. (*is*, *idis*. f.; from μονος, one, and ορχις, a testicle.) An epithet for a person that has but one testicle.

MONOSPERMAL. (*Monosperma*; from μονος, one, and σπερμα, a seed.) Having one seed: applied to seed-vessels.

MONRO, Alexander, was born in London, of Scotch parents, in 1697. His father, who was an army surgeon, settled afterwards at Edinburgh, and took great interest in his education. At a proper age he sent him to attend Cheselden in London, where he displayed great assiduity, and laid the foundation of his celebrated work on the bones; he then went to Paris, and, in 1718, to Leyden, where he received the particular commendation of Boerhaave. Returning to Edinburgh the following year, he was appointed professor and demonstrator of anatomy to the Company of Surgeons, and soon after he began to give public lectures on that subject, Dr. Alston at the same time taking up the Materia Medica and Botany. This may be regarded as the opening of that medical school, which has since extended its fame throughout Europe, and even to America. His first and chief work was his *Osteology*, in 1726, intended for his pupils; but which became very popular, passed through numerous editions, and was translated into most European languages: he afterwards added a concise description of the nerves, and a very accurate account of the lacteal system and thoracic duct. He was the supporter of a society to which the public was indebted for six volumes of *Medical Essays and Observations*. He contributed many valuable papers; especially an elaborate *Essay on the Nutrition of the Fœtus*. The plan of the society was afterwards extended, and three volumes of *Essays, Physical and Literary*, were published, in which Dr. Monro has several useful papers. His last publication was an *Account of the Success of Inoculation in Scotland*. He left, however, several works in manuscript; of which a short *Treatise on Comparative Anatomy*, and his oration *De Cuticulâ*, have been since given to the public.

MONS. (*s*, *tis*. m.) A mount, or hill.

Mons veneris. The triangular eminence immediately over the os pubis of women, that is covered with hair.

MONSTER. (*Monstrum*, *i*. n.) *Lusus naturæ*. Dr. Denman divides monsters into, 1st. Monsters from redundance or multiplicity of parts; 2d. Monsters from deficiency or want of parts; 3d. Monsters from confusion of parts. To these might perhaps be added, without impropriety, another kind, in which there is neither redundance, nor deficiency, nor confusion of parts, but an error of

place, as in transposition of the viscera. Children born with diseases, as the hydrocephalus, or their effects, as in some cases of blindness from previous inflammation, cannot be properly considered as monsters, though they are often so denominated.

Of the first order there may be two kinds: redundance or multiplicity of natural parts, as of two heads and one body, of one head and two bodies, an increased number of limbs, as legs, arms, fingers, and toes; or excrescences or additions to parts of no certain form, as those upon the head and other parts of the body. It is not surprising that we should be ignorant of the manner in which monsters or irregular births are generated or produced; though it is probable that the laws by which these are governed are as regular, both as to cause and effect, as in common or natural productions. Formerly, and indeed till within these few years, it was a generally received opinion, that monsters were not primordial or aboriginal, but that they were caused subsequently, by the power of the imagination of the mother, transferring the imperfection of some external object, or the mark of something for which she longed, and with which she was not indulged, to the child of which she was pregnant; or by some accident which happened to her during her pregnancy. Such opinions, it is reasonable to think, were permitted to pass current, in order to protect pregnant women from all hazardous and disagreeable occupations, to screen them from severe labour, and to procure for them a greater share of indulgence and tenderness than could be granted to them in the common occurrences of life. The laws and customs of every civilised nation have, in some degree, established a persuasion that there was something sacred in the person of a pregnant woman; and this may be right in several points of view: but these only go a little way towards justifying the opinion of monsters being caused by the imagination of the mother. The opinion has been disproved by common observation, and by philosophy, not perhaps by positive proofs, but by many strong negative facts; as the improbability of any child being born perfect, had such a power existed; the freedom of children from any blemish, their mothers being in situations most exposed to objects likely to produce them; the ignorance of the mother of any thing being wrong in the child, till, from information of the fact, she begins to recollect every accident which happened during her pregnancy, and assigns the worst or the most plausible as the cause; the organisation and colour of these adventitious substances; the frequent occurrence of monsters in the brute creation, in which the power of the imagination cannot be great; and the analogous appearances in the vegetable system, where it does not exist in any degree. Judging, however, from appearances, accidents may perhaps be allowed to have considerable influence in the production of monsters of some kinds, either by actual injury upon parts, or by suppressing or deranging the principle of growth, because, when an arm, for instance, is wanting, the rudiments of the deficient parts may generally be discovered.

MONTMARTRITE. A mineral compound of sulphate and carbonate of lime, that stands the weather, which common gypsum does not. It is found at Montmartre, near Paris.

MOON. See *Luna*.

MOONSTONE. A variety of adularia.

Moon-wort. See *Ophioglossum lunaria*.

MORBI'LLI. (*i, orum.* m.; diminutive of *morbus*, a disease.) See *Rubeola*.

MORBUS. See *Disease*.

Morbus arquatus. The jaundice.

Morbus attonitus. The epilepsy and apoplexy are so called by some writers.

Morbus coxarius. See *Arthropuosis*.

Morbus gallicus. The venereal disease.

Morbus herculeus. The epilepsy.

Morbus indicus. The venereal disease.

Morbus infantilis. The epilepsy.

Morbus magnus. The epilepsy.

Morbus niger. See *Melæna*.

Morbus regius. The jaundice.

Morbus sacer. The epilepsy.

MORCHELLA. (*a, æ.* f. A name of Persoon's, of the derivation of which nothing is known.) The name of a genus of plants. Class, *Cryptogamia*; Order, *Fungi*. The morel.

Morchella esculenta. This and the *gigas* are the morels mostly used. All the morchellæ are, also, very wholesome and agreeable in sauces and made dishes. They are distinguished from the stinkhorns, or phalli, by the absence of the fœtid juice of the latter, and also of the volva which envelopes the young phalli.

MORDANT. In dyeing, the substance combined with the vegetable or animal fibre, in order to fix the dye-stuff.

MOREL. See *Morchella esculenta*.

More'tus. (From *morum*, the mulberry.) A decoction of mulberries.

MORGAGNI, Giambatista, was born in 1682. He commenced his medical studies at Bologna, and afterwards prosecuted them at Venice and Padua. He soon distinguished himself by the publication of the first part of his *Adversaria Anatomica*, a work remarkable for its accuracy, as well as originality; of which subsequently five other parts appeared. He assisted Lancisi in preparing for publication the valuable drawings of Eustachius, which came out in 1714. His native city placed a bust of him in their public hall during his life, with an honorary inscription: he attained the advanced age of 90. Besides the Adversaria, he published several other works, two quarto volumes of anatomical epistles, and an essay on the proper method of acquiring medical science. But that which has chiefly rendered his name illustrious, is entitled, *De Sedibus et Causis Morborum*, printed at Venice in 1760. It contains a prodigious collection of dissections of morbid

bodies, made by Valsalva and himself, arranged according to the organs affected. He followed the plan of Bonetus; but the accuracy of his details renders the collection far superior in value to any that had preceded it.

MO'RIA. (*a, æ. f.*; from μωρος, foolish.) Idiotism. Fatuity.

Mo'ro. (From *morum*, a mulberry.) A small abscess resembling a mulberry.

MORO'SIS. (From μωρος, foolish.) See *Amentia.*

MOROXYLATE. (*Moroxylas, atis.* m.; so called from being a compound of *moroxylic* acid.) A compound of moroxylic acid with a salifiable basis.

MOROXYLIC. (*Moroxylicus*; from *morus*, the mulberry tree, and ξυλον, wood: because it is found on the bark or wood of that tree.) Appertaining to the bark of the mulberry tree.

Moroxylic acid. *Acidum moroxylicum.* In the botanic garden at Palermo, Mr. Thompson found an uncommon saline substance on the trunk of a white mulberry tree. It appeared as a coating on the surface of the bark in little granulous drops of a yellowish and blackish-brown colour, and had likewise penetrated its substance. This salt was found to be a compound of lime and a peculiar vegetable acid, with some extractive matter.

MORPHE'A. (*a, æ. f.*; from μορφη, form.) A term introduced in some Latin works for a species of elephantiasis, lepra, &c.

MO'RPHIA. (*a, æ. f.*) A vegetable alkali, extracted from opium, of which it constitutes the narcotic principle. See *Papaver somniferum.*

Morphiæ acetas. Acetate of morphia. See *Papaver somniferum.*

MORPHINE. See *Morphia.*

MORSE'LLUS. A lozenge.

MORSULUS. An ancient name for that form of medicine which was to be chewed in the mouth, as a lozenge; the word signifying a little mouthful.

MO'RSUS. (*us, ûs.* m.; from *mordeo.*) A bite, sting, or grasp.

Mo'rsus diaboli. A whimsical name of the fimbriæ of the Fallopian tubes.

MO'RTA. See *Pemphigus.*

MORTARI'OLUM. (Diminutive of *mortarium*, a mortar.) 1. In *Chemistry*, a sort of mould for making cupels with.

2. A little mortar.

3. In *Anatomy*, the socket of a tooth.

MORTIFICATION. (*Mortificatio, onis.* f.; from *mors*, death, and *fio*, to become.) *Gangrena. Sphacelus.* The loss of vitality of a part of the body. Surgeons divide mortification into two species, the one preceded by inflammation, the other without it. In inflammations that are to terminate by mortification, there is a diminution of power joined to an increased action; this becomes a cause of mortification, by destroying the balance of power and action, which ought to exist in every part. There are, however, cases of mortification that do not arise wholly from that as a cause: of this kind are the carbuncle, and the slough, formed in the small-pox pustule. Healthy phlegmonous inflammation seldom ends in mortification, though it does so when very vehement and extensive. Erysipelatous inflammation is observed most frequently to terminate in gangrene; and whenever phlegmon is in any degree conjoined with an erysipelatous affection, which it not unfrequently is, it seems thereby to acquire the same tendency, being more difficult to bring to resolution, or suppuration, than the true phlegmon, and more apt to run into a mortified state.

Causes which impede the circulation of the part affected, will occasion mortification, as is exemplified in strangulated hernia, tied polypi, or a limb being deprived of circulation from a dislocated joint.

Preventing the entrance of arterial blood into a limb, is also another cause. Paralysis, conjoined with pressure, old age, and ossification of the arteries, may produce mortification; also cold, particularly if followed by the sudden application of warmth; and likewise excessive heat applied to a part.

The symptoms of mortification that take place after inflammation are various, but generally as follows:—the pain and sympathetic fever suddenly diminish, the part affected becomes soft, and of a livid colour, losing at the same time more or less of its sensibility.

When any part of the body loses all motion, sensibility, and natural heat, and becomes of a brown livid or black colour, it is said to be affected with sphacelus. When the part becomes a cold, black, fibrous, senseless substance, it is termed a slough. As long as any sensibility, motion, and warmth continue, the state of the disorder is said to be gangrene. When the part has become quite cold, black, fibrous, incapable of moving, and destitute of all feeling, circulation, and life; this is the second stage of mortification, termed *sphacelus.*

When gangrene takes place, the patient is usually troubled with a kind of hiccough; the constitution always suffers an immediate dejection, the countenance assumes a wild cadaverous look, the pulse becomes small, rapid, and sometimes irregular; cold perspirations come on, and the patient is often affected with diarrhœa and delirium.

MORTON, Richard, was born in Suffolk, and practised in London. His first publication was an attempt to arrange the varieties of consumption, but not very successfully. His *Pyretologia* came out in two volumes, the first in 1691, the other at an interval of three years: in this work especially the stimulant treatment of fevers is carried to an unusual extent, and a more general use of cinchona recommended.

MO'RUM. (*um, i.* n.) See *Morus nigra.*

MO'RUS. (*us, i.* f.; from μαυρος, black: so called from the colour of its fruit when ripe.) The name of a genus of plants in the

Linnæan system. Class, *Monœcia*; Order, *Tetrandria*. The mulberry tree.

Morus nigra. The systematic name of the mulberry tree. *Morus—foliis cordatis scabris*, of Linnæus. Mulberries abound with a deep violet-coloured juice, which, in its general qualities, agrees with that of the fruits called *acido-dulces*, allaying thirst, partly by refrigerating, and partly by exciting an excretion of mucus from the mouth and fauces; a similar effect is also produced in the stomach, where, by correcting putrescency, a powerful cause of thirst is removed. The London College directs a *syrupus mori*, which is an agreeable vehicle for various medicines. The bark of the root of this tree is said, by Andrée, to be useful in cases of tænia.

Mosaic gold. See *Aurum musivum.*

Moscha'ta nux. See *Myristica moschata.*

MOSCHA'TUS. (From *moschus*, musk.) Musky: applied to plants, &c.

MO'SCHUS. (*us, i.* m. *Mosch*, Arabian.) Musk. See *Moschus moschiferus.*

Moschus moschiferus. The systematic name of the musk animal, a ruminating quadruped, resembling the antelope. An unctuous substance is contained in excretory follicles about the navel of the male animal, the strong and permanent smell of which is peculiar to it. It is contained in a bag placed near the umbilical region. The best musk is brought from Tonquin, in China; an inferior sort from Agria and Bengal; and a still worse from Russia. It is slightly unctuous, of a black colour, having a strong durable smell and a bitter taste. It yields part of its active matter to water; by infusion; by distillation the water is impregnated with its flavour; alkohol dissolves it, its impurities excepted. Chewed, and rubbed with a knife on paper, it looks bright, yellowish, smooth, and free from grittiness. Laid on a red-hot iron, it catches flame, and burns almost entirely away, leaving only an exceedingly small quantity of light greyish ashes. If any earthy substances have been mixed with the musk, the impurities will discover them. The medicinal and chemical properties of musk and castor are very similar: the virtues of the former are generally believed to be more powerful, and hence musk is preferred in cases of imminent danger. It is prescribed as a powerful antispasmodic, in doses of three grains or upwards, even to half a drachm, in the greater number of spasmodic diseases, especially in hysteria and singultus, and also in diseases of debility. In typhus it is employed to remove subsultus tendinum, and other symptoms of a spasmodic nature. In cholera, it frequently stops vomiting; and, combined with ammonia, it is given to arrest the progress of gangrene. It is best given in the form of bolus. To children it is given in the form of enema, and is an efficacious remedy in the convulsions arising from dentition. It is also given in hydrophobia, and in some forms of mania.

Mosqui'ta. (From *mosquita*, a gnat, Spanish.) An itching eruption of the skin, produced in hot climates by the bite of gnats.

MOSS. The English name for several species of *musci*, which grow on walls, old wood, trees, damp ground, &c.

Moss, pectoral. See *Lichen pulmonarius.*

Moss, sea. See *Conferva rupestris.*

MOSY'LLUM. Μοσυλλον. The best cinnamon.

MOTHER. 1. See *Mater.*

2. This term was applied to many chemical preparations and plants, from whimsical more than good reasons.

Mother of thyme. See *Thymus serpyllum.*

Mother-water. When sea-water, or any other solution containing various salts, is evaporated, and the crystals taken out, there always remains a fluid containing deliquescent salts, and the impurities, if present. This is called the mother-water.

Mother-wort. See *Leonurus.*

MOTION. See *Muscular motion.*

Motion, peristaltic. See *Peristaltic motion.*

MOTOR. (*or, oris.* m.; from *moveo*, to move.) A mover or stirrer: applied to muscles, &c.

Motor oculi. See *Motores oculorum.*

Moto'res oculorum. (*Nervi motores oculorum*: so called because they supply the muscles which move the eye.) The third pair of nerves of the brain. They arise from the crura cerebri, and are distributed on the muscles of the bulb of the eye.

Moto'rii. See *Motores oculorum.*

MOULD. See *Fontanella.*

Mountain cork. See *Asbestos.*

Mountain green. Common copper green, a carbonate of copper.

Mountain leather. See *Asbestos.*

Mountain parsley, black. See *Athamanta oreoselinum.*

Mountain soap. See *Soap, mountain.*

Mountain wood. See *Asbestos.*

MOUSE-EAR. See *Hieracium pilosella.*

MOUTH. *Os.* 1. The mouth of animals and fishes. In man this cavity is well known. The parts which constitute it are the common integuments, the lips, the muscles of the upper and under jaw, the palate, two alveolar arches, the gums, the tongue, the cheeks, and salival glands. The bones of the mouth are the two superior maxillary, two palatine, the lower jaw, and thirty two teeth. The arteries of the external parts of the mouth are branches of the infra orbital, inferior alveolar, and facial arteries. The veins empty themselves into the external jugulars. The nerves are branches from the fifth and seventh pair. The use of the mouth is for mastication, speech, respiration, deglutition, suction, and taste.

2. The mouth of flowers. See *Faux.*

MO'XA. (*a, æ.* f.; a Japanese word.) See *Artemisia chinensis.*

Moxa japanica. See *Artemisia chinensis.*

MUCIC. (*Mucicus*; from *mucus*, it being obtained from gum.) Appertaining to mucus.

Mucic acid. *Acidum mucicum.* "This acid has been generally known by the name of *saccholactic*, because it was first obtained

from sugar of milk; but as all the gums appear to afford it, and the principal acid in sugar of milk is the oxalic, chemists in general now distinguish it by the name of *mucic* acid.

It was discovered by Scheele. Having poured twelve ounces of diluted nitric acid on four ounces of powdered sugar of milk in a glass retort on a sand-bath, the mixture became gradually hot, and at length effervesced violently, and continued to do so for a considerable time after the retort was taken from the fire. It is necessary, therefore, to use a large retort, and not to lute the receiver too tight. The effervescence having nearly subsided, the retort was again placed on the sand heat, and the nitric acid distilled off, till the mass had acquired a yellowish colour. This exhibiting no crystals, eight ounces more of the same acid were added, and the distillation repeated, till the yellow colour of the fluid disappeared. As the fluid was inspissated by cooling, it was redissolved in eight ounces of water, and filtered. The filtered liquor held oxalic acid in solution, and seven drachms and a half of white powder remained on the filter. This powder was the acid under consideration.

If one part of gum be heated gently with two of nitric acid, till a small quantity of nitrous gas and of carbonic acid is disengaged, the dissolved mass will deposit, on cooling, the mucic acid. According to Fourcroy and Vauquelin, different gums yield from 14 to 26 hundredths of this acid.

This pulverulent acid is soluble in about sixty parts of hot water, and, by cooling, a fourth part separates in small shining scales, that grow white in the air. It decomposes the muriate of barytes, and both the nitrate and muriate of lime. It acts very little on the metals, but forms with their oxides salts scarcely soluble. It precipitates the nitrates of silver, lead, and mercury. With potash it forms a salt soluble in eight parts of boiling water, and crystallisable by cooling. That of soda requires but five parts of water, and is equally crystallisable. Both these salts are still more soluble when the acid is in excess. That of ammonia is deprived of its base by heat. The salts of barytes, lime, and magnesia are nearly insoluble."

MUCILAGE. (*Mucilago, inis.* f.; from *mucus.*) An aqueous solution of gum. See *Gum*.

MUCILAGINOUS. (*Mucilaginosus*; from *mucilago*, mucilage.) Gummy.

MUCILAGINOUS EXTRACTS. Extracts that readily dissolve in water, scarcely at all in spirits of wine, and undergo spirituous fermentation.

MUCILA'GO. See *Mucilage*.

MUCILAGO ACACIÆ. Mucilage of acacia. *Mucilago gummi arabici.* Take of acacia gum, powdered, four ounces; boiling water, half a pint. Rub the gum with the water, gradually added, until it incorporates into a mucilage. A demulcent preparation, more frequently used to combine medicines than in any other form.

MUCILAGO AMYLI. Starch mucilage. Take of starch, three drachms; water, a pint. Rub the starch, gradually adding the water to it; then boil until it incorporates into a mucilage. This preparation is mostly exhibited with opium, in the form of clyster in diarrhœas and dysenteries, where the tenesmus arises from an abrasion of the mucus of the rectum.

MUCILAGO ARABICI GUMMI. See *Mucilago acaciæ*.

MUCILAGO SEMINIS CYDONII. See *Decoctum cydoniæ*.

MUCILAGO TRAGACANTHÆ. Mucilage of tragacanth, joined with syrup of mulberries, forms a pleasant demulcent, and may be exhibited to children, who are fond of it. This mucilage is omitted in the last London Pharmacopœia, as possessing no superiority over the mucilage of acacia.

MUCOCA'RNEUS. In M. A. Severinus, it is an epithet for a tumour, and an abscess, which is partly fleshy and partly mucous.

MUCOUS. (*Mucosus*; from *mucus.*) Of the nature of mucus.

Mucous acid. See *Mucic acid.*

MUCOUS GLANDS. *Glandulæ mucosæ.* Mucipalous glands. Glands that secrete mucus, such as the glands of the Schneiderian membrane of the nose, the glands of the fauces, œsophagus, stomach, intestines, bladder, urethra, &c.

Mucous web. See *Membrane.*

MUCRONA'TUS. (From *mucro*, a sharp point.) Sharp-pointed; dagger-pointed. See *Cuspidatus.*

MUCUS. (*us, i.* m.; from μυξα, the mucus of the nose.) A name given to the two following substances:—

1. *Mucus, animal.* One of the primary fluids of an animal body, perfectly distinct from gelatine, and vegetable mucus. Tannin, which is a delicate test for gelatine, does not affect mucus. "This fluid is transparent, glutinous, thready, and of a salt savour; it reddens paper of turnsole; contains a great deal of water, muriate of potash and soda, lactate of lime, of soda, and phosphate of lime. According to Fourcroy and Vauquelin, the mucus is the same in all the mucous membranes. On the contrary, Berzelius thinks it variable according to the points from which it is extracted.

Mucus forms a layer of greater or less thickness at the surface of the mucous membranes, and it is renewed with more or less rapidity; the water it contains evaporates under the name of *mucous exhalation*; it also protects these membranes against the action of the air, of the aliment, the different glandular fluids, &c.; it is, in fact, to these membranes nearly what the epidermis is to the skin. Independently of this general use, it has others that vary according to the parts of mucous membranes. Thus, the mucus of the nose is favourable to the smell; that of the mouth gives facility to the taste; that of the stomach

and the intestines assists in the digestion; that of the genital and urinary ducts serves in the generation, and the secretion of the urine, &c.

A great part of the mucus is absorbed again by the membranes which secrete it; another part is carried outwards, either alone, as in blowing the nose, or spitting, or mixed with the pulmonary transpiration, or else mixed with the excremental matter, or the urine, &c.

Animal mucus differs from that obtained from the vegetable kingdom, in not being soluble in water, swimming on its surface, nor capable of mixing oil with water, and being soluble in mineral acids, which vegetable mucus is not.

2. *Mucus, vegetable.* See *Gum.*

MUCUS MALPIGHIANUS. See *Cutis.*

MUGIL. *Mugilis.* The name of a genus of fishes, of the Order *Abdominales.*

MUGIL CEPHALUS. The silvery grey mullet. An excellent fish, but not often found in our market. It is easy of digestion, and was much esteemed by the Romans.

MUGILIS. See *Mugil.*

MUGWORT. See *Artemisia vulgaris.*

Mugwort, China. See *Artemisia chinensis.*

MU'LÆ. Pustules contracted either by heat or cold.

MULBERRY. See *Morus nigra.*

MULE. See *Hybrid.*

Mule's fern. See *Asplenium hemionitis.*

MULLEIN. See *Verbascum.*

MULLET. See *Mugil,* and *Mullus.*

MULLUS. The name of a genus of fishes, of the order *Thoracici.* The surmullet.

MULLUS BARBATUS. *Mullus ruber.* The red surmullet, found in the Mediterranean and Northern Seas, where it comes to the length of 12 or 15 inches. Its colour is an elegant rose-red, tinged with olive on the back, and a silvery cast towards the belly. Its flesh is esteemed very delicious. The Romans held it in such high repute, that prodigious sums of money were given for them.

MULLUS SARMULETUS. The striped surmullet. This is found of all sizes, from four inches to a foot long. As an article of food, it is equally esteemed with the red mullet.

MU'LSUM. See *Hydromeli.*

MULTANGULAR. (*Multangularis*; from *multus,* many, and *angulus,* a corner.) Many-cornered.

MULTIFI'DUS. (From *multus,* many, and *findo,* to divide.) Divided into many parts. 1. In *Anatomy,* applied to a muscle which is deeply and much divided.

2. In *Botany,* applied to leaves, petals, &c. the borders of which are many clefted.

MULTIFIDUS SPINÆ. *Transverso-spinalis lumborum*; *Musculus sacer*; *Semi-spinalis internus, sive transverso spinalis dorsi*; *Semi-spinalis, sive transverso-spinalis colli, pars interna,* of Winslow. *Transversalis lumborum, vulgo sacer*; *Transversalis dorsi*; *Transversalis colli,* of Douglas. The generality of anatomical writers have unnecessarily multiplied the muscles of the spine, and hence their descriptions of these parts are confused, and difficult to be understood. Under the name of *multifidus spinæ,* Albinus has, therefore, very properly included those portions of muscular flesh, intermixed with tendinous fibres, which lie close to the posterior part of the spine, and which Douglas and Winslow have described as three distinct muscles, under the names of *transversales,* or *transverso-spinales,* of the loins, back, and neck. The multifidus spinæ arises tendinous and fleshy from the upper convex surface of the os sacrum, from the posterior adjoining part of the ilium, from the oblique and transverse processes of all the lumbar vertebræ, from the transverse processes of all the dorsal vertebræ, and from those of the cervical vertebræ, excepting the three first. From all these origins the fibres of the muscles run in an oblique direction, and are inserted, by distinct tendons, into the spinous processes of all the vertebræ of the loins and back, and likewise into those of the six inferior vertebræ of the neck. When this muscle acts singly, it extends the back obliquely, or moves it to one side; when both muscles act, they extend the vertebræ backwards.

MULTIFLORUS. (From *multus,* many, and *flos,* a flower.) Many-flowered. Applied to the flower-stalk of plants, which is so called when it bears many flowers; as the *Daphne laureola.* See *Pedunculus.*

MULTIFO'RME OS. See *Ethmoid bone.*

MULTILOCULAR. (*Multilocularis*; from *multus,* many, and *loculus,* a little place or cell.) Having many cells: applied to the seed-vessels of plants.

MULTIPARTITE. *Multipartitus.* Having many and deep divisions: applied to leaves, &c.

MU'LTIPES. (From *multus,* many, and *pes,* a foot.) 1. The wood-louse.

2. The polypus.

3. Any animal having more than four feet.

MULTIVALVE. *Multivalvis.* Having more than two valves.

MUMPS. See *Parotitis.*

MUNDICATI'VUS. (From *mundo,* to cleanse.) *Mundificans.* Having the property of purifying and cleansing away foulness.

MUNDIFICANS. See *Mundicativus.*

MU'NGOS. See *Ophiorrhiza mungos.*

MURÆNA. (*a, æ.* f.) The name of a genus of fishes of the order *Apodes.* The eel.

MURÆNA ANGUILLA. The common eel, which is found almost everywhere in fresh waters. The flesh of this fish, when boiled, stewed, baked, or fried, is very tender; easy of digestion when without fat, and forms a palatable and light food for delicate stomachs. It is prepared in a variety of ways for the tables of the rich, when its compounded state renders it more difficult to digest.

MURÆNA CONGER. The conger eel. An extremely voracious fish, which sometimes acquires a considerable size, weighing a hundred pounds. It is found in European seas. There is a fishery for congers at Mount Bay, in Cornwall, where they form a considerable

article of commerce. They are exported in a dried state to Spain and Portugal, where, being reduced powder, they are used for enriching soup. The fresh fish is considered coarse, difficult of digestion, even when well boiled or stewed. It is, however, eaten by the common people.

MURÆNA HELENA. *Muræna romana.* The Roman eel. This fish is found in great plenty along the coasts of the Mediterranean Sea, and was the celebrated favourite of the ancient Romans, who kept it in reservoirs appropriated for that purpose, and are said to have tamed it to such a degree as to come at a call to receive its food.

MURA'LIS. (From *murus*, a wall; so called because it grows upon walls.) Appertaining to a wall pellitory. See *Parietaria.*

MURA'RIA. (*a, æ.* f.; from *murus*, a wall: because it grows about walls.) A species of maiden-hair; the *Asplenium murale.*

MURIACITE. Gypsum.

MU'RIAS. (*as, atis.* m.; so called because formed with the muriatic acid.) A muriate, or salt, formed by the union of the muriatic acid with a salifiable base; as *muriate of ammonia*, &c. The muriates in a state of dryness are chlorides: those used in medicine are,—

1. *Muriate of barytes.* See *Barytæ murias.*

2. *Muriate of potash.* See *Murias potassæ.*

3. *Muriate of soda.* See *Sodæ murias.*

4. *Muriate of lime*, has been known by the names of *marine selenite, calcareous marine salt, muria*, and *fixed sal ammoniac.* Its taste is acrid, bitter, and very disagreeable. It is soluble in half its weight of cold water, and by heat in its own water of crystallisation. It is one of the most deliquescent salts known; and, when deliquesced, has been called *oil of lime.* It exists in nature, but neither very abundantly nor very pure. It is formed in chemical laboratories, in the decomposition of muriate of ammonia; and Homberg found, that if it were urged by a violent heat, till it condensed, on cooling, into a vitreous mass, it emitted a phosphoric light upon being struck by any hard body, in which state it was called *Homberg's phosphorus.* See *Calcis murias.*

5. *Muriate of ammonia.* See *Ammoniæ murias.*

MURIAS AMMONIÆ. See *Sal ammoniac.*

MURIAS ANTIMONII. Muriate of antimony, now called bichlorate of antimony, was formerly used as a caustic. See *Antimony.*

MURIAS BARYTÆ. See *Barytæ murias.*

MURIAS CALCIS. See *Calx.*

MURIAS FERRI. This preparation of iron is styptic and tonic, and may be given in chlorosis, intermittents, rachitis, &c.

MURIAS FERRI AMMONIACALIS. See *Ferrum ammoniacum.*

MURIAS HYDRARGYRI. There are two muriates of mercury. See *Hydrargyri submurias*, and *Hydrargyri oxymurias.*

MURIAS HYDRARGYRI AMMONIACALIS. See *Hydrargyrum præcipitum album.*

MURIAS HYDRARGYRI OXYGENATUS. See *Hydragyri oxymurias.*

MURIAS POTASSÆ. *Alkali vegetabile salitum. Sal digestivus. Sal febrifugus Sylvii.* This salt is exhibited with the same intention as the muriate of soda, and was formerly in high estimation in the cure of intermittents, &c.

MURIAS POTASSÆ OXYGENATUS. A chlorate of potash. The oxygenated muriate of potash has lately been extolled in the cure of the venereal disease. It is exhibited in doses of from fifteen to forty grains in the course of a day. It increases the action of the heart and arteries, is supposed to oxygenate the blood, and prove of great service in scorbutus, asthenia, and cachectic diseases.

MURIAS SODÆ. See *Sodæ murias.*

MURIAS STIBII. See *Murias antimonii.*

MURIATIC. (*Muriaticus*; from *muria*, brine.) Belonging to sea-salt.

MURIATIC ACID. This acid, in its pure state, exists as a compound of chlorine with hydrogene, and thence called by some *hydrochloric acid*, a gas of which water dissolves 480 times its volume. Its specific gravity, compared with common air, is as 1·298 to 1·000. It consists of equal volumes of hydrogene and chlorine, and is therefore properly called *hydrochloric acid.* Let 6 parts of pure and dried sea-salt be put into a glass retort, to the beak of which is luted, in a horizontal direction, a long glass tube artificially refrigerated, and containing a quantity of ignited muriate of lime. Upon the salt pour at intervals 5 parts of concentrated oil of vitriol, through a syphon funnel, fixed air-tight, in the tubulure of the retort. The free end of the long tube being recurved, so as to dip into the mercury of a pneumatic trough, a gas will issue, which, on coming in contact with the air, will form a visible cloud, or haze, presenting, when viewed in a vivid light, prismatic colours. This gas is muriatic acid.

When received in glass jars over dry mercury, it is invisible, and possesses all the mechanical properties of air. Its odour is pungent and peculiar; its taste acid and corrosive. Its specific gravity, according to Sir H. Davy, is such, that 100 cubic inches weigh 39 grains, while by estimation, he says, they ought to be 38·4 gr. If an inflamed taper be immersed in it, it is instantly extinguished. It is destructive of animal life; but the irritation produced by it on the epiglottis scarcely permits its descent into the lungs. It is merely changed in bulk by alterations of temperature; it experiences no change of state.

When potassium, tin, or zinc is heated in contact with this gas over mercury, one half of the volume disappears, and the remainder is pure hydrogene. On examining the solid residue, it is found to be a metallic chloride. Hence, muriatic acid gas consists of chlorine and hydrogene, united in equal volumes. This view of its nature was originally given by Scheele, though obscured by terms derived from the vague and visionary hypothesis of

phlogiston. The French school afterwards introduced the belief that muriatic acid gas was a compound of an unknown radical and water; and that chlorine consisted of this radical and oxygene. Sir H. Davy has proved, by decisive experiments, that, in the present state of our knowledge, chlorine must be regarded as a simple substance, and muriatic acid gas as a compound of it with hydrogene.

In the ancient method, common salt was previously decrepitated, then ground with dried clay, and kneaded or wrought with water to a moderately stiff consistence, after which it was divided into balls of the size of a pigeon's egg: these balls, being previously well dried, were put into a retort, so as to fill the vessel two thirds full; distillation being then proceeded upon, the muriatic acid came over when the heat was raised to ignition. In this process eight or ten parts of clay to one of salt are to be used. The retort must be of stone-ware well coated, and the furnace must be of that kind called reverberatory.

It was formerly thought that the salt was merely divided in this operation by the clay, and on this account more readily gave out its acid; but there can be little doubt that the effect is produced by the silicious earth, which abounds in large proportions in all natural clays, and detains the alkali of the salt by combining with it.

Sir H. Davy first gave the just explanation of this decomposition. Common salt is a compound of sodium and chlorine. The sodium may be conceived to combine with the oxygene of the water in the earth, and with the earth itself, to form a vitreous compound; and the chlorine to unite with the hydrogene of the water, forming muriatic acid gas. 'It is also easy,' adds he, 'according to these new ideas, to explain the decomposition of salt by moistened litharge, the theory of which has so much perplexed the most acute chemists. It may be conceived to be an instance of compound affinity: the chlorine is attracted by the lead, and the sodium combines with the oxygene of the litharge, and with water, to form hydrate of soda, which gradually attracts carbonic acid from the air. When common salt is decomposed by oil of vitriol, it was usual to explain the phænomenon by saying, that the acid, by its superior affinity, aided by heat, expelled the gas, and united to the soda. But, as neither muriatic acid nor soda exists in common salt, we must now modify the explanation, by saying that the water of the oil of vitriol is first decomposed, its oxygene unites to the sodium to form soda, which is seized on by the sulphuric acid, while the chlorine combines with the hydrogene of the water, and exhales in the form of muriatic acid gas.'

As 100 parts of dry sea-salt are capable of yielding 62 parts by weight of muriatic acid gas, these ought to afford, by economical management, nearly 221 parts of liquid acid, specific gravity 1·142, as prescribed by the London College, or 200 parts of acid, sp. gr. 1·160, as directed by the Edinburgh and Dublin Pharmacopœias.

The ancient method of extracting the gas from salt is now laid aside.

The English manufacturers use iron stills for this distillation, with earthen heads: the philosophical chemist, in making the *acid of commerce*, will doubtless prefer glass. Five parts by weight of strong sulphuric acid are to be added to six of decrepitated sea-salt, in a retort, the upper part of which is furnished with a tube or neck, through which the acid is to be poured upon the salt. The aperture of this tube must be closed with a ground stopper immediately after the pouring. The sulphuric acid immediately combines with the alkali, and expels the muriatic acid in the form of a peculiar air, which is rapidly absorbed by water. As this combination and disengagement take place without the application of heat, and the aërial fluid escapes very rapidly, it is necessary to arrange and lute the vessels together before the sulphuric acid is added, and not to make any fire in the furnace until the disengagement begins to slacken, at which time it must be very gradually raised. Before the modern improvements in chemistry were made, a great part of the acid escaped for want of water to combine with; but, by the use of Woolf's apparatus, the acid air is made to pass through water, in which it is nearly condensed, and forms muriatic acid of double the weight of the water, though the bulk of this fluid is increased one half only. The acid condensed in the first receiver, which contains no water, is of a yellow colour, arising from the impurities of the salt.

The marine acid in commerce has a straw colour: but this is owing to accidental impurity; for it does not obtain in the acid produced by the impregnation of water with the aëriform acid.

The muriatic acid is one of those longest known, and some of its compounds are among those salts with which we are most familiar.

Those used in the cure of diseases, are,—

1. The muriate of lime.
2. ——————— ammonia.
3. ——————— antimony.
4. ——————— barytes.
5. ——————— iron.
6. ——————— mercury.
7. ——————— potash.
8. ——————— soda.
9. The submuriate of mercury.
10. The oxymuriate of mercury.
11. ——————— potash.

Muriatic acid possesses active tonic powers. In typhus, or nervous fevers, although employed on the Continent with success, it has not proved so beneficial in this country; and, when freely used, it is apt to determine to the bowels. Externally, the muriatic acid has been applied in the form of a bath, to the feet, in gout. In a late publication, there are accounts of its successful application as a lithontriptic.

Muriatic acid, oxygenised. *Acidum muriaticum oxygenatum. Acidum oxymuriaticum.* This supposed acid was lately de-

scribed by Thénard. But chemists in general regard the apparent oxygenation of the acid merely as the conversion of a portion of its combined water into deutoxide of hydrogene.

MURICA'TUS. Sharp-pointed: applied generally in *Natural History*, and particularly to seeds; as those of the *Ranunculus parviflorus*, and *Sida ciliaris*.

MURRAY, John Andrew, was born at Stockholm, of a Scotch family, in 1740. At 16, he was sent to Upsal, and had the benefit of the instructions of Linnæus, for whom he ever after entertained the highest esteem. He was a man of sound judgment, great activity, and extensive information. He composed a great number of tracts on various subjects in botany, natural history, medicine, pharmacy, and medical literature. His principal work, which occupied a large portion of his time and attention, was on the Materia Medica, under the title of *Apparatus Medicaminum*, in six octavo volumes: indeed he was employed in correcting the last for the press the day before his death. In the Transactions of the Royal Society of Gottingen, there are many valuable papers by him, chiefly botanical; and his descriptions are deemed models of elegance and accuracy.

MU'SA. (*a, æ. f.* This word is corrupted, or rather refined, from *Mauz*, the Egyptian appellation of this valuable plant; and is made classical in the works of Linnæus, by an allusion to *Musa*, a muse; or, with much greater propriety, to *Antonius Musa*, the physician of Augustus, who, having written on some botanical subjects, may justly be commemorated in the above name.) The name of a genus of plants. Class, *Polygamia*; Order, *Monœcia*. The plantain and banana tree.

Musa paradisiaca. The plantain-tree; called also, *Musa, Palma humilis, Ficus indica, Bala*, and *Platanus*. It grows spontaneously in many parts of India, but has been immemorially cultivated by the Indians in every part of the continent of South America. It is an herbaceous tree, growing to the height of fifteen or twenty feet. The fruit are nearly of the size and shape of ordinary cucumbers, and, when ripe, of a pale yellow colour, of a mealy substance, a little clammy, with a sweetish taste, and will dissolve in the mouth without chewing. The whole spike of fruit often weighs forty or fifty pounds. When they are brought to table by way of dessert, they are either raw, fried, or roasted; but, if intended for bread, they are cut before they are ripe, and are then either roasted or boiled. The trees being tall and slender, the Indians cut them down to get at the fruit; and in doing this they suffer no loss, for the stems are only one year's growth, and would die if not cut; but the roots continue, and new stems soon spring up, which in a year produce ripe fruit also. From the ripe plantains they make a liquor called *mistaw*. When they make this, they roast the fruit in their husks, and, after totally beating them to a mash, they pour water upon them, and, as the liquor is wanted, it is drawn off. But the nature of this fruit is such, that they will not keep long without running into a state of putrefaction; and therefore, in order to reap the advantage of them at all times, they make cakes of the pulp, and dry them over a slow fire, and, as they stand in need of mistaw, they mash the cakes in water, and they answer all the purposes of fresh fruit. These cakes are exceedingly convenient to make this liquor in their journeys, and they never fail to carry them for that purpose. The leaves of the tree, being large and spacious, serve the Indians for tablecloths and napkins.

Musa sapientum. The systematic name of the banana tree; called also, *Banana, Bananeira, Ficoides, Ficus indica, Musa fructu cucumerino breviori, Senoria*, and *Pacæira*. This and the plantain-tree are among the most important productions of the earth. The banana tree is cultivated, on a very extensive scale, in Jamaica; without the fruit of which, Dr. Wright says, the island would scarcely be habitable, as no species of provision would supply their place. Even flour, or bread itself, would be less agreeable, and less able to support the laborious negro, so as to enable him to do his business, or to keep in health. Plantains also fatten horses, cattle, swine, dogs, fowls, and other domestic animals. The leaves, being smooth and soft, are employed as dressings after blisters. The water from the soft trunk is astringent, and employed by some to check diarrhœas. Every other part of the tree is useful in different ways in rural economy. The leaves are used as napkins and tablecloths, and are food for hogs. The second sort, musa sapientum, or banana tree, differs from the paradisaica, in having its stalks marked with dark purple stripes and spots. The fruit is shorter, straighter, and rounder; the pulp is softer, and of a more luscious taste. It is never eaten green; but, when ripe, is very agreeable, either eaten raw or fried in slices as fritters, and is relished by all ranks of people in the West Indies. Both the above plants were carried to the West Indies from the Canary Islands, whither, it is believed, they had been brought from Guinea, where they grow naturally.

Musadi. *Sal ammoniac.*

MUSCA. (*a, æ. f.* Μυισκη; from μυζω, to murmur.) A very extensive genus of insects, of the order *Diptera*. The fly.

Musca volitans. See *Pseudoblepsis.*

MUSCI'PULA. (*a, æ. f.*; from *mus*, a mouse, and *capio*, to take, being originally applied to a mouse-trap; afterwards to a plant: so called from its viscidity, by which flies are caught, as with birdlime.) A species of lychnis.

MUSCLE. (*Musculus, i. m.*; a diminutive of *mus*, a mouse, from its resemblance to a flayed mouse.) The parts that are usually

included under this name consist of distinct portions of flesh, susceptible of contraction and relaxation; the motions of which, in a natural and healthy state, are subject to the will, and for this reason they are called *voluntary* muscles. Besides these, there are other parts of the body that owe their power of contraction to their muscular fibres: thus the heart is a muscular texture, forming what is called a hollow muscle; and the urinary bladder, stomach, intestines, &c. are enabled to act upon their contents, merely because they are provided with muscular fibres; these are called *involuntary* muscles, because their motions are not dependent on the will. The muscles of respiration being in some measure influenced by the will, are said to have a *mixed* motion. The names by which the voluntary muscles are distinguished, are founded on their size, figure, situation, use, or the arrangement of their fibres, or their origin and insertion; but, besides these particular distinctions, there are certain general ones that require to be noticed. Thus, if the fibres of a muscle are placed parallel to each other, in a straight direction, they form what anatomists term a *rectilinear* muscle; if the fibres cross and intersect each other, they constitute a *compound* muscle; when the fibres are disposed in the manner of rays, a *radiated* muscle; when they are placed obliquely with respect to the tendon, like the plume of a pen, a *penniform* muscle. Muscles that act in opposition to each other are called *antagonists*; thus every extensor has a flexor for its antagonist, and *vice versâ*. Muscles that concur in the same action are termed *congeneres*. The muscles being attached to the bones, the latter may be considered as levers, that are moved in different directions by the contraction of those organs. That end of the muscle which adheres to the most fixed part is usually called the *origin*; and that which adheres to the more moveable part, the *insertion* of the muscle. In almost every muscle, two kinds of fibres are distinguished: the one soft, of a red colour, sensible, and irritable, called *fleshy* fibres, see *Muscular fibre*; the other of a firmer texture, of a white glistening colour, insensible, without irritability or the power of contracting, and named *tendinous* fibres. They are occasionally intermixed, but the fleshy fibres generally prevail in the belly, or middle part of the muscle, and the tendinous ones in the extremities. If these tendinous fibres are formed into a round slender cord, they form what is called the *tendon* of the muscle: on the other hand, if they are spread into a broad flat surface, it is termed an *aponeurosis*.

Each muscle is surrounded by a very thin and delicate covering of cellular membrane, which encloses it, as it were, like a sheath, and, dipping down into its substance, surrounds the most minute fibres we are able to trace, connecting them to each other, lubricating them by means of the fat which its cells contain in more or less quantity in different subjects, and serving as a support to the blood-vessels, lymphatics, and nerves which are so plentifully distributed through the muscles. This cellular membrane, which in no respect differs from what is found investing and connecting the other parts of the body, has been sometimes mistaken for a membrane peculiar to the muscles; and hence we often find writers giving it the name of *membrana propria musculosa*. The muscles owe the red colour which so particularly distinguishes their belly part, to an infinite number of arteries, which are everywhere dispersed through the whole of their reticular substance; for their fibres, after having been macerated in water, are (like all other parts of the body divested of their blood) found to be of a white colour. These arteries usually enter the muscles by several considerable branches, and ramify so minutely through their substance, that we are unable, even with the best microscopes, to trace their ultimate branches. Ruysch fancied that the muscular fibre was hollow, and a production of a capillary artery; but this was merely conjectural. The veins, for the most part, accompany the arteries, but are found to be larger and more numerous. The lymphatics, likewise, are numerous, as might be expected from the great proportion of reticular substance which is everywhere found investing the muscular fibres. The nerves are distributed in such abundance to every muscle, that the muscles of the thumb alone are supplied with a greater proportion of nervous influence than the largest viscera; as the liver, for instance. They enter the generality of muscles by several trunks, the branches of which, like those of the blood-vessels, are so minutely dispersed through the cellular substance, that their number and minuteness soon elude the eye, and the knife of the anatomist. This has given rise to a conjecture, as groundless as all the other conjectures on this subject, that the muscular fibre is ultimately nervous.

A Table of the Muscles.—The generality of anatomical writers have arranged muscles according to their several uses; but this method is evidently defective, as the same muscle may very often have different and opposite uses. The method here adopted is that more usually followed at present; they are enumerated in the order in which they are situated, beginning with those that are placed nearest the integuments, and proceeding from these to the muscles that are more deeply seated.

[The reader will observe, that all the muscles are in pairs, except those marked thus.*]

Muscles of the integuments of the cranium:—*Occipito frontalis.** *Corrugator supercilii.*

Muscles of the eyelids:—*Orbicularis palpebrarum. Levator palpebræ superioris.*

Muscles of the eyeball:—*Rectus superior. Rectus inferior. Rectus internus. Rectus externus. Obliquus superior. Obliquus inferior.*

Muscles of the nose and mouth:—*Levator palpebræ superioris alæque nasi. Levator labii superioris proprius. Levator anguli oris. Zygomaticus major. Zygomaticus minor. Buc-*

cinator. Depressor anguli oris. Depressor labii inferioris. Orbicularis oris. Depressor labii superioris alæque nasi. Constrictor nasi. Levator menti vel labii inferioris.*

Muscles of the external ear:—*Superior auris. Anterior auris. Posterior auris. Helicis major. Helicis minor. Tragicus. Antitragicus. Transversus auris.*

Muscles of the internal ear:—*Laxator tympani. Membrana tympani. Tensor tympani. Stapedius.*

Muscles of the lower jaw:—*Temporalis. Masseter. Pterygoideus externus. Pterygoideus internus.*

Muscles about the anterior part of the neck:—*Platysma myoides. Sterno-cleidomastoideus.*

Muscles between the lower jaw and os hyoides:—*Digastricus. Mylo-hyoideus. Genio-hyoideus. Genio-glossus. Hyo-glossus. Lingualis.*

Muscles situated between the os hyoides and trunk:—*Sterno-hyoideus. Crico-hyoideus. Sterno-thyroideus. Thyro-hyoideus. Crico-thyroideus.*

Muscles between the lower jaw and os hyoides laterally:—*Stylo-glossus. Stylo-hyoides. Stylo-pharyngeus. Circumflexus. Levator palati mollis.*

Muscles about the entry of the fauces:—*Constrictor isthmi faucium. Palatopharyngeus. Azygos uvulæ.**

Muscles situated on the posterior part of the pharynx:—*Constrictor pharyngis superior. Constrictor pharyngis medius. Constrictor pharyngis inferior.*

Muscles situated about the glottis:—*Crico-arytænoideus posticus. Crico-arytænoideus lateralis. Thyro-arytænoideus. Arytænoideus obliquus.* Arytænoideus transversus.* Thyro-epiglottideus. Arytæno-epiglottideus.*

Muscles situated about the anterior part of the abdomen:—*Obliquus descendens externus. Obliquus ascendens internus. Transversalis abdominis. Rectus abdominis. Pyramidalis.*

Muscles about the male organs of generation:—*Dartos.* Cremaster. Erector penis. Accelerator urinæ. Transversus perinei.*

Muscles of the anus:—*Sphincter ani.* Levator ani.**

Muscles of the female organs of generation:—*Erector clitoridis. Sphincter vaginæ.*

Muscles situated within the pelvis:—*Obturator internus. Coccygeus.*

Muscles situated within the cavity of the abdomen:—*Diaphragma.* Quadratus lumborum. Psoas parvus. Psoas magnus. Iliacus internus.*

Muscles situated on the anterior part of the thorax:—*Pectoralis major. Subclavius. Pectoralis minor. Serratus major anticus.*

Muscles situated between the ribs, and within the thorax:—*Intercostales externi. Intercostales interni. Triangularis.*

Muscles situated on the anterior part of the neck, close to the vertebræ:—*Longus colli. Rectus internus capitis major. Rectus capitis internus minor. Rectus capitis lateralis.*

Muscles situated on the posterior part of the trunk:—*Trapezius. Latissimus dorsi. Serratus posticus inferior. Rhomboideus. Splenius. Serratus superior posticus. Spinalis dorsi. Levatores costarum. Sacro lumbalis. Longissimus dorsi. Complexus. Trachelo mastoideus. Levator scapulæ. Semi-spinalis dorsi. Multifidus spinæ. Semi-spinalis colli. Transversalis colli. Rectus capitis posticus minor. Obliquus capitis superior. Obliquus capitis inferior. Scalenus. Interspinales. Intertransversales.*

Muscles of the superior extremities:—*Supra-spinatus. Infra-spinatus. Teres minor. Teres major. Deltoides. Coracobrachialis. Subscapularis.*

Muscles situated on the os humeri:—*Biceps flexor cubiti. Brachialis internus. Biceps extensor cubiti. Anconeus.*

Muscles situated on the fore-arm:—*Supinator radii longus. Extensor carpi radialis longior. Extensor carpi radialis brevior. Extensor digitorum communis. Extensor minimi digiti. Extensor carpi ulnaris. Flexor carpi ulnaris. Palmaris longus. Flexor carpi radialis. Pronator radii teres. Supinator radii brevis. Extensor ossis metacarpi pollicis manus. Extensor primi internodii. Extensor secundi internodii. Indicator. Flexor digitorum sublimis. Flexor digitorum profundus. Flexor longus pollicis. Pronator radii quadratus.*

Muscles situated chiefly on the hand:—*Lumbricales. Flexor brevis pollicis manus. Opponens pollicis. Abductor pollicis manus. Adductor pollicis manus. Abductor indicis manus. Palmaris brevis. Abductor minimi digiti manus. Abductor minimi digiti. Flexor parvus minimi digiti. Interossei interni. Interossei externi.*

Muscles of the inferior extremities:—*Pectinalis. Triceps adductor femoris. Obturator externus. Gluteus maximus. Gluteus minimus. Gluteus medius. Pyriformis. Gemini. Quadratus femoris.*

Muscles situated on the thigh:—*Tensor vaginæ femoris. Sartorius. Rectus femoris. Vastus externus. Vastus internus. Cruralis. Semi-tendinosus. Semi-membranosus. Biceps flexor cruris. Popliteus.*

Muscles situated on the leg:—*Gastrocnemius externus. Gastrocnemius internus. Plantaris. Tibialis anticus. Tibialis posticus. Peroneus longus. Peroneus brevis. Extensor longus digitorum pedis. Extensor proprius pollicis pedis. Flexor longus digitorum pedis. Flexor longus pollicis pedis.*

Muscles chiefly situated on the foot:—*Extensor brevis digitorum pedis. Flexor brevis digitorum pedis. Lumbricales pedis. Flexor brevis pollicis pedis. Abductor pollicis pedis. Adductor pollicis pedis. Abductor minimi digiti pedis. Flexor brevis minimi digiti pedis. Transversales pedis. Interossei pedis externi. Interossei pedis interni.*

MUSCULAR. (*Muscularis*; from *musculus*, a muscle.) Belonging to a muscle.

MUSCULAR FIBRE. *Fibra muscularis.* The fibres that compose the body of a muscle are disposed in fasciculi, or bundles, which are

easily distinguishable by the naked eye; but these fasciculi are divisible into still smaller ones; and these again are probably subdivisible *ad infinitum*. The most minute fibre we are able to trace seems to be somewhat plaited; these plaits disappearing when the fibre is put upon the stretch, seem evidently to be the effect of contraction, and have probably induced some writers to assert, that the muscular fibre is twisted or spiral. Various have been the opinions concerning the structure of these fibres, their form, size, position, and the nature of the atoms that compose them. A fibre is essentially composed of *fibrine* and ozmazome, receives a great deal of blood, and, at least, one nervous filament. All other suppositions are founded only on conjecture, and therefore we shall mention only the principal ones, and this with a view rather to gratify the curiosity of the reader, than to afford him information. Borelli supposes them to be so many hollow cylinders, filled with a spongy medullary substance, which he compares to the pith of elder, *spongiosa ad instar sambuci*. These cylinders, he contends, are intersected by circular fibres, which form a chain of very minute bladders. This hypothesis has since been adopted by a great number of writers, with certain variations. Thus, for instance, Bellini supposes the vesicles to be of a rhomboidal shape; whereas Bernouilli contends that they are oval. Cowper went so far as to persuade himself that he had filled these cells with mercury; a mistake, no doubt, which arose from its insinuating itself into some of the lymphatics. It is observable, however, that Leeuwenhoeck says nothing of any such vesicles. Here, as well as in many other of her works, Nature seems to have drawn a boundary to our enquiries, beyond which no human penetration will probably ever extend. By chemical analysis, muscle is found to consist chiefly of fibrine, with albumen, gelatine, extractive, phosphate of soda, phosphate of ammonia, phosphate and carbonate of lime, and sulphate of potash.

Muscular motion. Muscular motions are of three kinds: namely, voluntary, involuntary, and mixed. The *voluntary motions* of muscles are such as proceed from an immediate exertion of the active powers of the will: thus the mind directs the arm to be raised or depressed, the knee to be bent, the tongue to move, &c. The *involuntary motions* of muscles are those which are performed by organs, seemingly of their own accord, without any attention of the mind, or consciousness of its active power; as the contraction and dilatation of the heart, arteries, veins, absorbents, stomach, intestines, &c. The *mixed motions* are those which are in part under the control of the will, but which ordinarily act without our being conscious of their acting; and is perceived in the muscles of respiration, the intercostals, the abdominal muscles, and the diaphragm.

When a muscle acts, it becomes shorter and thicker; both its origin and insertion are drawn towards its middle. The sphincter muscles are always in action; and so, likewise, are antagonist muscles, even when they seem at rest. When two antagonist muscles move with equal force, the part which they are designed to move remains at rest; but if one of the antagonist muscles remains at rest, while the other acts, the part is moved towards the centre of motion.

When a muscle is divided it contracts. If a muscle be stretched to a certain extent, it contracts, and endeavours to acquire its former dimensions, as soon as the stretching cause is removed: this takes place in the dead body, in muscles cut out of the body, and also in parts not muscular; and is called, by the immortal Haller, *vis mortua*, and by some *vis elastica*. It is greater in living than in dead bodies, and is called the *tone* of the muscles.

When a muscle is wounded, or otherwise irritated, it contracts independent of the will. This power is called *irritability*, and, by Haller, *vis insita*: it is a property peculiar to, and inherent in, the muscles. The parts of our body which possess this property are called irritable; as the heart, arteries, muscles, &c., to distinguish them from those parts which have no muscular fibres. With regard to the degree of this property peculiar to various parts, the heart is the most irritable, then the stomach and intestines; the diaphragm, the arteries, veins, absorbents, and, at length, the various muscles follow; but the degree of irritability depends upon the age, sex, temperament, mode of living, climate, state of health, idiosyncrasy, and likewise upon the nature of the stimulus.

When a muscle is stimulated, either through the medium of the will or any foreign body, it contracts, and its contraction is greater or less in proportion as the stimulus applied is greater or less. The contraction of muscles is different according to the purpose to be served by their contraction: thus, the heart contracts with a jerk; the urinary bladder slowly and uniformly; puncture a muscle, and its fibres vibrate; and the abdominal muscles act slowly in expelling the contents of the rectum. Relaxation generally succeeds the contraction of muscles, and alternates with it.

Muscular contraction, such as takes place in the ordinary state of life, supposes the free exercise of the brain, of the nerves which enter the muscles, and of the muscles themselves. Every one of these organs ought to receive arterial blood, and the venous blood ought not to remain too long in its tissue. If one of these conditions is wanting, the muscular contraction is weakened, injured, or rendered impossible.

Phænomena of Muscular Contraction.—When a muscle contracts, its fibres shorten, become hard, with more or less rapidity, without any preparatory oscillation or hesitation: they acquire, all at once, such an elasticity, that they are capable of vibrating or pro-

ducing sounds. The colour of the muscle does not appear to change in the instant of contraction; but there is a certain tendency to become displaced, which the *aponeuroses* oppose.

There have been discussions about the size of a muscle in its contracted and relaxed state. The question does not seem to be resolved in which of these states it is most voluminous: it is, happily, of small consequence.

The whole of the sensible phænomena of muscular contraction passes in the muscles; but, to a certainty, no action can take place without the immediate action of the brain and the nerves.

If the brain of a man or of an animal is compressed, the faculty of contracting the muscles ceases: the nerves of a muscle being cut, it loses all power.

What change happens in the muscular tissue during the state of contraction? This is totally unknown. In this respect there is no difference between muscular contraction and the vital actions, of which no explanation can be given. There is no want of attempts to explain the action of the muscles, as well as that of the nerves and the brain, in muscular contraction; but none of the proposed hypotheses can be received.

Instead of following such speculations, which can be easily invented or refuted, and which ought to be banished from physiology, it is necessary to study in muscular contraction,—1st, the intensity of the contraction; 2dly, its duration; 3dly, its rapidity; 4thly, its extent.

The intensity of muscular contraction, that is, the degree of power with which the fibres draw themselves together, is regulated by the action of the brain; it is generally regulated by the will, according to certain limits, which are different in different individuals. A particular organisation of the muscles is favourable to the intensity of their contraction: this organisation is a considerable volume of fibres, strong, of a deep red, and striated transversely. With an equal power of the will, these will produce much more powerful effects than muscles, whose fibres are fine, colourless, and smooth. However, should a very powerful cerebral influence, or a great exertion of the will, be joined to such fibres, the contraction will acquire great intensity; so that the cerebral influence, and the disposition of the muscular tissue, are the two elements of the intensity of muscular contraction.

A very great cerebral energy is rarely found united, in the same individual, with that disposition of the muscular fibres which is necessary to produce intense contractions: these elements are almost always in an inverse ratio. When they are united, they produce astonishing effects. Perhaps this union existed in the *athletæ* of antiquity: in our times it is observed in certain mountebanks.

The muscular power may be carried to a wonderful degree by the action of the brain alone: we know the strength of an enraged person, of maniacs, and of persons in convulsions.

The will governs the duration of the contraction: it cannot be carried beyond a certain time, however it may vary in different individuals. A feeling of weariness takes place, not very great at first, but which goes on increasing until the muscle refuses contraction. The quick developement of this painful feeling depends on the intensity of the contraction and the weakness of the individual.

To prevent this inconvenience, the motions of the body are so calculated that the muscles act in succession, the duration of each being but short: our not being able to rest long in the same position is thus explained, as an attitude which causes the contraction of a small number of muscles cannot be preserved but for a very short time.

The feeling of fatigue occasioned by muscular contraction soon goes off, and, in a short time, the muscles recover the power of contracting.

The quickness of the contractions are, to a certain degree, subject to cerebral influence: we have a proof of this in our ordinary motions: but, beyond this degree, it depends evidently on habit. In respect of the rapidity of motion, there is an immense difference between that of a man who touches a piano for the first time, and that which the same man produces after several years' practice. There is, besides, a very great difference in persons, with regard to the quickness of contractions, either in ordinary motions, or in those which depend on habit.

As to the extent of the contractions, it is directed by the will; but it must necessarily depend on the length of the fibres: long fibres having a greater extent of contraction than those that are short.

After what has been said, we see that the will has generally a great influence on the contraction of muscles: it is not, however, indispensable: in many circumstances, motions take place, not only without the participation of the will, but even contrary to it: we find very striking examples of this in the effects of habit, of the passions, and of diseases.

MUSCULAR POWER. See *Irritability*.

MUSCULUS. See *Muscle*.

MUSCULUS CUTANEUS. See *Platysma myoides*.

MUSCULUS FASCIÆ LATÆ. See *Tensor vaginæ femoris*.

MUSCULUS PATIENTIÆ. See *Levator scapulæ*.

MUSCULUS STAPEDIUS. See *Stapedius*.

MUSCULUS SUPERCILII. See *Corrugator supercilii*.

MUSCULUS TUBÆ NOVÆ. See *Circumflexus*.

MUSCUS. (*us, i.* m.; the moss of a tree: from μοσχος, tender: so called from its delicate and tender consistence.) A moss. A cryptogamous plant, which has its fructification contained in a capsule.

Mosses are distinguished, according to the splitting of the capsule, into,—

1. *Musci frondosi*, the capsule of which is *operculate*, having a lid and the fronds very small.

2. *Musci hepatici*, liverworts; the capsules of which split into *valves*, and the herbage is *frondose* and stemless.

The parts of the capsule of frondose mosses, which are distinguished by particular names, are,—

1. The *surculus*, which bears the leaves.

2. The *seta*, or fruit-stalk, which goes from the surculus, and supports the theca.

3. The *theca*, or capsule; the dry fructification adhering to the apex of the frondose stem.

4. The *operculum*, or lid, found in the fringe.

5. The *peristoma*, *peristomium*, or fringe, which in most mosses borders the opening of the theca.

6. The *calyptra*, the veil, placed on the capsule like an extinguisher on a candle; as in *Bryum cæspititium*.

7. The *perichætium*, a slender or squamous membrane at the base of the fruit-stalk.

8. The *fimbria*, or fringe, a dentate ring of the operculum, by the elastic force of which the operculum is displaced.

9. The *epiphragma*, a slender membrane which shuts the fringe; as in *Polytricum*.

10. The *sphrongidium*, or *columnula*; the last column or filament which passes the middle of the capsule, and to which the seeds are attached.

Mosses are found in the hottest and coldest climates. They are extremely tenacious of life, and, after being long dried, easily recover their health and vigour by moisture. Their beautiful structure cannot be too much admired. Their species are numerous, and difficult to determine.

Muscus arboreus. See *Lichen plicatus*.

Muscus caninus. See *Lichen caninus*.

Muscus clavatus. See *Lycopodium*.

Muscus cranii humani. See *Lichen*.

Muscus cumutalis. See *Lichen aphthosus*.

Muscus erectus. See *Lycopodium selago*.

Muscus islandicus. See *Lichen islandicus*.

Muscus marinus. See *Conferva rupestris*.

Muscus maritimus. See *Corallina*.

Muscus pulmonarius quercinus. See *Lichen pulmonarius*.

Muscus pyxidatus. See *Lichen*.

Muscus squamosus terrestris. See *Lycopodium*.

MUSGRAVE, William, was born in Somersetshire, 1657. He edited the Philosophical Transactions for some time: he likewise communicated several papers on anatomical and physiological subjects. In 1689 he took his doctor's degree, and settled at Exeter, where he practised his profession with considerable success, for nearly thirty years, and died in 1721. He wrote two treatises on *Gout*, which are valuable works, and were several times reprinted. He was also a distinguished antiquary, and author of several learned tracts on the subjects of his researches in this way.

MUSHROOM. See *Agaricus campestris*.

Mushroom, goat's-beard. See *Clavaria*.

Mushroom, hedgehog. See *Hydnum*.

Mu'sia pattræ. A name for moxa.

MUSK. See *Moschus*.

Musk, artificial. Let three fluid drachms and a half of nitric acid be gradually dropped on one fluid drachm of rectified oil of amber, and well mixed. Let it stand twenty-four hours, then wash it well, first in cold, and then in hot water. One drachm of this resinous substance, dissolved in four ounces of rectified spirit, forms a good tincture, of which the mean dose is twenty minims. In preparing the above, great attention should be given to the washing the resin, otherwise it is offensive to the stomach.

Musk-cranesbill. See *Geranium*.

Musk-melon. See *Cucumis melo*.

Musk-seed. See *Hibiscus abelmoschus*.

MUSQUITTO. A variety of our common gnat, the *Culex pipens* of Linnæus, which, in the West Indies, produce small tumours on whatever part they settle and bite, attended with so high a degree of itching and inflammation, that the person cannot refrain from scratching; by a frequent repetition of which he not uncommonly occasions them to ulcerate, particularly if he is of a robust and full habit.

MUSSEL. See *Mytilus*.

MUSSENDA. (*a*, *æ*. f.; the vernacular name of the original species, in the island of Ceylon, which, though of barbarous origin, has obtained unusual suffrage.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

Mussenda fondosa. Ray attributes a cooling property to an infusion or decoction of this plant, which the Indians drink by the name of *beleson*.

MUSSITE. Diopside.

MUST. The juice of the grape. By fermentation it forms wine.

MUSTARD. See *Sinapis*.

Mustard, hedge. See *Erysimum alliaria*.

Mustard, mithridate. See *Thlaspi*.

Mustard, treacle. See *Thlaspi*.

Mustard, yellow. See *Sinapis*.

MU'TICUS. (From *mutilus*, without horns.) Beardless; awnless: applied to the arista or awn of plants. *Glumæ muticæ*, beardless husks. See *Gluma*.

MUTI'TAS. (*as*, *atis*. f.; from *mutus*, dumb.) Dumbness. A disease defined by Cullen, an inability of articulation. He distinguishes three species; viz.

1. *Mutitas organica*, when the tongue is removed or injured.

2. *Mutitas atonica*, arising from an affection of the nerves of the organ.

3. *Mutitas surdorum*, depending upon being born deaf, or becoming so in their infantile years.

By whatever cause dumbness may be produced, it requires the use of stimulating

gargles of pellitory of Spain, ammonia, and mustard; electricity, and the remedies that are likely to remove any organic disease which may produce it.

MUYS, Wyer-William, was born at Steenwyk in 1682. His writings were partly medical, partly philosophical. Of the former kind was a dissertation, highly commending the use of sal ammoniac in intermittents: also a very elaborate investigation of the structure of muscles, comprehending an account of all that had been previously discovered on the subject.

Mu'za. See *Musa*.

MYACA'NTHA. (*a, æ.* f.; from μυς, a mouse, and ακανθα, a thorn: so called because its prickly leaves are used to cover whatever is intended to be preserved from mice.) See *Ruscus*.

Mya'gro. See *Myagrum*.

MYA'GRUM. (*um, i.* n.; from μυια, a fly, and αγρευω, to seize: because flies are caught by its viscidity.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliculosa*.

MY'CE. (From μυω, to wink, shut up, or obstruct.) 1. A winking, closing, or obstruction. An obsolete term, formerly applied to the eyes, to ulcers, and to the viscera, especially the spleen, where it imports obstructions.

2. In *Surgery*, it is a fungus, such as arises in ulcers and wounds.

3. Some writers speak of a yellow vitriol, which is called *Myce*.

Mychthi'smos. (From μυζω, to mutter, or groan.) In Hippocrates, it is a sort of sighing, or groaning during respiration, whilst the air is forced out of the lungs.

Myconoi'des. (From μυκη, a noise, and ειδος, a likeness.) Applied to an ulcer full of mucus, and which upon pressure emits a wheezing sound.

MY'CTER. The nose and nostril.

Myde'sis. (From μυδαω, to abound with moisture.) It imports, in general, a corruption of any part from a redundant moisture; but Galen applies it particularly to the eyelids.

My'don. (From μυδαω, to grow putrid.) Fungus, or putrid flesh.

MYDRI'ASIS. (*is, is.* f.; from μυδαω, to abound in moisture: so named because it was thought to originate in redundant moisture.) A disease of the iris. Too great a dilatation of the pupil of the eye, with or without a defect of vision. It is known by the pupil always appearing of the same latitude or size in the light. It sometimes accompanies an amaurosis; is occasionally an attendant on hydrocephalus and worms; and it is sometimes caused by a concretion of the uvea with the capsule of the crystalline lens. A paralysis of the orbicular fibres of the iris is another cause; as is also spasm of the rectilineal fibres of the iris, as often happens in hysteric and spasmodic diseases; and atony of the iris.

Myla'cris. (From μυλη, a grindstone: so called from its shape.) The patella, or knee-pan.

My'le. Μυλη. 1. The knee-pan.

2. A mole in the uterus.

MY'LO. (From μυλη, a grinder tooth.) Names compounded with this word belong to muscles, which are attached near the grinders; such as,

Mylo hyoideus. This muscle, which was first described by Fallopius, is so called from its origin near the *dentes molares*, and its insertion into the os hyoides. It is a thin, flat muscle, situated between the lower jaw and the os hyoides, and is covered by the anterior portion of the digastricus. It arises fleshy, and a little tendinous, from all the inner surface of the lower jaw, as far back as the insertion of the pterygoideus internus, or, in other words, from between the last dens molaris and the middle of the chin, where it joins its fellow, to form one belly, with an intermediate tendinous streak, or *linea alba*, which extends from the chin to the os hyoides, where both muscles are inserted into the lower edge of the basis of that bone. This has induced Riolanus, Winslow, Albinus, and others, to consider it as a single penniform muscle. Its use is to pull the os hyoides upwards, forwards, and to either side.

Mylo-pharyngeus. See *Constrictor*.

My'lon. See *Staphyloma*.

MYOCE'PHALUM. (*um, i.* n.; from μυια, a fly, and κεφαλη, a head: from its resemblance to the head of a fly.) Fly-head: applied to a tumour in the uvea of the eye.

MYOCOILI'TIS. (*is, idis.* f.; from μυς, a muscle, and κοιλια, a belly.) Inflammation of the muscles of the belly.

MYODESOPSIA. (*a, æ.* f.; from μυια, a fly, ειδος, resemblance, and οψις, vision.) A disease of the eyes, in which the person sees black spots, an appearance of flies, cobwebs, or black wool, before his eyes.

MYOLAMPUS. (*us, i.* m.) A throbing or pulse-like leaping of muscular parts, vulgarly called live-blood.

MYOLOGY. (*Myologia, æ.* f.; from μυς, a muscle, and λογος, a discourse.) The doctrine of the muscles. See *Muscle*.

MYO'PIA. (*a, æ.* f.; from μυω, to wink, and ωψ, the eye.) Near-sighted; purblind. The myopes are considered those persons who cannot see distinctly above twenty inches. The myopia is likewise adjudged to all those who cannot see at three, six, or nine inches. The proximate cause is the adunation of the rays of light in a focus before the retina. This disease arises from,

1. Too great a convexity of the cornea. The cause of this convexity is either from nativity, or a greater secretion of the aqueous humour: hence on one day there shall be a greater myopia than on another.

2. Too great a longitude of the bulb. This length of the bulb is native, or acquired from a congestion of the humours in the eye: hence artificers occupied in minute objects, as the

engravers of seals, and persons reading much, frequently after puberty become myopes.

3. Too great a convexity of the anterior superficies of the crystalline lens. This is likewise from birth. The image will so much sooner be formed as the cornea or lens is more convex. This perfectly accounts for short-sightedness; but an anterior too great convexity of the cornea is the most common cause.

4. Too great a density of the cornea, or humours of the eye; for optics teach us, by so much sooner the rays of light are forced into a focus, as the diaphanous body is denser.

5. Too dilated a pupil.

6. Infants, from the great convexity of the cornea, are often myopes; but by degrees, as they advance in years, they perceive objects more remotely, by the cornea becoming less convex. The best palliatives of this disease are concave spectacles.

MY'OPS. (*ops, ópis*. n.; from μυω, to wink, and ωψ, the eye.) One who is near-sighted. See *Myopia*.

MYO'SIS. (*is, is*. f. Μυωσις.) A disease of the eye which consists in a contraction or too small perforation of the pupil.

MYOSI'TIS. (*is, idis*. f.; from μυς, a muscle.) Inflammation of a muscle. It is the term given by Sagar to acute rheumatism.

MYOSO'TIS. (*is, is*. f. Μυς, a muscle, and ους, ωτος, an ear: so called because its leaves are hairy, and grow longitudinally like the ear of a mouse.) See *Hieracium pilosella*.

MYOTOMY. (*Myotomia, æ*. f.; from μυς, a muscle, and τεμνω, to cut.) The dissection of the muscles.

MY'RICA. (*a, æ*. f.; a name borrowed from the ancient Greeks, whose μυρικη, however, appears to be the *Tamarix gallica*.) The name of a genus or family of plants. Class, *Diœcia*; Order, *Tetrandria*.

MYRICA GALE. The systematic name of the Dutch myrtle or sweet willow; called also, *Myrtus brabantica*, *Myrtus anglica*, *Myrtifolia belgica*, *Gale*, *Gagel*, *Rus sylvestris*, *Acaron*, *Elæagnus*, *Elæagnus cordo*, *Chamælæagnus*, and *Dodonæo*. The leaves, flowers, and seeds of this plant have a strong, fragrant smell, and a bitter taste. They are said to be used amongst the common people for destroying moths and cutaneous insects, and the infusion is given internally, as a stomachic and vermifuge.

MYRICIN. The ingredient of wax which remains after digestion in alkohol. It is insoluble also in water and æther; but very soluble in fixed and volatile oils.

MYRIOPHY'LLON. (*um, i*. n.; from μυριος, infinite, and φυλλον, a leaf: named from the number of its leaves.) Milfoil, a species of Achillea. See *Achillea millefolium*.

MYRI'STICA. (*a, æ*. f.) The name of a genus of plants in the Linnæan system. Class, *Diœcia*; Order, *Monadelphia*.

MYRISTICA AROMATICA. Swart's name of the nutmeg-tree.

MYRISTICA MOSCHATA. The nutmeg and mace tree.

1. The nutmeg; called also, *Myristicæ nucleus*, *Nux moschata*, *Nucista*, *Nux myristica*, *Chrysobalanus Galeni*, *Unguentaria*, *Assala*, and *Nux aromatica*. The seed, or kernel, of the *Myristica—foliis lanceolatis, fructu glabro*, of Linnæus. It is a spice that is well known, and has been long used, both for culinary and medical purposes. Distilled with water, it yields a large quantity of essential oil, resembling in flavour the spice itself; after the distillation, an insipid sebaceous matter is found swimming on the water; the decoction, inspissated, gives an extract of an unctuous, very slightly bitterish taste, and with little or no astringency. Rectified spirit extracts the whole virtue of nutmegs, by infusion, and elevates very little of it in distillation: hence the spirituous extract possesses the flavour of the spice in an eminent degree. Nutmegs, when heated, yield to the press a considerable quantity of limpid, yellow oil. There are three kinds of unctuous substances, called oil of mace, though really expressed from the nutmeg. The best is brought from the East Indies, in stone jars: this is of a thick consistence, of the colour of mace, and has an agreeable fragrant smell. The second sort, which is paler coloured, and much inferior in quality, comes from Holland, in solid masses, generally flat, and of a square figure. The third, which is the worst of all, and usually called common oil of mace, is an artificial composition of suet, palm oil, and the like, flavoured with a little genuine oil of nutmeg. The medicinal qualities of nutmeg are supposed to be aromatic, anodyne, stomachic, and astringent; and hence it has been much used in diarrhœas and dysenteries. To many people the aromatic flavour of nutmeg is very agreeable; they, however, should be cautioned not to use it in large quantities, as it is apt to affect the head, and even to manifest an hypnotic power in such a degree as to prove extremely dangerous. Bontius speaks of this as a frequent occurrence in India; and Dr. Cullen relates a remarkable instance of this soporific effect of nutmeg, which fell under his own observation; and hence concludes that, in apoplectic and paralytic cases, this spice may be very improper. The officinal preparations of nutmeg are a spirit and an essential oil, and the nutmeg, in substance, roasted to make it more astringent: both the spice itself and the essential oil enter several compositions, as the *confectio aromatica*, *spiritus ammoniæ aromaticus*, &c.

2. *Mace* is the middle bark of the nutmeg. A thick, tough, reticulated, unctuous membrane, of a lively, reddish yellow colour, approaching to that of saffron, which envelopes the shell of the nutmeg. The mace, when fresh, is of a blood red colour, and acquires its yellow hue in drying. It is dried in the sun, upon hurdles fixed above one another, and then, it is said, sprinkled with sea-water, to prevent its crumbling in carrying. It has a pleasant, aromatic smell, and a warm, bitterish, moderately pungent taste. It is in

common use as a grateful spice, and appears to be in its general qualities nearly similar to the nutmeg. The principal difference consists in the mace being much warmer, more bitter, less unctuous, and sitting easier on weak stomachs. Mace possesses qualities similar to those of nutmeg, but is less astringent, and its oil is supposed to be more volatile and acrid.

Myristica nux. See *Myristica moschata*.

Myrme'cia. (From μυρμηξ, a pismire.) A small painful wart, of the size and shape of a pismire. See *Myrmecium*.

Myrme'cium. A moist soft wart, about the size of a lupine, with a broad base, deeply rooted, and very painful. It grows on the palms of the hands, and soles of the feet.

Myro'copum. (From μυρον, an ointment, and κοπος, labour.) An unguent to remove lassitude.

Myrmavyge. A dazzling of the eyes.

MYROBALAN. See *Myrobalanus*.

MYROBA'LANUS. (*us, i.* f.; from μυρος, an unguent, and βαλανος, a nut: so called because it was formerly used in ointments.) A myrobalan. A dried fruit of the plum kind, brought from the East Indies. All the myrobalans have an unpleasant, bitterish, very austere taste, and strike an inky blackness with a solution of steel. They are said to have a gently purgative, as well as an astringent and corroborating virtue. In this country they have been long expunged from the pharmacopœias. Of this fruit there are several species.

Myrobalanus bellirica. The belliric myrobalan. The fruit is of a yellowish grey colour, and an irregular roundish or oblong figure, about an inch in length, and three quarters of an inch thick.

Myrobalanus chebula. The chebule myrobalan. This resembles the yellow in figure and ridges, but is larger, of a darker colour, inclining to brown or blackish, and has a thicker pulp.

Myrobalanus citrina. Yellow myrobalan. This fruit is somewhat longer than the belliric, with generally five large longitudinal ridges, and as many smaller between them, somewhat pointed at both ends.

Myrobalanus emblica. The emblic myrobalan is of a dark blackish grey colour, roundish, about half an inch thick, with six hexagonal faces, opening from one another.

Myrobalanus indica. The Indian or black myrobalan, of a deep black colour, oblong, octangular, differing from all the others in having no stone, or only the rudiments of one, from which circumstance they are supposed to have been gathered before maturity.

My'ron. (From μυρο, to flow.) An ointment, medicated oil, or unguent.

Myrophy'llum. *Millefolium aquaticum.* Water-fennel. It is said to be vulnerary.

MYRO'XYLON. (*um, i.* n.; from μυρον, an ointment, and ξυλον, wood.) The name of a genus of plants in the Linnæan system. Class, *Diandria*; Order, *Monogynia*.

Myroxylon peruiferum. The systematic name of the tree which gives out the Peruvian balsam. *Balsamum peruvianum*. *Pulzochill*. *Indian*, *Mexican*, and *American balsam*. *Carbareiba* is the name of the tree from which, according to Piso and Ray, it is taken. It is the *Myroxylon peruiferum* of Linnæus, which grows in the warmest provinces of South America, and is remarkable for its elegant appearance. Every part of the tree abounds with a resinous juice; even the leaves being full of transparent resinous points, like those of the orange-tree.

Balsam of Peru is of three kinds; or rather, it is one and the same balsam, having three several names: — 1. The balsam of incision; 2. The dry balsam; 3. The balsam of lotion. The virtues of this balsam, as a cordial, pectoral, and restorative stimulant and tonic, are by some thought to be very great. It is given with advantage from 5 to 10 or 15 drops for a dose, in dyspepsia, atonic gout, in consumptions, asthmas, nephritic complaints, obstructions of the viscera, and suppressions of the menses. It is best taken dropped upon sugar. The yoke of an egg, or mucilage of gum-arabic, will, indeed, dissolve it: it may, by that way, be made into an emulsion; and it is less acrid in that form than when taken singly. It is often made an ingredient in bolusses and electuaries, and enters into two of the officinal compositions, — the tinctura balsami Peruviani composita, and the trochisci glycyrrhizæ. Externally, it is recommended as an useful application to relaxed ulcers, not disposed to heal.

MY'RRHA. (*a, æ.* f.; a Hebrew word.) Also called *stacte*, and the worst sort *ergasma*. A botanical specimen of the tree which affords this gum-resin has not yet been obtained; but from the account of Bruce, who says it very much resembles the *Acacia vera* of Linnæus, there can be little doubt in referring it to that genus, especially as it corresponds with the description of the tree given by Dioscorides. The tree that affords the myrrh, which is obtained by incision, grows on the eastern coast of Arabia Felix, and in that part of Abyssinia which is situated near the Red sea, and is called by Bruce, *Troglodyte*. Good myrrh is of a turbid black-red colour, solid and heavy, of a peculiar smell, and bitter taste. Its medicinal effects are warm, corroborant, and antiseptic: it has been given as an emmenagogue in doses from 5 to 20 grains. It is also given in cachexies, and applied externally as an antiseptic and vulnerary. In doses of half a drachm, Dr. Cullen remarks that it heated the stomach, produced sweat, and agreed with the balsams in affecting the urinary passages. It has lately come more into use as a tonic in hectical cases, and is said to prove less heating than most other medicines of that class. Myrrh dissolves almost totally in boiling water, but, as the liquor cools, the resinous matter subsides. Rectified spirit dissolves less of this concrete

than water; but extracts more perfectly that part in which its bitterness, virtues, and flavour reside: the resinous matter which water leaves undissolved is very bitter, but the gummy matter which the spirit leaves undissolved is insipid, the spirituous solution containing all the active part of the myrrh: it is applied to ulcers, and other external affections of a putrid tendency; and also as a wash, when diluted, for the teeth and gums. There are several preparations of this drug in the London and Edinburgh Pharmacopœias.

MYRRHI'NE. (From μυρρα, myrrh: so called because it smells like myrrh.) The common myrtle. See *Myrtus communis*.

MY'RRHIS. (From μυρρα, myrrh: so named from its myrrh-like smell.) Sweet cicely. See *Scandix odorata*.

MYRSINELÆ'UM. (From μυρσινη, the myrtle, and ελαιον, oil.) Oil of myrtle.

MYRTACA'NTHA. (*a, æ.* f.; from μυρτος, a myrtle, and ακανθα, a thorn: so called from its likeness to myrtle, and from its prickly leaves.) Butcher's broom. See *Ruscus*.

Myrti'danum. (From μυρτος, the myrtle.) An excrescence growing on the trunk of the myrtle, and used as an astringent.

Myrtiform caruncles. See *Carunculæ myrtiformes*.

Myrtiform glands. See *Carunculæ myrtiformes*.

MYRTI'LLUS. See *Vaccinium myrtillus*.

MYRTLE. See *Myrtus*.

Myrtle, Dutch. See *Myrica gale*.

Myrto cheilides. (From μυρτον, the clitoris, and χειλος, a lip.) The nymphæ of the female pudenda.

MY'RTON. The clitoris.

MY'RTUM. (*um, i.* n.; from μυρτος, a myrtle.) 1. A little prominence in the pudenda of women, resembling a myrtle-berry.

2. The clitoris.

MY'RTUS. (*us, i.* f.; from μυρρα, because of its smell; or from *Myrrha*, a virgin, who was fabled to have been turned into this tree.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Monogynia*.

2. The pharmacopœial name of the myrtle. See *Myrtus communis*.

Myrtus brabantica. See *Myrica gale*.

Myrtus caryophyllata. The tree which affords the clove bark. *Cassia caryophyllata*. The bark of this tree, *Myrtus—pedunculis trifido-multifloris, foliis ovatis*, of Linnæus, is a warm aromatic, of the smell of clove spice, but weaker, and with a little admixture of the cinnamon flavour. It may be used with the same views as cloves, or cinnamon.

Myrtus communis. The common myrtle.

Myrtus communis italica. *Oxymyrrhine. Oxymyrsine.* The berries of this plant are recommended in alvine and uterine fluxes, and other disorders from relaxation and debility. They have a roughish, and not unpleasant taste, and appear to be moderately astringent and corroborant, partaking also of aromatic qualities.

Myrtus pimenta. The tree which bears the Jamaica pepper, or allspice. *Pimento. Piper caryophyllatum. Cocculus. Indi aromaticus. Piper chiapæ. Amomum pimenta. Caryophyllus aromaticus. Caryophyllus americanus. Piper odoratum jamaicense. Myrtus —floribus trichotoma-paniculatis, foliis oblongo-lanceolatis*, of Linnæus. This spice, which was first brought over for dietetic uses, has been long employed in the shops as a succedaneum to the more costly oriental aromatics: it is moderately warm, of an agreeable flavour, somewhat resembling that of a mixture of cloves, cinnamon, and nutmegs. Both pharmacopœias direct an aqueous and spirituous distillation to be made from these berries; and the Edinburgh College orders the *Oleum essentiale piperis jamaicensis*.

MY'STAX. (*ax, acis.* f.) 1. The hair which forms the beard in man, on each side the upper lip. See *Capillus*.

2. The upper lip.

MYTILUS. (*us, i.* m.; said to be derived from μυς.) The name of a genus of shell-fish. Class, *Vermes*; Order, *Testacea*. The mussel or muscle.

Mytilus margaritiferus. The pearl muscle, found in the American and Indian seas. It is about eight inches long, and still broader than it is long. The inside is beautifully polished; produces the true mother of pearl, and frequently the most valuable pearls. Some imagine it is a species of the genus *ostrea*.

Mytilus edulis. The edible or eatable muscle. This is found in the European seas, in vast beds, and generally adhering to other bodies by a long silky beard. The flesh is esteemed by some, when boiled; for it is never eaten raw. It is not so easy of digestion as the oyster; and a small quantity often disagrees. It is said to act sometimes as a poison, producing vomiting and purging. It is also maintained by some, that a weed is sometimes hidden within the flesh which is poisonous.

Myu'rus. An obsolete epithet for a sort of sinking pulse, when the second stroke is less than the first, the third than the second, &c. Of this there are two kinds: the first is, when the pulse so sinks as not to rise again; the other, when it returns again, and rises in some degree. Both are esteemed bad presages.

MYXOSARCO'MA. (From μυξα, mucus, and σαρξ, flesh.) *Mucocarneus*. A tumour which is partly fleshy and partly mucous.

My'xter. (From μυξα, the mucus of the nose.) The nose or nostril.

N.

N. In prescriptions, this letter is a contraction for *numero*, in number.

NACRITE. See *Talcite*.

NA'CTA. An abscess of the breast.

NADLESTEIN. An ore of titanium.

NA'DUCEM. A uterine mole.

NÆ'VUS. (*us, i.* m.) A natural mark, spot, or blemish.

NÆVUS MATERNUS. *Macula matricis. Stigma. Metrocelis.* A mother's mark. A mark on the skin of children, which is born with them, and which is said to be produced by the longing of the mother for particular things, or her aversion to them; hence these marks resemble mulberries, strawberries, grapes, pines, bacon, &c.

NA'I CORONA. A name of the cowhage.

NAIL. See *Unguis*.

NAKED. See *Nudus*.

NA'KIR. According to Schenkius, this means wandering pains of the limbs.

NANCEIC. (*Nanceicus:* so called from the base.) Appertaining to the nanceic acid.

NANCEIC ACID. (*Acidum nanceicum:* so called by Braconnot, in honour of the town of Nancy, where he lived.) Zumic acid. He discovered it in many acescent vegetable substances: in sour rice; in putrefied juice of beet-root; in sour decoction of carrots, peas, &c. He imagines that this acid is generated at the same time as vinegar in organic substances, when they become sour. It is without colour, does not crystallise, and has a very acid taste.

NAPE'LLUS. (*us, i.* m.; diminutive of *napus:* so called because it has a bulbous root like that of the *napus*.) See *Aconitum*.

NA'PHÆ FLORES. Orange flowers are sometimes so called. See *Citrus aurantium*.

NA'PHTHA. (*a, æ.* f. Ναφθα.) A native combustible liquid of a yellowish white colour, perfectly fluid and shining. It feels greasy, and exhales an agreeable bituminous smell. It occurs in considerable springs on the shores of the Caspian sea, in Sicily, and Italy. It is used instead of oil, and differs from petroleum obtained by distilling coal only by its greater purity and lightness. This fluid has been used as an external application for removing old pains, nervous disorders, such as cramps, contractions of the limbs, paralytic affections, &c.

NAPHTHA VITRIOLA. See *Æther sulphuricus*.

NAPHTHALINE. A greyish white substance found during the rectification of the petroleum of the coal-gas works, incrusting the pipes. It may be obtained in thin white scales, of a pearly brightness, by slow re-sublimation in glass vessels. Its specific gravity is 1·048. It has a strong odour of naphtha, is insoluble in water, but very soluble in æther, and moderately so in alkohol and oils. According to Dr. Ure's analysis, it is a solid bicarburet of hydrogene.

NAPIFO'LIA. See *Brassica*.

NA'PIUM. See *Lapsana communis*.

NA'PUS. (*us, i.* m.) See *Brassica*.

NAPUS DULCIS. See *Brassica rapa*.

NAPUS SYLVESTRIS. See *Brassica rapa*.

NARCA'PHTHUM. An ancient cordial confection.

NARCI'SSUS. (*us, i.* m.) A genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Monogynia*.

NARCO'SIS. (*is, is.* f.; from ναρκοω, to stupify.) Stupefaction; stupor; numbness.

NARCOTIC. (*Narcoticus;* from ναρκοω, to stupify.) A medicine which has the power of procuring sleep. See *Anodyne*.

NARCOTINE. (*a, æ.* f.: so called because of its stupifying power.) An active principle of opium. See *Papaver somniferum*.

NARD. See *Valeriana celtica*.

Nard, Indian. See *Andropogon nardus*.

NARDO'STACHYS. (*ys, eos.* f.; from ναρδος, spikenard, and ςαχυς, sage.) A species of wild sage, resembling spikenard in its leaves and smell.

NA'RDUS. (*us, i.* f.; from *nard*, Syrian.) Spikenard. See *Lavendula spica*.

NARDUS CELTICA. See *Valeriana celtica*.

NARDUS INDICA. See *Andropogon nardus*.

NARDUS ITALICA. See *Lavendula spica*.

NARDUS MONTANA. See *Asarum*.

NARDUS RUSTICA. See *Asarum*.

NARIFUSO'RIA. (From *nares*, the nostrils, and *fundo*, to pour.) A medicine dropped into the nostrils.

NA'RIS. (*is, is.* f.) The nostril. The cavity of the nostrils is of a pyramidal figure, and is situated under the anterior part of the cranium, in the middle of the face. The two nostrils are composed of fourteen bones, viz. the frontal, two maxillary, two nasal, two lachrymal, two inferior spongy, the sphenoid, the vomer, the ethmoid, and two palatine bones, which form several eminences and cavities. The eminences are the septum narium, the cavernous substance of the ethmoid bone, called the superior conchæ, and the inferior spongy bones. The cavities are three pair of pituitary sinuses, namely, the frontal, sphenoid, and maxillary; the anterior and posterior foramina of the nostrils; the ductus nasalis, the spheno-palatine foramina, and anterior palatine foramina. All these parts are covered with periosteum, and a pituitary membrane which secretes the mucus of the nostrils. The arteries of this cavity are branches of the internal maxillary. The veins empty themselves into the internal jugulars. The nerves are branches of the olfactory, ophthalmic, and superior maxillary. The use

of the nostrils is for smelling, respiration, and speech.

NARIS COMPRESSOR. See *Compressor naris.*

NA'RTA. (Ναρτα, *ex nardi odore,* from its smell.) A plant used in ointments.

NARTHEX. Most probably the *Anethum fœniculum* of Linnæus.

NASAL. (*Nasalis;* from *nasus,* the nose.) Appertaining to the nose.

NASALIS LABII SUPERIORIS. See *Orbicularis oris.*

NASA'RIUM. (From *nasus,* the nose.) The mucus of the nose.

NASCA'LE. (From *nasus,* the nose.) A wood or cotton pessary for the nose.

NASCA'PHTHUM. A cordial confection.

NASI DEPRESSOR. See *Depressor labii superioris alæque nasi.*

NASI OSSA. The two small bones of the nose that are so termed form the bridge of the nose. In figure they are quadrangular and oblong.

NASTU'RTIUM. (*um, i.* n.; *quod nasum torqueat,* because the seed, when bruising, irritates the nose.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliquosa.*

NASTURTIUM AQUATICUM. See *Sisymbrium nasturtium.*

NASTURTIUM HORTENSE. See *Lepidium.*

NASTURTIUM INDICUM. See *Tropæolum.*

NA'SUS. (*us, i.* m.) The nose.

NA'TA. *Natta.* A wen with a slender pendent neck. Not now used.

NATANS. (From *nato,* to swim.) Floating. Applied to leaves on the surface of the water, in opposition to those which are naturally under, and different, and are called demersed, immersed, and submersed; as in *Potamogeton natans.*

NA'TES. (*es, is.* f.; from *nato,* to flow: because the excrements are discharged from them.) 1. The buttock, or the fleshy part upon which we sit.

2. Two of the eminences, called tubercula quadrigemina, of the brain, are so named from their resemblance.

NATES CEREBRI. See *Tubercula quadrigemina.*

NATROLITE. A subspecies of prismatic zeolite, or mesotype.

NA'TRON. (Indeclinable. So called from *Natron,* a lake in Judæa, where it was found.) *Natrum.* 1. The name formerly given to the alkali now called soda. See *Soda.*

2. A native salt, which is found crystallised in Egypt, in the lake called Natron, and in other hot countries, in sands surrounding lakes of salt water. It is an impure subcarbonate of soda, and there are two kinds of it, the common and the radiated.

3. The name of an impure subcarbonate of soda, obtained by burning various marine plants. See *Soda.*

NATRON MURIATUM. See *Sodæ murias.*

NATRON PRÆPARATUM. See *Sodæ subcarbonas.*

NATRON TARTARISATUM. See *Soda tartarizata.*

NATRON VITRIOLATUM. See *Sodæ sulphas.*

NA'TULÆ. (Diminutive of *nates,* the buttocks: so called from their resemblance.) The two uppermost of four small eminences of the brain. See *Tubercula quadrigemina.*

NATURAL. *Naturalis.* Appertaining to nature.

NATURAL ACTIONS. See *Actions.*

Natural functions. See *Actions.*

NATURAL HISTORY. A description of the natural products of the earth, water, or air; *ex. gr.* beasts, birds, fish, insects, worms, plants, metals, minerals, and fossils; together with such extraordinary phænomena as at any time appear in the material world, as meteors, monsters, &c.

NATURAL ORDERS. A division or arrangement of animals, plants, &c., from their external habits or characters. See *Classification.*

NATURAL PHILOSOPHY. Physics. The science which considers the properties of natural bodies and their mutual actions on one another, being contrasted with moral philosophy or ethics, which treats of the phænomena of mind and rules of morality.

NATURA'LIA. (*a, um.* pl. n.; from *natura,* nature.) The parts of generation.

NATURE. (*Natura, æ.* f.; from *nascor, natus*) 1. This term is most frequently employed to express the system of the world, the assemblage of all created beings, and, in this case, is synonymous with *world,* or *universe.*

2. That power which is said to be diffused throughout the creation, moving and acting in all bodies, and giving them certain properties. In this last sense, when a personified being is meant, Nature is nothing else but God, acting himself, and according to certain laws which he himself has fixed. According to the supposition of some, however, the principle called Nature is a power delegated by the Creator; as it were, a middle being between God and created things, which has been styled *Anima mundi;* but it does not appear that there is any foundation for this hypothesis, or that any thing is explained by referring the whole series of second causes to an intermediate principle, instead of to one universal agent.

3. In medical writings, the expression *nature* is usually taken for the agent which manages the vital motions, or aggregate of powers belonging to any body; as when physicians say that, in such a disease, Nature, left to herself, will perform the cure. It may be proper here to observe, with regard to this phrase of leaving the cure to Nature, that there is a wide difference between suspending for a time all interference with the vital processes, and *neglecting* a disease; although to those who are ignorant of the principles of medicine, these appear to be the same thing.

It would be the perfection of this science to ascertain upon what causes healthy and diseased actions depend, and to what extent either

can be affected by human agency: but at present the judicious physician never aims at a cure independently of the original powers of the system, but rather seeks to call them into action, or, at most, to assist when the inherent elasticity of the vital functions is insufficient to recover them from the oppression of disease. As, for example, when we allow a wound to heal by the first intention, or restore the digestive functions by obliging a man to attend to the rules of diet and exercise, &c. upon which health depends; we call upon the restorative powers of Nature, because art, that is to say, human ingenuity, can supply nothing equivalent. Or, again, when, in the treatment of a diseased joint, rest is enjoined at one period on account of inflammation, and perhaps motion is ordered at another, to keep up the proper uses of the part, we show the importance of alternately interfering and looking on, as we judge it proper to check the tendency of vital actions, or to trust entirely to them; while to those who are ignorant of these principles, the practitioner, when really exercising his greatest skill, is supposed to be idle.

NAU'SEA. (*a, æ.* f. Ναυσεα; from ναυς, a ship: because it is a sensation similar to that which people experience upon sailing in a ship.) An inclination to vomit without effecting it. See *Sickness.*

Nausio'sis. See *Nausea.*

Nau'tia. See *Nausea.*

NAU'TICUS. (A sailor: so called from the use which sailors make of it in climbing ropes.) Nautical: appertaining to the sea, and applied to a muscle of the leg, exerted in climbing up.

NAVEW. See *Brassica rapa.*

Navew, garden. See *Brassica rapa.*

Navew, sweet. See *Brassica rapa.*

NAVICULAR. (*Navicularis;* from *navicula*, a little boat.) 1. Boat-like. See *Naviculare os.*

2. Applied to parts of plants; as the valves of the seed-vessels of the woad and mithridate, and the lower petal of many of the papilionaceous blossoms.

NAVICULA'RE OS. *Naviforme os. Os scaphoides. Cymba.* A bone of the carpus and tarsus is so called, from its supposed resemblance to a boat.

Navifo'rmis. See *Navicular.*

NEAPOLITAN. (*Neapolitanus;* from *Neapolis*, or *Naples*, because it was said to have been first discovered at Naples, when the French were in possession of it.) The venereal disease was once so called.

NE'BULA. (*a, æ.* f.; from νεφελη.) 1. A cloudy spot in the cornea of the eye.

2. The cloud-like appearance in the urine, after it has been a little time at rest.

NECK. *Collum.* The parts which form the neck are divided into external and internal.

1. The *external* parts are the common integuments, several muscles, eight pair of cervical nerves, the eighth pair of nerves of the cerebrum, and the great intercostal nerve; the two carotid arteries, the two external jugular veins, and the two internal; the glands of the neck, viz. the jugular, submaxillary, cervical, and thyroid.

2. The *internal* parts are the fauces, pharynx, œsophagus, larynx, and trachea.

3. The bones of the neck are the seven cervical vertebræ.

NECRO'SIS. (*is, is.* f.; from νεκροω, to destroy.) This word, the strict meaning of which is only mortification, is, by the general consent of surgeons, confined to an affection of the bones. The death of parts of bones was not distinguished from caries, by the ancients. However, necrosis and caries are essentially different; for, in the first, the affected part of the bone is deprived of the vital principle; but this is not the case when it is simply carious. Caries is very analogous to ulceration; while necrosis is exactly similar to mortification of the soft parts.

Necrosis ustilaginea. A painful convulsive contraction of the limbs. See *Raphania.*

NE'CTAR. (*ar, aris.* n. Νεκταρ.) A wine made of honey.

NECTA'RIUM. (*um, ii.* n.; from nectar, because it contains a sweet honey-like fluid.) The nectary or honey-cup. An accidental part of a flower, which does not come under the description of any of its organs. It may be defined that part of the corolla which contains or which secretes honey, though it is not necessary to a nectary that honey be present.

Scarce a flower can be found that has not more or less honey, though it is far from being universally, or even generally formed, by an apparatus separate from the petals.

In monopetalous flowers, as the *Lamium album*, the dead nettle, the tube of the corolla contains, and probably secretes, the honey without any evident nectary.

Sometimes the part under consideration is a production or elongation of the corolla, as in the violet: sometimes, indeed, of the calyx, as in the garden nasturtium, *Tropæolum*, the coloured calyx of which partakes much of the nature of the petals.

Sometimes it is distant from both, either resembling the petals, as in *Aquilegia;* or more different, as in *Epimedium, Aconitum, Helleborus, Delphinium.* Such, at least, is what Linnæus and his followers understand of the four last-mentioned plants.

The most indubitable of all nectaries, as actually secreting honey, are those of a glandular kind. In the natural order of cruciform plants, composing the class *Tetradynamia*, there are generally four green glands at the base of the stamens, as in *Dentaria*, and *Sisymbrium;* whilst in *Pelargonium*, the nectary is a tube running down one side of the flower-stalk. The elegant *Parnassia* has a most elaborate apparatus or nectary.—*Smith.*

From the figure of the nectary, it is said to be,—

1. *Calcarate*, or spur-like; as in *Aquilegia*

vulgaris, *Delphinium ajax*, and *Antirrhinum linaria*.

2. *Cucullate*, hooded; as in *Impatiens balsamina*, *Aconitum*, and *Asclepias vincetoxicum*.

3. *Foveate*, a little depression in the claw of the petal; as in *Fritillaria imperialis*.

4. *Campanulate;* as in *Narcissus jonquilla*, and *Pseudonarcissus*.

5. *Crown-like;* as in *Passiflora cærulea*.

6. *Pedicellate*, resting on a partial flower-stalk; as in *Aconitum napellus*.

7. *A bilabiate tube;* as in *Helleborus fœtidus*, and *Nigella*.

8. *Poriform*, there being three pores in the germen; as in the Hyacinths.

9. *Squamate*, a little scale on the claw; as in *Ranunculus*.

10. *Glandular*, little nectiferous glands between the stamens and pistils; as in *Sinapis alba*.

11. *Stellate*, a double star covering the internal organs; as in *Stapelia*.

12. *Pilous*, fine hairy fascicles at the base of the stamina; as in *Parnassia palustris*.

13. *Bearded;* as in *Iris germanica*.

14. *Forniciform*, arched; small prolongations at the opening of the corolla, and covering the internal organs; as in *Symphytum officinale*, and *Myosotis scorpioides*.

15. *Bristle-like*, fine horn-like filaments around the internal organs; as in *Periploca græca*.

16. *Rotate;* as in *Cissampelos*.

17. *Scrotiforme*, behind the flower; as in *Satyrium*.

18. *Horn-like*, behind the flower; as in *Orchis*.

19. *Sandaliform*, slipper-like; as in *Cypripedium calceolus*.

20. *Globose*, investing the germen; as in *Mirabilis jalappa*.

21. *Cyathiform*, cup-like; as in *Urtica urens*.

22. *Conical;* as in *Utricularia foliosa*.

23. *Ascidiforme*, pitcher-like, a membraneous tube, containing water, and behind the flower; as in *Ascium*, and *Ruyschia*.

24. *Calycine*, adhering to the calyx by a spur; as in *Tropæolum majus*.

NEDY'IA. (*Nedys;* from νηδυς, the belly.) The intestines.

NEEDLE. See *Acus*.

Needle-shaped leaf. See *Acerosus*.

Needle zeolite. See *Zeolite*.

Negro cachexy. See *Cachexia*.

Nelæ'ra. (From νειαρος, furthermost.) The lower part of the belly.

NEMOROSUS. (From *nemus*, a grove.) Appertaining to a grove: also, woody.

NEP. See *Nepeta cataria*.

Ne'pa theophrasti. See *Spartium*.

NEPE'NTHES. (*es*, *is*. n.; from νη, neg. and πενθος, grief: so called from their exhilarating qualities.) 1. A preparation of opium.

2. A kind of bugloss.

NE'PETA. (*a*, *æ*. f.; from *nepte*, German.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia*.

Nepeta cataria. The systematic name of the nep, or catmint; called also, *Herba felis*, *Mentha felina*, *Calamintha*, *Nepetella*, and *Mentha cataria*. The leaves of this plant, *Nepeta—floribus spicatis; verticillis subpedicellatis; foliis petiolatis, cordatis, dentato-serratis*, of Linnæus, have a moderately pungent aromatic taste, and a strong smell, like an admixture of spearmint and pennyroyal. The herb is recommended in uterine disorders, dyspepsia, and flatulency.

Nepete'lla. (*a*, *æ*. f.; diminutive of *nepeta*.) The lesser catmint.

NE'PHELA. (*a*, *æ*. f.; diminutive of νεφος, a cloud.) A little cloud: applied to a cloud-like spot on the cornea of the eye.

NEPHELOI'DES. (From νεφελη, a cloud, and ειδος, a likeness.) Cloudy: applied to the urine.

NEPHRA'LGIA. (*a*, *æ*. f.; from νεφρος, the kidney, and αλγος, pain.) Pain in the kidney.

NEPHRELINE. Rhomboidal felspar. This occurs in drusy cavities along with ceylanite, vesuvian, and meionite, at Monte Somma, near Naples, in granular limestone.

NEPHRITE. A mineral, of which there are two species, common nephrite, and axe-stone. The former is of a leek-green colour, and occurs in granite and gneiss, in Switzerland. The most beautiful come from Persia and Egypt. See *Axe-stone*.

NEPHRITIC. (*Nephriticus;* from νεφρος, the kidney.) Of or belonging to the kidney.

Nephritic wood. Lignum nephriticum. See *Guilandina moringa*.

Nephritica aqua. Spirituous distillation of nutmeg and hawthorn flowers.

NEPHRI'TIS. (*is*, *idis*. f.; from νεφρος, a kidney.) Inflammation of the kidney. This disease is known by fever, pain in the region of the kidneys, and shooting along the course of the ureter; drawing up of the testicles; numbness of the thigh; vomiting; urine high coloured, and frequently discharged; costiveness, and colic pains. Nephritis is symptomatic of calculus, gout, &c.

This inflammation may be distinguished from the colic, by the pain being seated very far back, and by the difficulty of passing urine, which constantly attends it; and it may be distinguished from rheumatism, as the pain is but little influenced or increased by motion.

Nephritis is to be distinguished from a calculus in the kidney or ureter, by the symptoms of fever accompanying, or immediately following the attack of pain, and these continuing without any remarkable intermission; whereas in a calculus of the kidney or ureter, they do not occur until a considerable time after violent pain has been felt. In the latter case, too, a numbness of the thigh, and a retraction of the testicle on the affected side, usually takes place.

The causes which give rise to nephritis are external contusions, strains of the back, acrids conveyed to the kidneys in the course of the circulation, violent and severe exercise, either in riding or walking, calculous concretions lodged in the kidneys or ureters, and exposure to cold. In some habits, there is an evident predisposition to this complaint, particularly the gouty, and in these there are often translations of the matter to the kidneys, which very much imitate nephritis.

An inflammation of the kidney is attended with a sharp pain on the affected side, extending along the course of the ureter; and there is a frequent desire to make water, with much difficulty in expelling it. The body is costive, the skin is dry and hot, the patient feels great uneasiness when he endeavours to walk, or sit upright; he lies with most ease on the affected side, and is generally troubled with nausea and frequent vomiting.

When the disease is protracted beyond the seventh or eighth day, and the patient feels an obtuse pain in the part, has frequent returns of chillness and shiverings, there is reason to apprehend that matter is forming in the kidney, and that a suppuration will ensue.

Dissections of nephritis show the usual effects of inflammation on the kidney; and they likewise often discover the formation of abscesses, which have destroyed its whole substance. In a few instances, the kidney has been found in a scirrhous state.

The disease is to be treated by bleeding, general and local, the warm bath, or fomentations to the loins, emollient clyster, mucilaginous drinks, and the general antiphlogistic plan. The bowels should be effectually cleared at first by some sufficiently active formula; but the saline cathartics are considered not so proper, as they may add to the irritation of the kidney. Calomel with antimonial powder, followed by the infusion of senna, or the ol ricini, may be given in preference, and repeated occasionally. It will be right, also, to endeavour to promote diaphoresis, by moderate doses of antimonials especially. Blisters are inadmissible in this disease; but the linimentum ammoniæ, or other rubefacient application, may in some measure supply their place. Opium will often prove useful, particularly where the symptoms appear to originate from calculi, given in the form of glyster, or by the mouth; in which latter mode of using it, however, it will be much better joined with other remedies, which may obviate its heating effect, and determine it rather to pass off by the skin. A decoction of the dried leaves of the peach-tree is said to have been serviceable in many cases of this disease. In affections of a more chronic nature, where there is a discharge of mucus or pus, by urine, in addition to suitable tonic medicines, the uva ursi in moderate doses, or some of the terebinthinate remedies, may be given with probability of relief.

NEPHRODIUM. (*um, ii.* n.; from νεφρος, a kidney: in allusion to the shape of its involucrum.) The name of a genus of plants. Class, *Cryptogamia;* Order, *Filices.*

NEPHRODIUM CRENATUM. See *Aspidium.*

NE'PHROS. (*os, i.* m.; from νεω, to flow, and φερω, to bear: as conveying the urinary fluid.) The kidney. See *Kidney.*

NEPHROTOMY. (*Nephrotomia, æ.* f.; from νεφρος, a kidney, and τεμνω, to cut.) The operation of extracting a stone from the kidney,—a proceeding which, perhaps, has never been actually put in practice. The cutting into the kidney, the deep situation of this viscus, and the want of symptoms by which the lodgment of a stone in it can be certainly discovered, will always be strong objections to the practice.

NE'RIUM. (*um, ii.* n.; from νηρος, humid: so called because it grows in moist places.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

NERIUM ANTIDYSENTERICUM. The systematic name of the tree, *Nerium —foliis ovatis, acuminatis, petiolatis,* of Linnæus, which affords the Codaga pala bark; which is also called, *Conessi cortex, Cortex codagæ palæ, Cortex Bela-aye,* and *Cortex profluvii.* It grows on the coast of Malabar. It is of a dark black colour externally, and generally covered with a white moss, or scurf. It is very little known in the shops; has an austere, bitter taste; and is recommended in diarrhœa, dysentery, &c. as an astringent.

NERIUM TINCTORIUM. This tree grows in Hindostan, and, according to Dr. Roxburgh, affords indigo.

NE'ROLI OLEUM. Essential oil of orange flowers. See *Citrus aurantium.*

NERVA'LIA OSSA. (From *nervus,* a nerve.) The bones through which the nerves pass.

NERVALIS. See *Nervous.*

NERVE. (*Nervus, i.* m.; from νεῦρον.) A. In *Anatomy,* formerly it meant a sinew; and this accounts for the opposite meanings of the word *nervous,* which sometimes means strong, sinewy, and sometimes weak and irritable. Nerves are long, white, medullary cords, that serve for sensation. They originate from the brain and spinal marrow: hence they are distinguished into cerebral and spinal nerves, and distributed upon the organs of sense, the viscera, vessels, muscles, and every part that is endowed with sensibility. The cerebral nerves are the olfactory, optic, motores oculorum, pathetici, or trochleatores, trigemini, or divisi, abducent, auditory, or acoustic, par vagum, and lingual. Heister has drawn up the use of these nerves in the two following verses:—

Olfaciens, cernens, oculosque movens, patiensque,
Gustans, abducens, audiensque, vagansque, loquensque.

The spinal nerves are thirty pairs, and are divided into eight pair of cervical, twelve pair of dorsal, five pair of lumbar, and five of sacral nerves. In the course of the nerves there are a number of knots: these are called *gan-*

glions; they are commonly of an oblong shape, and of a greyish colour, somewhat inclining to red, which is, perhaps, owing to their being extremely vascular. Some writers have considered these little ganglions as so many little brains. Lancisi fancied he had discovered muscular fibres in them; but they certainly are not of an irritable nature. A late writer (Dr. Johnson) imagines they are intended to deprive us of the power of the will over certain parts, as the heart, for instance; but if this hypothesis were well founded, they should be met with only in nerves leading to involuntary muscles; whereas it is certain that the voluntary muscles receive nerves through ganglions. Dr. Munro, from observing the accurate intermixture of the minute nerves which compose them, considers them as new sources of nervous energy. The nerves, like the blood-vessels, in their course through the body, communicate with each other, and each of these communications constitutes what is called a *plexus,* from whence branches are again detached to different parts of the body. The use of the nerves is to convey impressions to the brain from all parts of the system, and the principles of motion and sensibility from the brain to every part of the system. The manner in which this operation is effected is not yet determined. The enquiry has been a constant source of hypothesis in all ages, and has produced some ingenious ideas, and many erroneous positions, but without having hitherto afforded much satisfactory information. Some physiologists have considered a trunk of nerves as a solid cord, capable of being divided into an infinite number of filaments, by means of which the impressions of feeling are conveyed to the common sensorium. Others have supposed each fibril to be a canal, carrying a volatile fluid, which they term the *nervous fluid.* Those who contend for their being solid bodies, are of opinion that feeling is occasioned by vibration; so that, for instance, according to this hypothesis, by pricking the finger, a vibration would be occasioned in the nerve distributed through its substance; and the effects of this vibration, when extended to the sensorium, would be an excital of pain; but the inelasticity, the softness, the connection, and the situation of the nerves, are so many proofs that vibration has no share in the cause of feeling.

A Table of the Nerves.

CEREBRAL NERVES.

1. The *first pair,* called *olfactory.*
2. The *second pair,* or *optic nerves.*
3. The *third pair,* or *oculorum motores.*
4. The *fourth pair,* or *pathetici.*
5. The *fifth pair,* or *trigemini,* which gives off,
   a. The *ophthalmic* or *orbital nerve,* which sends,
      1. A *branch* to unite with one from the sixth pair, and form the great intercostal nerve.
      2. The *frontal nerve.*
      3. The *lachrymal.*
      4. The *nasal.*
   b. The *superior maxillary,* which divides into,
      1. The *spheno-palatine* nerve.
      2. The *posterior alveolar.*
      3. The *infra-orbital.*
   c. The *inferior maxillary* nerve, from which arise,
      1. The *internal lingual.*
      2. The *inferior maxillary,* properly so called.
6. The *sixth pair,* or *abducentes,* which send off,
   A *branch* to unite with one from the fifth, and form the great intercostal.
7. The *seventh pair,* or *auditory nerves:* these arise by two separate beginnings, viz.
   The *portio dura,* a nerve going to the face.
   The *portio mollis,* which is distributed on the ear.
   The *portio dura,* or *facial* nerve, gives off the *chorda tympani,* and then proceeds to the face.
8. The *eighth pair,* or *par vagum,* arise from the medulla oblongata, and join with the accessory of Willis. The par vagum gives off,
   1. The *right* and *left recurrent nerve.*
   2. Several branches in the chest to form the *cardiac plexus.*
   3. Several branches to form the *pulmonic plexus.*
   4. Several branches to form the *œsophageal plexus.*
   5. It then forms in the abdomen the *stomachic plexus.*
   6. The *hepatic plexus.*
   7. The *splenic plexus.*
   8. The *renal plexus,* receiving several branches from the great intercostal, which assists in their formation.
9. The *ninth pair,* or *lingual nerves,* which go from the medulla oblongata to the tongue.

SPINAL NERVES.

Those nerves are called *spinal,* which pass out through the lateral or intervetebral foramina of the spine.

They are divided into *cervical, dorsal, lumbar,* and *sacral* nerves.

CERVICAL NERVES.

The *cervical nerves* are *eight* pairs.

The *first* are called the *occipital:* they arise from the beginning of the spinal marrow, pass out between the margin of the occipital foramen and atlas, form a ganglion on its transverse process, and are distributed about the occiput and neck.

The *second* pair of cervical nerves send a branch to the accessory nerve of Willis, and proceed to the parotid gland and external ear.

The *third* cervical pair supply the integuments of the scapula, the cucullaris, and triangularis muscles, and send a branch to form with others the diaphragmatic nerve.

The *fourth, fifth, sixth, seventh,* and *eighth* pair, all converge to form the *brachial plexus,* from which arise the six following:—

NERVES OF THE UPPER EXTREMITIES.

1. The *axillary* nerve, which sometimes

arises from the radial nerve. It runs backwards and outwards around the neck of the humerus, and ramifies in the muscles of the scapula.

2. The *external cutaneal*, which perforates the caraco-brachialis muscle, to the bend of the arm, where it accompanies the median vein as far as the thumb, and is lost in its integuments.

3. The *internal cutaneal*, which descends on the inside of the arm, where it bifurcates. From the bend of the arm the anterior branch accompanies the basilic vein, to be inserted into the skin of the palm of the hand; the posterior branch runs down the internal part of the fore-arm, to vanish in the skin of the little finger.

4. The *median* nerve, which accompanies the brachial artery to the cubit, then passes between the brachialis internus, pronator rotundus, and the perforatus and perforans, under the ligament of the wrist to the palm of the hand, where it sends off branches in every direction to the muscles of the hand, and then supplies the digital nerves, which go to the extremities of the thumb, fore and middle fingers.

5. The *ulnar* nerve, which descends between the brachial artery and basilic vein, between the internal condyle of the humerus, and the olecranon, and divides in the fore-arm into an *internal* and *external* branch. The former passes over the ligament of the wrist and sesamoid bone, to the hand, where it divides into three branches, two of which go to the ring and little finger, and the third forms an arch towards the thumb, in the palm of the hand, and is lost in the contiguous muscles. The latter passes over the tendon of the extensor carpi ulnaris and back of the hand, to supply also the two last fingers.

6. The *radial* nerve, which sometimes gives off the axillary nerve. It passes backwards, about the os humeri, descends on the outside of the arm, between the brachialis externus and internus muscles to the cubit; then proceeds between the supinator longus and brevis, to the superior extremity of the radius, giving off various branches to adjacent muscles. At this place it divides into two branches; *one* goes along the radius, between the supinator longus and radialis internus to the back of the hand, and terminates in the interosseous muscles, the thumb, and three first fingers; the *other* passes between the supinator brevis and head of the radius, and is lost in the muscles of the fore-arm.

Dorsal Nerves.

The *dorsal* nerves are twelve pairs in number. The first pair gives off a branch to the brachial plexus. All the dorsal nerves are distributed to the muscles of the back, intercostals, serrati, pectoral, abdominal muscles, and diaphragm. The five inferior pairs go to the cartilages of the ribs, and are called *costal*.

Lumbar Nerves.

The five pair of lumbar nerves are bestowed about the loins and muscles, skin of the abdomen and loins, scrotum, ovaria, and diaphragm. The second, third, and fifth pair unite and form the *obturator nerve*, which descends over the psoas muscle into the pelvis, and passes through the foramen thyroideum to the obturator muscle, triceps, pectineus, &c.

The third and fourth, with some branches of the second pair, form the *crural nerve*, which passes under Poupart's ligament with the femoral artery, sends off branches to the adjacent parts, and descends in the direction of the sartorius muscle to the internal condyle of the femur, from whence it accompanies the saphena vein to the internal ankle, to be lost in the skin of the great toe.

The fifth pair are joined to the first pair of the sacral nerves.

Sacral Nerves.

There are five pair of *sacral* nerves, all of which arise from the *cauda equina*, or termination of the medulla spinalis, so called from the nerves resembling the tail of a horse. The four first pair give off branches to the pelvic viscera, and are afterwards united to the last lumbar, to form a large *plexus*, which gives off

The *ischiatic nerve*, the largest in the body. The ischiatic nerve, immediately at its origin, sends off branches to the bladder, rectum, and parts of generation; proceeds from the cavity of the pelvis through the ischiatic notch, between the tuberosity of the ischium and great trochanter, to the ham, where it is called the *popliteal nerve*. In the ham it divides into two branches.

1. The *peroneal*, which descends on the fibula, and distributes many branches to the muscles of the leg and back of the foot.

2. The *tibial*, which penetrates the gastrocnemii muscles to the internal ankle, passes through a notch in the os calcis to the sole of the foot, where it divides into an *internal* and *external plantar* nerve, which supply the muscles and aponeurosis of the foot and the toes.

Physiology of the Nervous System.

The nervous system, as the organ of sense and motion, is connected with so many functions of the animal economy, that the study of it must be of the utmost importance, and a fundamental part of the study of the whole economy. The nervous system consists of the medullary substance of the brain, cerebellum, medulla oblongata, and spinalis; and of the same substance continued into the nerves, by which it is distributed to many different parts of the body. The whole of this system seems to be properly distinguished into these four parts :—

1. The medullary substance contained in the cranium and vertebral cavity; the whole of which seems to consist of distinct fibres, but without the smaller fibres being separated from each other by any evident enveloping membranes.

2. Connected with one part or other of this substance are, the nerves, in which the same

medullary substance is continued; but here more evidently divided into fibres, each of which is separated from the others by an enveloping membrane, derived from the pia mater.

3. Parts of the extremities of certain nerves, in which the medullary substance is divested of the enveloping membranes from the pia mater, and so situated as to be exposed to the action of certain external bodies, and perhaps so framed as to be affected by the action of certain bodies only: these are named the *sentient extremities* of the nerves.

4. Certain extremities of the nerves, so framed as to be capable of a peculiar contractility; and, in consequence of their situation and attachments, to be, by their contraction, capable of moving most of the solid and fluid parts of the body. These are named the *moving extremities* of the nerves.

These several parts of the nervous system are every where the same continuous medullary substance, which is supposed to be the vital solid of animals, so constituted in living animals, and in living systems only, as to admit of motions being readily propagated from any one part to every other part of the nervous system, so long as the continuity and natural living state of the medullary substance remains. In the living man, there is an immaterial thinking substance, or *mind*, constantly present, and every phænomenon of thinking is to be considered as an affection or faculty of the mind alone. But this immaterial and thinking part of man is so connected with the material and corporeal part of him, and particularly with the nervous system, that motions excited in this give occasion to thought; and thought, however occasioned, gives occasion to new motions in the nervous system. This mutual communication, or influence, is assumed with confidence as a fact: but the mode of it we do not understand, nor pretend to explain; and, therefore, are not bound to obviate the difficulties that attend any of the suppositions which have been made concerning it. The phænomena of the nervous system occur commonly in the following order:—The impulse of external bodies acts upon the sentient extremities of the nerves; and this gives occasion to perception or thought, which, as first arising in the mind, is termed *sensation*. This sensation, according to its various modifications, gives occasion to *volition*, or the willing of certain ends to be obtained by the motion of certain parts of the body; and this volition gives occasion to the contraction of muscular fibres, by which the motion of the part required is produced. As the impulse of bodies on the sentient extremities of a nerve does not occasion any sensation, unless the nerve between the sentient extremity and the brain be free; and as, in like manner, volition does not produce any contraction of muscles, unless the nerve between the brain and muscle be also free; it is concluded, from both these facts, that sensation and volition, so far as they are connected with corporeal motions, are functions of the brain alone; and it is presumed, that sensation arises only in consequence of external impulse producing motion in the sentient extremities of the nerves, and of that motion being thence propagated along the nerves of the brain; and, in like manner, that the will operating in the brain only, by a motion begun there, and propagated along the nerves, produces the contraction of muscles. From what is now said, we perceive more distinctly the different functions of the several parts of the nervous system. 1. The sentient extremities seem to be particularly fitted to receive the impressions of external bodies; and, according to the difference of these impressions, and of the condition of the sentient extremity itself, to propagate along the nerves motions of a determined kind, which, communicated to the brain, give occasion to sensation. 2. The brain seems to be a part fitted for, and susceptible of, those motions with which sensation, and the whole consequent operations of thought, are connected: and thereby is fitted to form a communication between the motions excited in the sentient, and those in consequence arising in the moving extremities of the nerves, which are often remote and distant from each other. 3. The moving extremities are so framed as to be capable of contraction, and of having this contraction excited by motion propagated from the brain, and communicated to the contractile fibre. 4. The nerves, more strictly so called, are to be considered as a collection of medullary fibres, each enveloped in its proper membrane, and thereby so separated from every other, as hardly to admit of any communication of motion from any one to the others, and to admit only of motion along the continuous medullary substance of the same fibre, from its origin to the extremities, or contrariwise. From this view of the parts of the nervous system, of their several functions and communication with each other, it appears, that the beginning of motion in the animal economy is generally connected with sensation; and that the ultimate effects of such motion are chiefly actions depending immediately upon the contraction of moving fibres, between which and the sentient extremities the communication is by means of the brain.

B. In *Botany*, applied to a cluster of vessels that runs like a rib or chord on certain leaves; as that of the *Laurus cinnamomum*, and *Arctium lappa*.

Nerveless. See *Enervis*.

NERVINE. (*Nervinus*; from *nervus*, a nerve.) Neurotic. That which relieves disorders of the nerves. All the antispasmodics, and the various preparations of bark and iron.

Nervo'rum resolutio. Apoplexy and palsy have been so called.

Nervosum os. See *Occipitale os*.

NERVOUS. *Nervosus*. 1. In *Medicine*, applied to fevers and affections of the

nerves, and to medicines which act on the nervous system.

2. In *Anatomy*, to the structure of parts being composed of, or resembling, a nerve.

3. In *Botany*, to leaves which have hard fibres or nerve-like cords.

Nervous consumption. See *Atrophia.*

Nervous diseases. See *Neuroses.*

Nervous fever. *Febris nervosa.* The fever which is so denominated is usually placed by nosologists in the genus typhus, and is therefore called *typhus nervosus.* Dr. Cullen ranks it as a variety of his *typhus mitior.* It has been described as *febris lenta nervosa,* the low, slow, nervous, and also hysterical fever, because it is accompanied by considerable languor and dejection of spirits or sensorial power. It is particularly characterised by slight shiverings; heavy or vertiginous headaches; great oppression about the præcordia; nausea; frequent sighing; despondency; whey-like urine, with the ordinary heat of skin; thirst, and febrile symptoms, which exacerbate once or twice a day, and are accompanied in many cases by low or quiet muttering and delirium.

There is seldom any thing alarming in the commencement. The first symptoms are slight: the tongue exhibits little change, and the pulse is only a little quickened, and somewhat smaller than usual; at the same time, however, there is great anxiety and depression of mind; so that the symptoms do not much differ from a mild and comparatively insignificant fever of any kind operating on a nervous temperament. But as the disease advances, all the symptoms of sensorial debility become severer; the skin, which has hitherto been mostly dry, will now be covered with profuse, clammy, weakening sweats, while the heat is still inconsiderable, and the countenance pale and sunk. The perspiration is often offensive to the smell, and has a sour odour. About the tenth day, the weakness greatly increases; all the limbs become tremulous; and the tremors soon become convulsive, with a despondency and alienation of mind, at first observable only in the night, but soon continuing with little intermission. This delirium is of the mildest form. The disease often runs on to the twenty-first day, and occasionally to a much longer period. It very seldom vanishes under an obvious crisis, but gradually becomes more aggravated in its symptoms, till it reaches a fatal termination; or, by a gradual subsidence of the severity of the symptoms, it slowly advances to convalescence, by evincing a disposition to natural sleep; more steadiness, and firmness of pulse; a more favourable countenance; a tongue more florid at its edges; a firmer and more collected mind; and a returning desire for food.

In the treatment of this disease, the loss of blood is particularly prejudicial, except by leeches, to relieve local pains, and even there, must be cautiously repeated if the blood flow freely. The principal indications are to allay the nervous irritation, and prevent a septic state of the fluids. If, then, after clearing the primæ viæ by a gentle purgative, there be pain in the head and throbbing at the temples, the application of leeches or cupping may be resorted to, and also the use of warm pediluvia. The febrile action is then to be combated by volatile saline diaphoretics, as acetate of ammonia, and citrate of ammonia, with camphire mixture; and, as the disease advances, the spirit of nitric and sulphuric æthers are to be resorted to, giving small doses of compound ipecacuanha powder at bed-time, or some preparation of henbane or hop. The extract of both are very serviceable in procuring sleep, and allaying the general disturbance of the nervous system. Purgatives do harm; and when the bowels require assistance, the mildest aperients are to be selected, in doses just sufficient to have a gentle effect. When the skin is relaxed, and more especially when profuse perspiration comes on, tonics are immediately to be exhibited; and of these, cascarilla is most decidedly the best. An infusion, with the compound tincture of Peruvian bark, acidulated with dilute sulphuric acid, is a most excellent medicine in the nervous form of febrile action. The bitter tonics are also useful: calumba, serpentaria virginiana, and quassia, and, where the bowels are disposed to be relaxed, the cusparia. If with this disease there be a bilious state of primæ viæ, small doses of the pilula hydrargyri at bed-time, with an opiate, will be found useful. To all these tonics the æthereal preparations and ammonia may be added, if there is subsultus tendinum, low delirium, or any hysterical symptom.

Nervous fluid. The vascularity of the cortical part of the brain, and of the nerves themselves, their softness, pulpiness, and natural humid appearance, give reason to believe that between the medullary particles, of which they are principally composed, a fine fluid is constantly secreted, which may be fitted to receive and transmit, even more readily than other fluids do, all impressions which are made on it. It appears to exhale from the extremities of the nerves. The lassitude and debility of *muscles* from too great exercise, and the dulness of the sensorial organs from excessive use, would seem to prove this. It has no *smell* nor *taste*; for the cerebrine medulla is insipid and inodorous. Nor has it any *colour*, for the cerebrum and nerves are white. It is of so subtile a *consistence*, as never to have been detected. Its *mobility* is *stupendous*, for in less than a moment, with the consent of the mind, it is conveyed from the cerebrum to the muscles, like the electric matter. Whether the nervous fluid be carried from the organ of sense in the *sensorial* nerves to the cerebrum, and from thence in the *motory* nerves to the muscles, cannot be positively affirmed. The *constituent principles* of this liquid are perfectly unknown, as they cannot be rendered visible by art, or proved by experiment. Upon making a liga-

ture upon a nerve, the motion of the fluid is interrupted, which proves that something corporeal flows through it. It is, therefore, a weak argument to deny its existence because we cannot see it; for who has seen the matter of heat, oxygene, azote, and other elementary bodies, the existence of which no physician in the present day doubts? The *electric matter*, whose action on the nerves is very great, does not appear to constitute the nervous fluid; for nerves exhibit no signs of spontaneous electricity; nor can it be the *magnetic matter*, as the experiment of Gavian with the magnet demonstrates; nor is it *oxygene*, nor *hydrogene*, nor *azote*; for the first very much irritates the nerves, and the other two suspend their action. The nervous fluid, therefore, is an *element sui generis*, which exists and is produced in the nerves only: hence, like other elements, it is only to be known by its effects. The pulpous softness of some nerves, and their lax situation, does not allow them and the brain to act on the body and soul only by *oscillation*. Lastly, a tense chord, although tied, oscillates. The *use* of the nervous fluid is, 1. It appears to be an intermediate substance between the body and the soul, by means of which the latter thinks, perceives, and moves the muscles subservient to the will. Hence the body acts upon the soul, and the soul upon the body. 2. It appears to differ from the *vital principle*; for parts live and are irritable which want nerves, as bones, tendons, plants, and insects.

Nervous headache. See *Cephalalgia.*

Nervous principle. See *Nervous fluid.*

NE'STIS. (Fron νη, neg. and εσθιω, to eat: so called because it is generally found empty.) The jejunum.

NETTLE. See *Urtica.*

Nettle, dead. See *Lamium album.*

Nettle-rash. See *Urticaria.*

NEURA'LGIA. (*a, æ.* f.; from νευρον, a nerve, and αλγος, pain.) A pain in a nerve.

NEURILE'MMA. (*a, atis.* n.; from νευρον, a nerve, and λεμμα, the bark or covering.) The neurileme, sheath, or covering of a nerve.

NEUROCHONDROIDES. (From νευρον, a sinew, χονδρος, a cartilage, and ειδος, resemblance.) A hard substance between a sinew and a cartilage.

NEUROLOGY. (*Neurologia, æ.* f.; from νευρον, a nerve, and λογος, a discourse.) The doctrine of the nerves. See *Nerve.*

NEUROME'TOR. (From νευρον, a nerve, and μητρα, a matrix.) The psoas muscles are called by Fallopius, *neurometores*, as being the repository of many small nerves.

NEURO'SES. (The plural of *neurosis.*) Nervous diseases. The second class of Cullen's Nosology is so called: it comprehends affections of sense and motion disturbed, without either idiopathic pyrexia, or topical diseases.

NEUROSIS. (From νευρον, a nerve.) Appertaining to a nerve.

NEURO'TICUS. (From νευρον, a nerve.) Nervous; appertaining to the nerves: applied to, — 1. Diseases of the nervous system.

2. Nervous medicines.

NEURO'TOMY. (*Neurotomia, æ.* f.; from νευρον, a nerve, and τεμνω, to cut.) 1. The anatomical dissection of the nerves.

2. A cutting or puncture of a living nerve.

NEUTRAL. (*Neutralis*; from *neuter*, neither one nor the other.) 1. In *Chemistry*, applied to saline compounds of an acid and an alkali, which are so called, because they do not possess the characters of acid or alkaline salts; such are Epsom salts, nitre, and all the compounds of the alkalies with the acids.

2. In *Botany*, applied to such flowers or florets as contain neither stamens nor pistils, and of course produce no seed.

NEUTRALISATION. *Neutralisatio.* When acid and alkaline matter are combined in such proportions, that the compound does not change the colour of litmus or violets, they are said to be neutralised.

NE'XUS. (From *necto*, to wind.) Applied formerly in the same way as *connexis.*

NICHOLS, FRANK, was born in London in 1699, and graduated at Oxford in 1729. In 1743, he married one of the daughters of the celebrated Dr. Mead. About five years after he was appointed lecturer on surgery to the college, and began his course with a learned and elegant dissertation on the "Anima Medica," which was afterwards published. On the death of Sir Hans Sloane, in 1753, Dr. Nichols was appointed his successor as one of the King's physicians; which office he held till the death of his Majesty seven years after. To a second edition of the treatise "De Animi Medica," in 1772, he added a dissertation "De Motu Cordis et Sanguinis in Homine nato et non nato." He died in 1778.

Nicked leaf. See *Emarginatus.*

NICKEL. A metal found in nature generally in the metallic state, more rarely in that of an oxide. Its ores have a coppery red colour, generally covered more or less with a greenish-grey efflorescence. The most abundant ore is that termed *sulphuret of nickel*; besides which there is what is called *native oxide of nickel*, or *nickel ochre*; the sulphuret, and *martial nickel.*

Nickel is a metal of great hardness, of a uniform texture, and of a colour between silver and tin; very difficult to be purified, and magnetical. It even acquires polarity by the touch.

NICO'PHORUS. (*us, i.* m.; from νικη, victory, and φερω, to bear: so called because victors were crowned with it.) A kind of ivy.

NICOTIA'NA. (*a, æ.* f.; from Nicott, who first brought it into Europe.) Tobacco.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia.*

2. The former pharmacopœial name of the tobacco. See *Nicotiana tabacum.*

NICOTIANA AMERICANA. American or Virginian tobacco. See *Nicotiana tabacum.*

NICOTIANA MINOR. See *Nicotiana rustica.*

NICOTIANA RUSTICA. The systematic name of the English tobacco: called also, *Nicotiana minor, Priapeia,* and *Hyoscyamus luteus.* This plant is much weaker than the Virginian tobacco; the leaves are chiefly used to smoke vermin, though they promise, from their more gentle operation, to be a safer remedy in some cases than the former.

NICOTIANA TABACUM. The systematic name of the Virginian tobacco-plant, which is also called *Petum,* by the Indians, *Tabacum, Hyoscyamus peruvianus,* and *Picelt.*

Nicotiana—foliis lanceolato-ovatis sessilibus decurrentibus florentibus acutis, of Linnæus.

This plant is employed medicinally. It is a very active narcotic and sternutatory. A decoction of the leaves is much esteemed in some diseases of the skin, and is by some said to be a specific against the itch. The fumes and the decoction are employed in obstinate constipations of the bowels, and very frequently with success: it is necessary, however, to caution the practitioner against an effect mostly produced by its exhibition, namely, syncope, with cold sweats; and, in some instances, death. Vauquelin has obtained a peculiar principle from this plant, in which its active properties reside. See *Nicotin.*

NICOTIN. A peculiar principle obtained by Vauquelin, from tobacco. It is colourless, and has the peculiar taste and smell of the plant. It dissolves both in water and alkohol: it is volatile and poisonous.

NICTITATIO. Twinkling, or winking of the eyes. To a certain extent, twinkling or winking of the eyes is performed every minute without our thinking of it. It is a natural and instinctive action, for the purpose of cleansing and moistening the eyeball, and rendering it better fitted for vision; but there have been many instances of its becoming a very frequent and unsightly habit. The cause of this is, generally, some irritation on the delicate conjunctive membrane, as dust, inflammation, &c. It is removed by collyria of warm water, solutions of opium, and the like; and, if there is a want of proper secretion on the conjunctive membrane, by mercurial and other alteratives, as sarsaparilla, guaiacum, and sassafras.

NIDULANS. (From *nidulor,* to place in a nest.) Nidulate: applied to the seeds of some fruits, which nestle, as it were, or are embedded on their surface; as those of the strawberry.

NIGE'LLA. (*a, æ.* f.; *quasi nigrella;* from *niger,* black: so named from its black seed.) 1. The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Pentagynia.*

2. The pharmacopœial name of the *nigella sativa.*

NIGELLA OFFICINARUM. See *Agrostemma githago.*

NIGELLA SATIVA. The systematic name of the devil in a bush. Fennel-flower. *Melanthium. Melaspermum.* This plant was formerly employed medicinally as an expectorant and deobstruent, but is now fallen into disuse.

NIGELLA'STRUM. (*um, i.* n.; from *nigella,* fennel-flower.) See *Agrostemma githago.*

NIGER. Black. Applied very generally, in *Natural History,* to designate the colour of animals, plants, minerals, &c.; as *Sambucus niger.* And in *Anatomy* and *Pathology;* hence, *pigmentum nigrum, morbus niger,* &c. See *Colour.*

NIGHT. *Nox.* The trivial name of many diseases and plants, because of some peculiar circumstance connected with the period; as nightmare, nightshade, &c.

Night-blindness. See *Nyctalopia.*

Nightmare. See *Oneirodynia gravans.*

NIGHTSHADE. See *Solanum, Phytolacca,* and *Atropa.*

Nightshade, American. See *Phytolacca.*

Nightshade, deadly. See *Atropa.*

Nightshade, Palestine. See *Solanum.*

Nightshade, woody. See *Solanum.*

NIGRINE. An ore of titanium.

NIGRI'TIES. (From *niger,* black.) A caries is called *nigrities ossium,* a blackness of the bone.

NIHIL ALBUM. *Nihilum album.* A name formerly given to the flowers or oxide of zinc.

NI'NZI RADIX. See *Sium ninsi.*

NI'NZIN. See *Sium ninsi.*

NIPPLE. *Papilla.* The small projecting proportion in the middle of the breasts of men and women. See *Mamma.*

Nipple-wort. See *Lapsana.*

NIRLES. See *Herpes phlyctænodes.*

NISUS. (*us, ûs.* m.) An endeavour, or the force or spring by which it is performed.

NISUS FORMATIVUS. A creative or formative effort.

NITIDUS. Polished; smooth; shining; glossy. Applied, in *Botany,* to parts of plants; as the stem of the *Chærophyllum sylvestre,* the leaves of the *Ilex, Hedera, Buxus,* &c.

NITRAS. (*as, atis.* m.; from *nitrum,* nitre.) A nitrate. A salt formed by the union of the nitric acid with a salifiable base; as the nitrate of potash, soda, silver, &c.

NITRAS AMMONIÆ. See *Ammoniæ nitras.*

NITRAS ARGENTI. See *Argenti nitras.*

NITRAS POTASSÆ. See *Potassæ nitras.*

NITRAS POTASSÆ FUSUS. *Sal Prunellæ. Nitrum tabulatum.* This salt, besides the nitric acid and potash, contains a little sulphuric acid. See *Nitric acid.*

NITRAS SODÆ. *Alkali minerale nitratum. Nitrum cubicum.* Nitrate of soda. A neutral salt composed of soda and nitric acid. Its virtues are similar to those of nitrate of potash, for which it may be safely substituted.

NITRATE. See *Nitras.*

Nitrate of potash. See *Nitric acid.*

Nitrate of silver. See *Argenti nitras.*

NITRE. (Νίτρον. *Nitrum, i.* n.) *Alaurat. Algali. Atac. Baurack. Acusto. Halinitrum. Saltpetræ. Potassæ nitras.* A per-

fect neutral salt, formed by the union of the nitric acid with the vegetable alkali, thence called nitrate of potash. Nitre exists in large quantities in the earth, and is continually formed in inhabited places; it is found in great quantities upon walls which are sheltered from the rain. It is found ready formed in the East Indies, in Spain, in the kingdom of Naples, and elsewhere, in considerable quantities; but nitrate of lime is still more abundant. Far the greater part of the nitrate made use of is produced by a combination of circumstances which tend to compose and condense nitric acid. This acid appears to be produced in all situations where animal matters are completely decomposed with access of air, and of proper substances with which it can readily combine. Grounds frequently trodden by cattle, and impregnated with their excrements, or the walls of inhabited places, where putrid animal vapours abound, such as slaughter-houses, drains, or the like, afford nitre by long exposure to the air. Artificial nitre beds are made by an attention to the circumstances in which this salt is produced by nature. Dry ditches are dug, and covered with sheds, open at the side, to keep off the rain. These are filled with animal substances, such as dung, or other excrements, with the remains of vegetables, and old mortar, or other loose calcareous earth; this substance being found to be the best and most convenient receptacle for the acid to combine with. Occasional watering, and turning up from time to time, are necessary to accelerate the process, and increase the surfaces to which the air may apply; but too much moisture is hurtful. When a certain portion of nitrate is formed, the process appears to go on more quickly; but a certain quantity stops it altogether; and after this cessation, the materials will go on to furnish more, if what is formed be extracted by lixiviation. After a succession of many months, more or less, according to the management of the operation, in which the action of a regular current of fresh air is of the greatest importance, nitre is found in the mass. If the beds contained much vegetable matter, a considerable portion of the nitrous salt will be common saltpetre; but if otherwise, the acid will, for the most part, be combined with the calcareous earth. It consists of 6·75 acid + 6 potash.

To extract the saltpetre from the mass of earthy matter, a number of large casks are prepared, with a cock at the bottom of each, and a quantity of straw within, to prevent its being stopped up. Into these the matter is put, together with wood-ashes, either strewed at top, or added during the filling. Boiling water is then poured on, and suffered to stand for some time; after which it is drawn off, and another water added in the same manner, as long as any saline matter can be thus extracted. The weak brine is heated, and passed through other tubs, until it becomes of considerable strength. It is then carried to the boiler, and contains nitre and other salts, the chief of which is common culinary salt, and sometimes muriate of magnesia. It is the property of nitre to be much more soluble in hot than cold water; but common salt is very nearly as soluble in cold as in hot water. Whenever, therefore, the evaporation is carried by boiling to a certain point, much of the common salt will fall to the bottom, for want of water to hold it in solution, though the nitre will remain suspended by virtue of the heat. The common salt thus separated is taken out with a perforated ladle, and a small quantity of the fluid is cooled, from time to time, that its concentration may be known by the nitre which crystallises in it. When the fluid is sufficiently evaporated, it is taken out and cooled, and great part of the nitre separates in crystals; while the remaining common salt continues dissolved, because equally soluble in cold and in hot water. Subsequent evaporation of the residue will separate more nitre in the same manner. By the suggestion of Lavoisier, a much simpler plan was adopted; reducing the crude nitre to powder, and washing it twice with water.

This nitre, which is called nitre of the first boiling, contains some common salt, from which it may be purified by solution in a small quantity of water, and subsequent evaporation; for the crystals thus obtained are much less contaminated with common salt than before; because the proportion of water is so much larger, with respect to the small quantity contained by the nitre, that very little of it will crystallise. For nice purposes, the solution and crystallisation of nitre are repeated four times. The crystals of nitre are usually of the form of six-sided flattened prisms, with dihedral summits. Its taste is penetrating; but the cold produced by placing the salt to dissolve in the mouth, is such as to predominate over the real taste at first. Seven parts of water dissolve two of nitre, at the temperature of sixty degrees; but boiling water dissolves its own weight. 100 parts of alkohol, at a heat of 176°, dissolve only 2·9.

On being exposed to a gentle heat, nitre fuses; and in this state, being poured into moulds, so as to form little round cakes, or balls, it is called *sal prunella*, or *crystal mineral*. This, at least, is the way in which this salt is now usually prepared, conformably to the directions of Boerhaave, though in most dispensatories a twenty-fourth part of sulphur was directed to be deflagrated on the nitre before it was poured out. This salt should not be left on the fire after it has entered into fusion, otherwise it will be converted into a *nitrate* of potash. If the heat be increased to redness, the acid itself is decomposed, and a considerable quantity of tolerably pure oxygene gas is evolved, succeeded by nitrogene.

This salt powerfully promotes the combustion of inflammable substances. Two or three parts mixed with one of charcoal, and set on fire, burn rapidly; azote and carbonic acid gas are given out, and a small portion of

the latter is retained by the alkaline residuum, which was formerly call *clyssus of nitre.* Three parts of nitre, two of subcarbonate of potash, and one of sulphur, mixed together in a warm mortar, form the *fulminating powder;* a small quantity of which, laid on a fire-shovel, and held over the fire till it begins to melt, explodes with a loud sharp noise. Mixed with sulphur and charcoal, it forms *gunpowder.*

Three parts of nitre, one of sulphur, and one of fine sawdust, well mixed, constitute what is called the powder of fusion. If a bit of base copper be folded up and covered with this powder in a walnut-shell, and the powder be set on fire with a lighted paper, it will detonate rapidly, and fuse the metal into a globule of sulphuret without burning the shell.

Silex, alumina, and barytes decompose this salt in a high temperature, by uniting with its base. The alumina will affect this even after it has been made into pottery.

The uses of nitre are various. Beside those already indicated, it enters into the composition of fluxes, and is extensively employed in metallurgy; it serves to promote the combustion of sulphur in fabricating its acid; it is used in the art of dyeing; it is added to common salt for preserving meat, to which it gives a red hue; it is an ingredient in some frigorific mixtures; and it is prescribed in medicine as cooling, febrifuge, and diuretic; and some have recommended it, mixed with vinegar, as a very powerful remedy for the sea scurvy. It is of great use in the arts; it is the principal ingredient in gunpowder; and burned with different proportions of tartar, forms the substances called fluxes. It is of considerable importance in medicine, as a febrifuge, diuretic, and antiphlogistic remedy, in doses of from five to twenty grains. It is from this salt we obtain one of the most powerful acids, the

NITRIC. (*Nitricus:* from *nitrum.*) Of or belonging to nitre.

Nitric acid. *Acidum nitricum.* This acid is composed of the two principal constituents of our atmosphere; which, when in certain proportions, are capable, under particular circumstances, of combining chemically, and forming nitric acid. If oxygene and nitrogene, in a gaseous state, be mixed in a proper proportion in a glass tube about a line in diameter, over mercury, and a series of electric shocks be passed through them for some hours, they will form nitric acid; or, if a solution of potash be present with them, nitrate of potash will be obtained. The constitution of this acid may be further proved, analytically, by driving it through a red-hot porcelain tube, as thus it will be decomposed into oxygene and nitrogene gases. For all practical purposes, however, the nitric acid is obtained from nitrate of potash, from which it is expelled by sulphuric acid.

Three parts of pure nitrate of potash, coarsely powdered, are to be put into a glass retort, with two of strong sulphuric acid. This must be cautiously added, taking care to avoid the fumes that arise. Join to the retort a tubulated receiver of large capacity, with an adopter interposed, and lute the junctures with glazier's putty. In the tubulure fix a glass tube, terminating in another large receiver, in which is a small quantity of water; and if you wish to collect the gaseous products, let a bent glass tube from this receiver communicate with a pneumatic trough. Apply heat to the receiver by means of a sand-bath. The first product that passes into the receiver is generally red and fuming; but the appearances gradually diminish, till the acid comes over pale, and even colourless, if the materials used were clean. After this it again becomes more and more red and fuming, till the end of the operation; and the whole mingled together will be of a yellow or orange colour.

Empty the receiver, and again replace it. Then introduce by a small funnel, very cautiously, one part of boiling water in a slender stream, and continue the distillation. A small quantity of a weaker acid will thus be obtained, which can be kept apart. The first will have a specific gravity of about 1·500, if the heat have been properly regulated, and if the receiver was refrigerated by cold water or ice. Acid of that density, amounting to two thirds of the weight of the nitre, may thus be procured; but commonly the heat is pushed too high, whence more or less of the acid is decomposed, and its proportion of water uniting to the remainder, reduces its strength. It is not profitable to use a smaller proportion of sulphuric acid, when a concentrated nitric is required. But when only a dilute acid, called in commerce *aquafortis,* is required, then less sulphuric acid will suffice, provided a portion of water be added. One hundred parts of good nitre, sixty of strong sulphuric acid, and twenty of water, form economical proportions.

In the large way, and for the purposes of the arts, extremely thick cast iron or earthen retorts are employed, to which an earthen head is adapted, and connected with a range of proper condensers. The strength of the acid, too, is varied, by putting more or less water in the receivers. The nitric acid thus made generally contains sulphuric acid, and also muriatic, from the impurity of the nitrate employed. If the former, a solution of nitrate of barytes will occasion a white precipitate; if the latter, nitrate of silver will render it milky. The sulphuric acid may be separated by a second distillation from very pure nitre, equal in weight to an eighth of that originally employed; or by precipitating with nitrate of barytes, decanting the clear liquid, and distilling it. The muriatic acid may be separated by proceeding in the same way with nitrate of silver, or with litharge, decanting the clear liquid, and redistilling it, leaving an eighth or tenth part in the retort. The acid for the last process should be condensed as much as possible, and the redistillation conducted very slowly; and if it be stopped when half is come over, beautiful crystals of muriate of lead will be obtained on cooling the

remainder, if litharge be used, as Steinacher informs us; who also adds, that the vessel should be made to fit tight by grinding, as any lute is liable to contaminate the product.

As this acid still holds in solution more or less nitrous gas, it is not in fact nitric acid, but a kind of nitrous. It is therefore necessary to put it into a retort, to which a receiver is added, the two vessels not being luted, and to apply a very gentle heat for several hours, changing the receiver as soon as it is filled with red vapours. The nitrous gas will thus be expelled, and the nitric acid will remain in the retort as limpid and colourless as water. It should be kept in a bottle secluded from the light, otherwise it will lose part of its oxygene.

What remains in the retort is a bisulphate of potash, from which the superfluous acid may be expelled by a pretty strong heat, and the residuum, being dissolved and crystallised, will be sulphate of potash.

As nitric acid, in a fluid state, is always mixed with water, different attempts have been made to ascertain its strength, or the quantity of real acid contained in it.

The nitric acid is of considerable use in the arts. It is employed for etching on copper; as a solvent of tin to form with that metal a mordant for some of the finest dyes; in metallurgy and assaying; in various chemical processes, on account of the facility with which it parts with oxygene, and dissolves metals; in medicine as a tonic, and as a substitute for mercurial preparations in syphilis and affections of the liver, as also in form of vapour to destroy contagion. For the purposes of the arts it is commonly used in a diluted state, and contaminated with the sulphuric and muriatic acids, by the name of *aquafortis*. This is generally prepared by mixing common nitre with an equal weight of sulphate of iron, and half its weight of the same sulphate calcined, and distilling the mixture; or by mixing nitre with twice its weight of dry powdered clay, and distilling in a reverberatory furnace. Two kinds are found in the shops, one called *double aquafortis*, which is about half the strength of nitric acid; the other simply *aquafortis*, which is half the strength of the double.

A compound made by mixing two parts of the nitric acid with one of muriatic, known formerly by the name of *aqua regia*, and now by that of *nitro-muriatic acid*, has the property of dissolving gold and platina. On mixing the two acids, heat is given out, an effervescence takes place, and the mixture acquires an orange colour. This is likewise made by adding gradually to an ounce of powdered muriate of ammonia four ounces of double aquafortis, and keeping the mixture in a sand heat till the salt is dissolved, taking care to avoid the fumes, as the vessel must be left open; or by distilling nitric acid with an equal weight, or rather more, of common salt.

On this subject we are indebted to Sir H. Davy for some excellent observations, published by him in the first volume of the Journal of Science. If strong *nitrous* acid, saturated with nitrous gas, be mixed with a saturated solution of muriatic acid gas, no other effect is produced than might be expected from the action of nitrous acid of the same strength on an equal quantity of water; and the mixed acid so formed has no power of action on gold or platina. Again, if muriatic acid gas, and nitrous gas, in equal volumes, be mixed together over mercury, and half a volume of oxygene be added, the immediate condensation will be no more than might be expected from the formation of nitrous acid gas. And when this is decomposed, or absorbed by the mercury, the muriatic acid gas is found unaltered, mixed with a certain portion of nitrous gas.

It appears, then, that *nitrous* acid and muriatic acid gas have no chemical action on each other. If *colourless nitric* acid and muriatic acid of commerce be mixed together, the mixture immediately becomes yellow, and gains the power of dissolving gold and platinum. If it be gently heated, pure chlorine arises from it, and the colour becomes deeper. If the heat be longer continued, chlorine still rises, but mixed with nitrous acid gas. When the process has been very long continued, till the colour becomes very deep, no more chlorine can be procured, and it loses its power of acting upon platinum and gold. It is now *nitrous* and muriatic acids. It appears, then, from these observations, which have been very often repeated, that nitro-muriatic acid owes its peculiar properties to a mutual decomposition of the nitric and muriatic acids; and that water, chlorine, and nitrous acid gas are the results. Though nitrous gas and chlorine have no action on each other when perfectly dry, yet, if water be present, there is an immediate decomposition, and nitrous acid and muriatic acid are formed. 118 parts of strong liquid nitric acid being decomposed in this case, yield 67 of chlorine. *Aqua regia* does not oxidise gold and platina: it merely causes their combination with chlorine.

With different saline, earthy, and metallic bases, the nitric acid forms the class of salts denominated *nitrates*.

The nitrates used in the cure of diseases are,

1. The nitrate of soda.
2. ——— potash.
3. ——— silver.
4. ——— mercury.
5. The subnitrate of bismuth.

Besides these, chemists are well acquainted with nitrate of barytes, soda, strontian, lime, magnesia, glucine, zircone, and yttria.

Nitric acid, oxygenised. The apparent oxygenation of nitric acid by Thénard, ought to be regarded merely as the conversion of a portion of its combined water into deutoxide of hydrogene.

Nitric oxide. See *Nitrogene, deutoxide of.*

Nitric oxide of mercury. See *Hydrargyri nitrico-oxydum.*

Nitrico-oxidum hydrargyri. See *Hydrargyri nitrico-oxydum.*

NITROGENE. (*Nitrogenium, ii.* n.; from νίτρον, nitre, and γεννάω, to generate: so called because it is the generator of nitre.) Azot; Azote. An important elementary or undecomposed principle. As it constitutes four fifths of the volume of atmospheric air, the readiest mode of procuring azote is to abstract its oxygenous associate, by the combustion of phosphorus or hydrogene. It may also be obtained from animal matters, subjected in a glass retort to the action of nitric acid, diluted with 8 or 10 times its weight of water.

Azote possesses all the physical properties of air. It extinguishes flame and animal life. It is absorbable by about 100 volumes of water. Its spec. gravity is 0·9722. 100 cubic inches weigh 29·65 grains. It has neither taste nor smell. It unites with oxygene in four proportions, forming four important compounds; namely, a protoxide, a deutoxide, the nitrous acid, and the nitric.

I. *Protoxide of azote.* This combination of nitrogene and oxygene was formerly called the *dephlogisticated nitrous gas*, but now gaseous oxide of nitrogene, or nitrous oxide. It was first discovered by Priestley.

Sir Humphrey Davy has examined with uncommon accuracy the formation and properties of all the substances concerned in its production.

It exists in the form of a permanent gas. A candle burns with a brilliant flame and crackling noise in it; before its extinction, the white inner flame becomes surrounded with a blue one. Phosphorus introduced into it, in a state of *actual* inflammation, burns with increased splendour, as in oxygene gas. Sulphur introduced into it when burning with a feeble blue flame is instantly extinguished; but when in a state of *vivid inflammation*, it burns with a rose-coloured flame. Ignited charcoal burns in it more brilliantly than in atmospheric air. Iron wire, with a small piece of wood affixed to it, when inflamed, and introduced into a vessel filled with this gas, burns vehemently, and throws out bright scintillating sparks. No combustible body, however, burns in it, unless it be previously brought to a state of vivid inflammation. Hence sulphur may be melted, and even sublimed in it: phosphorus may be liquefied in it without undergoing combustion. Nitrous oxide is pretty rapidly absorbed by water that has been boiled: a quantity of gas equal to rather more than half the bulk of the water may be thus made to disappear: the water acquires a sweetish taste, but its other properties do not differ perceptibly from common water. The whole of the gas may be expelled again by heat. It does not change blue vegetable colours. It has a distinctly sweet taste, and a faint but agreeable odour. It undergoes no diminution when mingled with oxygene or nitrous gas. Most of the liquid inflammable bodies, such as æther, alkohol, volatile and fat oils, absorb it rapidly and in great quantity. Acids exert but little action on it. The affinity of the neutro-saline solutions for gaseous oxide of nitrogene is very feeble. Green muriate and green sulphate of iron, whether holding nitrous gas in solution, or not, do not act upon it. None of the gases, when mingled with it, suffer any perceptible change at common temperatures; the muriatic and sulphureous acid gases excepted, which undergo a slight expansion. Alkalies freed from carbonic acid, exposed in the dry or solid form, have no action upon it; they may, however, be made to combine with it in the nascent state, and then constitute *saline-compounds* of a peculiar nature. These combinations deflagrate when heated with charcoal, and are decomposed by acids; the gaseous oxide of nitrogene being disengaged. It undergoes no change whatever from the simple effect of light. The action of the electric spark, for a long while continued, converts it into a gas, analogous to atmospheric air and nitrous acid: the same is the case when it is made to pass through an ignited earthen tube. It explodes with hydrogene in a variety of proportions, at very high temperatures; for instance, when electric sparks are made to pass through the mixture. Sulphuretted, heavy, and light carburetted hydrogene gases, and gaseous oxide of carbon, likewise burn with it when a strong red heat is applied. 100 parts by weight of nitrous oxide contain 36·7 of oxygene, and 63·3 of nitrogene; 100 cubic inches weigh 50 grains at 55° temperature and 30 inches atmospheric pressure. Animals, when wholly confined in gaseous oxide of nitrogene, give no signs of uneasiness for some moments, but they soon become restless, and then die.

When mingled with atmospheric air, and then received into the lungs, this gas generates highly pleasurable sensations: the effects it produces on the animal system are eminently distinguished from every other chemical agent. It excites every fibre to action, and rouses the faculties of the mind, inducing a state of great exhilaration, an irresistible propensity to laughter, a rapid flow of vivid ideas, and unusual vigour and fitness for muscular exertions, in some respects resembling those attendant on the pleasantest period of intoxication, without any subsequent languor, depression of the nervous energy, or disagreeable feelings; but more generally followed by vigour, and a pleasurable disposition to exertion, which gradually subsides.

Gaseous oxide of nitrogene is produced when substances, having a strong affinity with oxygene, are brought into contact with nitric acid, or with nitrous gas. It may, therefore, be obtained by various processes, in which nitrous gas or nitric acid is decomposed by substances capable of attracting the greater part of their oxygene. The most commodious and expeditious, as well as the cheapest, mode of obtaining it, is by decomposing nitrate of ammonia.

II. *Deutoxide of nitrogene;* termed likewise nitrous gas, or nitric oxide.

This is an elastic, colourless, gaseous fluid, having no sensible taste: it is neither acid nor alkaline: it is exceedingly hurtful to animals, producing instant suffocation whenever they attempt to breathe it. The greater number of combustible bodies refuse to burn in it. It is, nevertheless, capable of supporting the combustion of some of these bodies. Phosphorus burns in nitrous gas when introduced into it in a state of inflammation: pyrophorus takes fire in it spontaneously.

Ardent spirits, saccharine matters, hydrocarbonates, sulphureous acid, and phosphorus, have no action on it at the common temperature. It is not sensibly changed by the action of light. Heat dilates it. It rapidly combines with oxygene gas at common temperatures, and converts it into nitrous acid. Atmospheric air produces the same effect, but with less intensity. It is absorbable by green sulphate, muriate and nitrate of iron, and decomposable by alkaline, terrene, and metallic sulphurets, and other bodies that have a strong affinity for oxygene; but it is not capable of combining with them chemically, so as to form saline compounds. From the greatest number of bodies which absorb it, it may be again expelled by the application of heat.

It communicates to flame a greenish colour before extinguishing it: when mixed with hydrogene gas this acquires the property of burning with a green flame. It is absorbable by nitric acid and renders it fuming.

When exposed to the action of caloric, in an ignited porcelain tube, it experiences no alteration; but when electric sparks are made to pass through it, it is decomposed and converted into nitrous acid, and nitrogene gas. Phosphorus does not shine in it. It is composed of about eight parts of oxygene, and seven of nitrogene.

Methods of obtaining deutoxide of nitrogene.—1. Put into a small proof, or retort, some copper wire or pieces of the same metal, and pour on it nitric acid of commerce diluted with water: an effervescence takes place, and nitrous gas will be produced. After having suffered the first portions to escape, on account of the atmospheric air contained in the retort, collect the gas in the water-apparatus as usual. In order to obtain the gas in a pure state, it must then be shook for some time in contact with water. The water, in this instance, suffers no alteration; on the contrary, the acid undergoes a partial decomposition; the metal robs some of the nitric acid of the greatest part of its oxygene, and becomes oxidised; the acid having lost so much of its oxygene, becomes thereby so altered, that, at the usual temperature, it can exist no longer in the liquid state, but instantly expands and assumes the form of gas, ceasing at the same time to act as an acid, and exhibiting different properties: but the acid remaining undecomposed combines with the oxide of copper, and forms nitrate of copper.

III. *Nitrous acid.* See *Nitrous acid.*

IV. *Nitric acid.* See *Nitric acid.*

Nitrogene combines with chlorine and iodine, to form two very formidable compounds:—

1. The *chloride of nitrogene.* Put into an evaporating porcelain basin a solution of one part of nitrate or muriate of ammonia in 10 of water, heated to about 100°, and invert into it a wide-mouthed bottle filled with chlorine. As the liquid ascends by the condensation of the gas, oily-looking drops are seen floating on its surface, which collect together, and fall to the bottom in large globules. This is *chloride of azote.* It should be formed only in very small quantities. Thus obtained, it is an oily-looking liquid, of a yellow colour, and a very pungent intolerable odour, similar to that of chlorocarbonous acid. This experiment, and indeed every one with the chlorides and iodides of azote, require the greatest caution, as they detonate from slight causes, and produce serious injuries.

2. *Iodide of nitrogene.* Azote does not combine directly with iodine.

It may be obtained by putting pulverulent iodine into common water of ammonia; and this is the best way of preparing it. It is pulverulent, and of a brownish-black colour. It detonates from the smallest shock, and from heat, with a feeble violet vapour. When properly prepared, it often detonates spontaneously.

The strongest arguments for the compound nature of azote are derived from its slight tendency to combination, and from its being found abundantly in the organs of animals which feed on substances that do not contain it.

Its uses in the economy of the globe are little understood. This is likewise favourable to the idea that the real chemical nature is as yet unknown, and leads to the hope of its being decomposable.

It would appear that the atmospheric azote and oxygene spontaneously combine in other proportions, under certain circumstances, in natural operations. Thus we find, that mild calcareous or alkaline matter favours the formation of nitric acid, in certain regions of the earth; and that they are essential to its production in our artificial arrangements, forming nitre by decomposing animal and vegetable substances."

Nitrogene, deutoxide of. See *Nitrogene.*

Nitrogene, protoxide of. See *Nitrogene.*

NITRO-LEUCIC. (*Nitro-leucicus*; so called because obtained by the action of nitric acid on leucine.) Belonging to the compound of nitric acid with leucine.

Nitro-leucic acid. *Acidum nitro-leucicum.* *Leucine* is capable of uniting to nitric acid, and forming a compound, which Braconnot has called the nitro-leucic acid. When we dissolve leucine in nitric acid, and evaporate the solution to a certain point, it passes into a crystalline mass, without any disengagement of nitrous vapour, or of any gaseous matter: if we press this mass between blotting paper, and redissolve it in water, we shall obtain

from this, by concentration, fine, divergent, and nearly colourless needles. These constitute the new acid. It unites to the bases, forming salts which fuse on red-hot coals. The nitro-leucates of lime and magnesia are unalterable in the air.

NITRO-MURIATIC. (*Nitro-muriaticus:* so called from the two acids of which it is formed.) Appertaining to the compound of the nitric and muriatic acids.

Nitro-muriatic acid. *Aqua regia.* When nitric and muriatic acids are mixed, they become yellow, and acquire the power of readily dissolving gold, which neither of the acids possessed separately. This mixture evolves chlorine, a partial decomposition of both acids having taken place; and water, chlorine, and nitrous acid gas are thus produced; that is, the hydrogene of the muriatic acid abstracts oxygene from the nitric to form water. The result must be chlorine and nitrous acid.—*Brande.*

NITRO-SACCHARIC. (*Nitro-saccharicus:* formed of its two ingredients, the nitric acid and sugar.) Belonging to the acid so called.

Nitro-saccharic acid. *Acidum nitro-saccharicum.* Nitro-saccharine acid. When we heat the *sugar of gelatine* with nitric acid, they dissolve without any apparent disengagement of gas; and if we evaporate this solution to a proper degree, it forms, on cooling, a crystalline mass. On pressing this mass between the folds of blotting paper, and re-crystallising them, we obtain beautiful prisms, colourless, transparent, and slightly striated. These crystals are very different rom those which serve to produce them; and constitute, according to Braconnot, a true acid, which results from the combination of the nitric acid itself with the sweet matter of which the first crystals are formed. Thénard conceives it is the *nitrous* acid which is present.

Nitro-saccharic acid has a taste similar to that of the tartaric, only it is a little sweetish. Exposed to the fire in a capsule, it froths much, and is decomposed with the diffusion of a pungent smell. Thrown on burning coals, it acts like saltpetre. It produces no change in saline solutions. Finally, it combines with the bases, and gives birth to salts which possess peculiar properties. For example, the salt which it forms with lime is not deliquescent, and is very little soluble in strong alkohol. That which it produces with the oxide of lead detonates to a certain degree by the action of heat. *Ann. de Chimie et de Phys.* xiii. 113.

NITRO-SULPHURIC. (*Nitro-sulphuricus;* so called from its constituents, the nitric and sulphuric acids.) Appertaining to the acid which bears this name.

Nitro-sulphuric acid. A compound consisting of one part nitre dissolved in about ten of sulphuric acid.

NITROUS. *Nitrosus.* Of or belonging to nitre, or its combinations.

Nitrous acid. *Acidum nitrosum.* Fuming nitrous acid. This acid appears to form a distinct genus of salts, that may be termed *nitrites.* But these cannot be made by a direct union of their component parts, being obtainable only by exposing a nitrate to a high temperature, which expels a portion of its oxygene in the state of gas, and leaves the remainder in the state of a nitrite, if the heat be not urged so far, or continued so long, as to effect a complete decomposition of the salt. In this way the nitrites of potash and soda may be obtained, and perhaps those of barytes, strontian, lime, and magnesia. The nitrites are particularly characterised, by being decomposable by all the acids except the carbonic, even by the nitric acid itself, all of which expel them from nitrous acid. We are little acquainted with any one except that of potash, which attracts moisture from the air, changes blue vegetable colours to green, is somewhat acrid to the taste, and, when powdered, emits a smell of nitric oxide.

The acid itself is best obtained by exposing nitrate of lead to heat in a glass retort. Pure *nitrous* acid comes over in the form of an orange-coloured liquid. It is so volatile as to boil at the temperature of 82°. Its specific gravity is 1·450. When mixed with water it is decomposed, and nitrous gas is disengaged, occasioning effervescence. It is composed of one volume of oxygene united with two of nitrous gas. It therefore consists ultimately, by weight, of 1·75 nitrogene + 4 oxygene; by measure, of 2 oxygene + 1 nitrogene. The various coloured acids of nitre are not *nitrous* acids, but nitric acid impregnated with nitrous gas, the deutoxide of nitrogene or azote.

Nitrous oxide. See *Nitrogene.*

NI'TRUM. See *Nitre,* and *Natron.*

Nitrum purificatum. See *Nitre.*

Nitrum vitriolatum. See *Sodæ sulphas.*

NO'BILIS. (*Quasi noscibilis;* from *nosco,* to know.) Noble. Some parts of animals, and of plants, are so named by way of eminence; as a valve of the heart: and the more perfect metals; as gold and silver.

NOCTAMBULA'TION. (*Noctambulatio, onis.* f.; from *nox,* night, and *ambulo,* to walk.) Walking in the night, when asleep. See *Oneirodynia activa.*

NOCTISU'RGIUM. (*um, ii.* n.; from *nox,* night, and *surgo,* to arise.) Walking in the night when asleep. See *Oneirodynia activa.*

Nocturnal blindness. See *Hemeralopia.*

Nocturnal emission. See *Gonorrhœa.*

NODDING. See *Nutans.*

Nodding cnicus. See *Cnicus cernuus.*

NODE. (*Nodus,* i. m.; from *anad,* Hebrew, to tie.) 1. In *Surgery,* a hard circumscribed tumour, proceeding from a bone, and caused by a swelling of the periosteum. Nodes appear on every part of the body, but are more common on such as are thinly covered with muscles, as the os frontis, fore-part of the tibia, radius, and ulna. As they increase in size, they become more painful, from the distension they occasion in the periosteum. When they continue long, the bone becomes completely carious.

2. In *Botany*, applied to joints that have small elevations, observed in the stems of some grasses.

NODOSUS. Nodose: knotty; as the seed-vessel of the *Cucurbita melopepo*.

No'li me tangere. A species of malignant herpes, or lupus, affecting the skin, and not unfrequently the cartilages of the nose, very difficult to cure, because it is exasperated by most applications. The disease generally commences with small, superficial spreading ulcerations, which become more or less concealed beneath furfuraceous scabs. The whole nose is frequently destroyed by the progressive ravages of this peculiar disorder, which sometimes cannot be stopped or retarded by any treatment, external or internal. See *Lupus*.

NO'MA. (*a, æ.* f.; from νεμω, to eat.) An ulcer that attacks the skin, and often the cheek or vulva, of young girls. It appears in the form of red and somewhat livid spots; is not attended with pyrexia, pain, or tumour, and in a few days becomes gangrenous.

NON-NATURAL. *Res non-naturales.* Under this term, ancient physicians comprehend air, meat and drink, sleep and watching, motion and rest, the retentions and excretions, and the affections of the mind; or, in other words, those principal matters which do not enter into the composition of the body, but at the same time are necessary to its existence.

NO'NUS. (*Quasi novenus;* from *novem*, nine.) The ninth. Sometimes applied to the coracoid muscle of the shoulder.

No'pal. *Nopalnochetzth.* The plant that feeds the cochineal insect.

Norla'ndica bacca. See *Rubus*.

NOSE. *Nasus.* See *Nares*.

Nose, bleeding of. See *Epistaxis*.

NOSOCO'MIUM. (*um, ii.* n.; from νοσος, a disease, and κομεω, to take care of.) *Nosodochium.* An hospital or infirmary for the sick.

Nosodo'chium. See *Nosocomium*.

NOSOLOGY. (*Nosologia, æ.* f.; from νοσος, a disease, and λογος, a discourse.) This term is, from its derivation, synonymous with pathology; but it is mostly applied to the division of it, or science, which considers the most appropriate names of diseases, and to their methodical arrangement or classification, of which there are many.

The arrangement from *accidental* differences, regards the origin, time, seat, course, nature, occupation, age, sex, climate, issue, &c. of diseases. Thus they are distinguished into,—

I. From their *origin:*

1. *Hereditary;* as gout.	6. *Epidemic.*
2. *Congenital;* as mother's marks.	7. *Pandemic.*
3. *Adventitious.*	8. *Sporadic.*
4. *Primary,* or *protopathic.*	9. *Natural.*
5. *Secondary,* or *deuteropathic.*	10. *Artificial.*
	11. *Fictitious.*
	12. *Legitimate,* or *true.*
	13. *Spurious,* or *illegitimate.*

II. From their *situation:*

1. *External.*	2. *Internal.*
3. *Migrating.*	8. *Local.*
4. *Fixed.*	9. *Idiopathic.*
5. *Retrogade.*	10. *Symptomatic.*
6. *Universal.*	11. *Sympathetic.*
7. *Partial.*	

III. From their *course:*

1. *Long.*	6. *Chronic.*
2. *Short.*	7. *Acute.*
3. *Precedent.*	8. *Continued.*
4. *Successory.*	9. *Remittent.*
5. *Accessory.*	10. *Intermittent.*

IV. From their *nature:*

1. *Mild.*	6. *Irregular.*
2. *Malignant.*	7. *Simple.*
3. *Refractory.*	8. *Compound.*
4. *Contagious.*	9. *Complicated.*
5. *Regular.*	

V. From their *issue:*

1. *Curable.*	5. *Recidive*
2. *Incurable.*	6. *Salutary.*
3. *Mortal.*	7. *Insalubrious.*
4. *Doubtful.*	

VI. From the *occupation* of the person:

Disease of *literary* people, of *soldiers, sailors, miners, colliers, travellers, white lead* and other manufacturers, &c. &c.

VII. From the *constitutions* and *temperaments:*

Sanguineous, bilious, phlegmatic diseases, &c.

VIII. From the *sex:*

Diseases of the *male, female, virgins, pregnancy,* &c.

IX. From the *period of life:*

Disease of the fœtus; infantile, juvenile, &c. &c.

X. From *climate:*

Diseases of *warm, cold, temperate, humid, dry* situations, &c.

XI. From the *time:*

Vernal, æstival, autumnal, hyemal, novilunar, plenilunar, diurnal, nocturnal, &c.

The diversity of the nature of diseases establishes their *essential* differences, by reason of which one disease differs from another.

The primary division, from the essential differences of diseases, is into,—

1. *Functional;* or mere derangement of the actions of the solids.

2. *Organic,* or *structural;* in which the structure of parts is altered.

3. Diseases of the *fluids.*

The *functional diseases* are alterations from the natural or healthy state of those principles of action which are innate to the moving powers, and dependent on the vital principle; namely, cohesion, elasticity, sensibility, and irritability.

Diseases of cohesion. The principle of cohesion in the fibres may be faulty in three ways:—it may be deficient; in excess; and wholly destroyed. When deficient in the soft parts, there is an obvious *flaccidity,* and the hard parts become soft. When in excess in the soft parts, it is *rigidity;* and in the harder parts, as the bones, *fragility.*

Diseases of elasticity. The elasticity may be in excess, and deficient. When in excess, the fibres have a quickness and energy of contraction; and when the elasticity is deficient, there is an inertness.

Diseases of sensibility. This principle resides in the nervous system. Its varied state in the human body is great, and consequently it affords many diseases; but its chief difference from a healthy condition, is in being in excess or deficient, both universally and partially.

Diseases of irritability. This principle resides in the muscular fibre and contractile parts only, by virtue of which they contract. It varies principally from a healthy state in being in excess, and in being deficient; and from these opposite conditions, very many diseases depend.

It is from the essential differences that nosologists have placed diseases in classes, orders, genera, species, varieties, &c. There are many of these classifications which should be perused, especially those of Sauvages, Linnæus, Macbride, Sagar, Young, Good, and Cullen; the last of which, being in very general use in these kingdoms, is inserted as follows:—

Synoptical View of the Classes, Orders, and Genera, according to the Cullenian *System.*

CLASS I.—PYREXIÆ.

Order I.
FEBRES.
§ 1. *Intermittentes.*
1. Tertiana.
2. Quartana.
3. Quotidiana.
§ 2. *Continuæ.*
4. Synocha.
5. Typhus.
6. Synochus.

Order II.
PHLEGMASIÆ.
7. Phlogosis.
8. Ophthalmia.
9. Phrenitis.
10. Cynanche.
11. Pneumonia.
12. Carditis.
13. Peritonitis.
14. Gastritis.
15. Enteritis.
16. Hepatitis.
17. Splenitis.
18. Nephritis.
19. Cystitis.
20. Hysteritis.
21. Rheumatismus.
22. Odontalgia.
23. Podagra.
24. Arthropuosis.

Order III.
EXANTHEMATA.
25. Variola.
26. Varicella.
27. Rubeola.
28. Scarlatina.
29. Pestis.
30. Erysipelas.
31. Miliaria.
32. Urticaria.
33. Pemphigus.
34. Aphtha.

Order IV.
HÆMORRHAGIÆ.
35. Epistaxis.
36. Hæmoptysis.
37. Hæmorrhois.
38. Menorrhagia.

Order V.
PROFLUVIA.
39. Catarrhus.
40. Dysenteria.

CLASS II.—NEUROSES.

Order I.
COMATA.
41. Apoplexia.
42. Paralysis.

Order II.
ADYNAMIÆ.
43. Syncope.
44. Dyspepsia.
45. Hypochondriasis.
46. Chlorosis.

Order III.
SPASMI.
47. Tetanus.
48. Convulsio.
49. Chorea.
50. Raphania.
51. Epilepsia.
52. Palpitatio.
53. Asthma.
54. Dyspnœa.
55. Pertussis.
56. Pyrosis.
57. Colica.
58. Cholera.
59. Diarrhœa.
60. Diabetes.
61. Hysteria.
62. Hydrophobia.

Order IV.
VESANIÆ.
63. Amentia.
64. Melancholia.
65. Mania.
66. Oneirodynia.

CLASS III.—CACHEXIÆ.

Order I.
MARCORES.
67. Tabes.
68. Atrophia.

Order II.
INTUMESCENTIÆ.
§ 1. *Adiposæ.*
69. Polysarcia.
§ 2. *Flatuosæ.*
70. Pneumatosis.
71. Tympanites.
72. Physometra.
§ 3. *Aquosæ.*
73. Anasarca.
74. Hydrocephalus.
75. Hydrorachitis.
76. Hydrothorax.
77. Ascites.
78. Hydrometra.
79. Hydrocele.
§ 4. *Solidæ.*
80. Physconia.
81. Rachitis.

Order III.
IMPETIGINES.
82. Scrofula.
83. Syphilis.
84. Scorbutus.
85. Elephantiasis.
86. Lepra.
87. Frambœsia.
88. Trichoma.
89. Icterus.

CLASS IV.—LOCALES.

Order I.
DYSÆSTHESIÆ.
90. Caligo.
91. Amaurosis.
92. Dysopia.
93. Pseudoblepsis.
94. Dysecoea.
95. Paracusis.
96. Anosmia.
97. Agheustia.
98. Anæsthesia.

ORDER II.
DYSOREXIÆ.
§ 1. *Appetitus erronei.*
99. Bulimia.
100. Polydipsia.
101. Pica.
102. Satyriasis.
103. Nymphomania.
104. Nostalgia.
§ 2. *Appetitus deficientes.*
105. Anorexia.
106. Adipsia.
107. Anaphrodisia.

ORDER III.
DYSCYNESIÆ.
108. Aphonia.
109. Mutitas.
110. Paraphonia.
111. Psellismus.
112. Strabismus.
113. Dysphagia.
114. Contractura.

ORDER IV.
APOCENOSES.
115. Profusio.
116. Ephidrosis.
117. Epiphora.
118. Ptyalismus.
119. Enuresis.
120. Gonorrhœa.

ORDER V.
EPISCHESES.
121. Obstipatio.
122. Ischuria.
123. Dysuria.
124. Dyspermatismus.
125. Amenorrhœa.

ORDER VI.
TUMORES.
126. Aneurisma.
127. Varix.
128. Ecchymoma.
129. Scirrhus.
130. Cancer.
131. Bubo.
132. Sarcoma.
133. Verruca.
134. Clavus.
135. Lupia.
136. Ganglion.
137. Hydatis.
138. Hydarthrus.
139. Exostosis.

ORDER VII.
ECTOPIÆ.
140. Hernia.
141. Prolapsus.
142. Luxatio.

ORDER VIII.
DYALYSES.
143. Vulnus.
144. Ulcus.
145. Herpes.
146. Tinea.
147. Psora.
148. Fractura.
149. Caries.

NOSTA'LGIA. (*a, æ.* f.; from νοϛεω, to return, and αλγος, pain.) A vehement desire for revisiting one's country, known by impatience when absent from one's native home, attended with gloom and melancholy, loss of appetite, and want of sleep. A genus of disease in the class *Locales*, and order *Dysorexiæ*, of Cullen.

NOSTOC. See *Temella nostoc.*

NOSTRIL. See *Naris.*

NOSTRUM. This word means *our own*, and is very significantly applied to all quack medicines, the composition of which is kept a secret from the public, and known only to the inventor.

NOTCHED. See *Erosus.*

NO'THUS. (Νοθος, spurious.) Spurious. A term frequently employed in medical and anatomical writings. See *False.*

NOTIÆ'US. (From νωτον, the back.) An obsolete epithet of the spinal marrow.

NOTIO'DES. (From νοτις, moisture.) An obsolete word, applied to a fever attended with a vitiation of the fluids, or a colliquative wasting.

NOVACULITE. See *Whetslate.*

NUBE'CULA. (*a, æ.* f.; diminutive of *nubes*, a cloud.) A little cloud. 1. A cloud in the urine.

2. A white speck in the eye.

NUCAMENTUM. See *Amentum.*

NUCES. The plural of *nux.* See *Nux.*

NUCESTA. See *Myristica moschata.*

NU'CHA. (*a, æ.* f.; Arabian.) *Nucha capitis.* The hind part or nape of the neck. The part is so called where the spinal marrow begins.

NUC'ISTA. The nutmeg.

NUCK, ANTHONY, a distinguished Dutch physician and anatomist, flourished at the Hague, and at Leyden, in the latter part of the 17th century. He pursued his dissections with great ardour, cultivating both human and comparative anatomy at every opportunity. He contributed some improvements also to the practice of surgery. He died about the year 1692.

NU'CLEUS. (*us, i.* m.; *e nuce*, from the nut.) 1. A kernel or fruit enclosed in a hard shell.

2. When the centre of a tumour or morbid concretion, as a stone of the bladder, has an obvious difference from the surrounding parts, that is called the nucleus: thus, a cherry-stone and other things have been found in calculi of the bladder, forming the nucleus of that concretion.

NU'CULA. (*a, æ.* f.; diminutive of *nux*, a nut.) A little nut.

NU'CULA SAPONARIA. See *Sapindus saponaria.*

NUDE. See *Nudus.*

NUDUS. Nude, or naked: applied to flowers, leaves, stems, receptacles, seeds, &c. of plants. A flower is said to be naked when the calyx is wanting, as in the tulip, and white lily; and a leaf when it is destitute of all kinds of clothing or hairiness, as in the genus *orchis*: the stem is naked that bears no leaves, scales, or any other vesture, as *Cuscuta europea*; the receptacle of the *Leontodon taraxacum*, and *Lactuca*; the seeds of the gymnospermal plants, &c.

NUMI'DIA. (The name of a place whence the bird comes.) The name of a genus of birds, of the order *Gallinæ.*

NUMIDIA MELEAGRIS. The guinea-fowl, the flesh of which is of easy digestion.

NUMMULA'RIA. (*a, æ.* f.; from *nummus*, money: so called because its leaves are round, and of the size of the old silver twopence). See *Lysimachia nummularia.*

NUT. See *Nux.*

Nut, Barbadoes. See *Jatropha curcas.*

Nut, cocoa. See *Cocos nucifera.*

Nut, pistachio. See *Pistacia vera.*

Nut, purging. See *Jatropha curcas.*

NUTANS. (From *nuto*, to bend.) Nu-

tant: drooping, or nodding. Applied to stems, &c. when bent towards the end near the flower; as the *Narcissus*, *Scilla nutans*, &c.

NUTMEG. See *Myristica moschata*.

NUTRITION. (*Nutritio*, *onis*. f.) Nutrition may be considered the completion of the assimilating functions. The food, changed by a series of decompositions, animalised and rendered similar to the being which it is designed to nourish, applies itself to those organs, the loss of which it is to supply; and this identification of nutritive matter to our organs constitutes nutrition.

The living body is continually losing its constituent parts.

" From the state of the embryo to the most advanced old age, the weight and volume of the body are almost continually changing; the different organs and tissues present infinite variations in their consistence, colour, elasticity, and sometimes their chemical composition. The volume of the organs augments when they are often in action; on the contrary, their size diminishes when they remain long at rest. By the influence of one or other of these causes, their chemical and physical properties present remarkable variations. Many diseases often produce, in a very short time, remarkable changes in the exterior conformation, and in the structure of a great number of organs.

If madder is mixed with the food of an animal, in fifteen or twenty days the bones present a red tint, which disappears when the use of it is left off.

There exists, then, in the organs, an insensible motion of the particles which produce all these modifications. It is this that is called *nutrition*, or *nutritive action*.

This phænomenon, which the observing spirit of the ancients had not permitted to escape, was to them the object of many ingenious suppositions that are still admitted. For example, it is said that, by means of the nutritive action, the whole body is renewed, so that, at a certain period, it does not possess a single particle of the matter that composed it formerly. Limits have even been assigned to this total renewal: some have fixed the period of three years; others think it not complete till seven: but there is nothing to give probability to these conjectures; on the contrary, certain well-proved facts seem to render them of no avail.

It is well known that soldiers, sailors, and several savage people colour their skins with substances which they introduce into the tissue of this membrane itself: the figures thus traced preserve their form and colour during their lives, should no particular circumstances occur. How can this phænomenon agree with the renewal of the skin according to these authors? The recent use of nitrate of silver internally, in the cure of epilepsy, furnishes a new proof of this kind. After some months' use of this substance, some sick persons have had their skin coloured of a greyish blue, probably by a deposition of the salt in the tissue of this membrane, where it is immediately in contact with the air. Several individuals have been in this state for some years without the tint becoming weaker; whilst, in others, it has diminished by degrees, and disappeared in two or three years.

It is admitted, in the metaphorical language now used in physiology, that the atoms of the organs can only serve for a certain period, in their composition; that in time they *wear*, and become at last improper to enter into their composition; and that they are then absorbed and replaced by new atoms proceeding from the food.

It is added, that the animal matters of which our excretions are composed are the *detritus* of the organs, and that they are principally composed of atoms that can no longer serve in their composition, &c.

Instead of discussing these hypotheses, we shall mention a few facts from which we have some idea of the nutritive movement.

A. In respect to the rapidity with which the organs change their physical and chemical properties by sickness or age, it appears that nutrition is more or less rapid according to the tissues. The glands, the muscles, the skin, &c., change their volume, colour, consistence, with great quickness; the tendons, the fibrous membranes, the bones, the cartilages, appear to have a much slower nutrition, for their physical properties change but slowly by the effect of age and disease.

B. If we consider the quantity of food consumed proportionally to the weight of the body, the nutritive movement seems more rapid in infancy and youth, than in the adult and in old age; it is accelerated by the repeated action of the organs, and retarded by repose. Indeed, children and young people consume more food than adults and old people: these last can preserve all their faculties by the use of a very small quantity of food. All the exercises of the body, and hard labour, require necessarily a greater quantity, or more nutritive food; on the contrary, perfect repose permits of longer abstinence.

C. The blood appears to contain most of the principles necessary to the nutrition of the organs; the fibrine, the albumen, the fat, the salts, &c. that enter into the composition of the tissues, are found in the blood. They appear to be deposited in their parenchyma at the instant when the blood traverses them; the manner in which this deposit takes place is entirely unknown. There is an evident relation between the activity of the nutrition of an organ and the quantity of blood it receives. The tissues that have a rapid nutrition have larger arteries; when the action of an organ has determined an acceleration of its nutrition, the arteries increase in size.

Many proximate principles that enter into the composition of the organs are not found in the blood: as ozmazome, the cerebral matter, gelatine, &c. They are, therefore, formed from other principles in the parenchyma of the organs, in some chemical but unknown manner.

D. Since chemical analysis has made known the nature of the different tissues of the animal economy, they have been all found to contain a considerable portion of azote. Our food being also partly composed of this simple body, the azote of our organs likewise probably comes from them; but several eminent authors think that it is derived from respiration; others believe that it is formed by the influence of life solely. Both parties insist particularly upon the example of the herbivorous animals, which are supported exclusively upon non-azotised matter; upon the history of certain people that live entirely upon rice and maize; upon that of negroes who can live a long time without eating any thing but sugar; lastly, upon what is related of *caravans*, which, in traversing the deserts, have for a long time had only gum in place of every sort of food. Were it, indeed, proved by these facts, that men can live a long time without azotised food, it would be necessary to acknowledge that azote has an origin different from the food; but the facts cited by no means prove this. In fact, almost all the vegetables upon which man and the animals feed contain more or less azote: for example, the impure sugar that the negroes eat presents a considerable portion of it; and with regard to the people, as they say, who feed upon rice or maize, it is well known that they eat milk or cheese: now *casein* is the most azotised of all the nutritive proximate principles.

E. A considerable number of tissues in the economy appear to have no nutrition, properly so called; as the epidermis, the nails, the hair, the teeth, the colouring matter of the skin, and, perhaps, the cartilages.

These different parts are really secreted by particular organs, as the teeth and the hair; or by parts which have other functions at the same time, as the nails and the epidermis. The most of the parts formed in this mode wear by the friction of exterior bodies, and are constantly renewed: if they are entirely carried away, they are capable of reproduction. A very singular fact is, that they continue to grow several days after death."—*Magendie's Physiology.*

NUTRI'TUM UNGUENTUM. A composition of litharge, vinegar, and oil.

NUX. (*x, cis.* f.) A nut or fruit which has a hard shell.

Botanists consider this as distinct from the drupa, and define it a pericarp, the seed being contained in a hard bony shell.

From the number of seeds it contains, it is called,—

1. *Monosperm,* having one; as in *Corylus ellana.*
2. *Disperm,* with two; as in *Halesia.*

From its loculaments:

1. *Unilocular, bilocular, trilocular,* with one, two, or three; as in *Corylus, Lygeum,* and *Elais.*

From its figure:

1. *Alate,* winged; as in *Pinus thuja.*
2. *Angulate;* as in *Cypressus.*
3. *Ovate;* as in *Corylus,* and *Carpinus.*
4. *Quadrangular;* as in *Halesia.*
5. *Tetragone;* as in *Peladium,* and *Mesua.*
6. *Reniform;* as in *Anacardium.*
7. *Spinous;* as in *Trapa natans.*

NUX AQUATICA. See *Trapa natans.*

NUX AROMATICA. See *Myristica.*

NUX BARBADENSIS. See *Jatropha curcas.*

NUX BASILICA. See *Juglans regia.*

NUX BEN. See *Guilandina moringa.*

NUX CATHARTICA. See *Jatropha curcas.*

NUX CATHARTICA AMERICANA. See *Jatropha curcas.*

NUX INDICA. See *Cocos nucifera.*

NUX JUGLANS. See *Juglans regia.*

NUX MEDICA. The maldivian nut.

NUX METELLA. See *Strychnos.*

NUX MOSCHATA. See *Myristica.*

NUX MYRISTICA. See *Myristica.*

NUX PERSICA. See *Juglans regia.*

NUX PISTACIA. See *Pistacia vera.*

NUX PURGANS. See *Jatropha curcas.*

NUX SERAPIONIS. See *Ignatia amara.*

NUX VOMICA. See *Strychnos.*

NYCTALO'PIA. (*a, æ.* f.; from νυξ, the night, and ωψ, an eye.) A defect in vision, by which the person sees little or nothing in the day, but in the evening and night sees tolerably well. This disease is dependent upon a peculiar irritability of the retina, produced by two very different causes: a sudden exposure to a stronger light than the eye has been wont to sustain; and a deficiency of the pigmentum nigrum. From the first cause, the disease is common with those who have been accustomed to a disuse of light, by living in caverns, mines, dungeons, &c., or who have recently had a cataract depressed or extracted, the growth of which excluded the light from the retina. Ramazini asserts, that this affection is common to the peasants in Italy, who are employed in agriculture; and many Æthiopians, Africans, and Asiatics have it, most probably from the clearness of the atmosphere, the brightness of the sky, and the warmth of the air, the joint operation of which is likely to produce habitual debility of the iris and irritability of the retina. A deficiency of the pigmentum nigrum is occasionally found in persons of a fair complexion and light hair; and, as the retina is hereby deprived of the natural shade that softens the light in its descent upon this very sensible membrane, its morbid irritability is not to be wondered at.

Sedative applications, as dilute tincture of belladonna, and the internal use of hyosciamus, and conium, with cinchona or cascarilla, are likely to be beneficial where the disease proceeds from an accidental irritability, taking care to remove the causes. In old age, and an early deficiency of the black pigment, medicine can do but little.

NYCTALOPS. (*ops, opis.* c. g.; from νυξ, the night, and ωψ, the eye.) One who sees only in the night.

NYCTO'BASIS. (*is, is.* f.; from νυξ, the night, and βαινω, to go.) Walking in the sleep.

NY'MPHA. (*a, æ.* f.; from νυμφα, a water-nymph: so called because it stands in the water-course.) A membraneous and fleshy fold, situated just within the external labia of the female parts of generation, one on each side. They have been also denominated, *Alæ internæ minores clitoridis*, *Colliculi*, *Collicula*, *Myrtocheilides*, and *Labia minora*.

NYMPHÆ'A. (*a, æ.* f.; from νυμφα, a water-nymph: because it grows in watery places.) The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Monogynia*. The water-lily.

Nymphæa alba. The systematic name of the white water-lily: also named, *Leuconymphæa*, *Nenuphar*, and *Micro-leuconymphæa*. This beautiful plant was formerly employed medicinally as a demulcent, and slightly anodyne remedy. It is now laid aside.

Nymphæa glandifera. See *Nymphæa nelumbo*.

Nymphæa lotus. The Egyptian lotus. An aquatic plant, a native of both Indies. The root is conical, firm, about the size of a middling pear, covered with a blackish bark, and set round with fibres. It has a sweetish taste, and, when boiled or roasted, becomes as yellow within as the yolk of an egg. The plant grows in abundance on the banks of the Nile, and is there much sought after by the poor, who, in a short time, collect enough to supply their families with food for several days.

Nymphæa lutea. The systematic name of the yellow water-lily. *Nymphæa major lutea*, of Caspar Bauhin. This beautiful plant was employed formerly with the same intentions as the white water-lily, and, like it, is now fallen into disuse. Lindestolpe informs us, that, in some parts of Sweden, the roots, which are the strongest part, were, in times of scarcity, used as food, and did not prove unwholesome.

Nymphæa nelumbo. The pontic, or Ægyptian bean. The *Faba ægyptica*, *Bentamara*, *Bemtamara*, *Cyamus ægypliacus*, *Nymphæa indica*, and *Nymphæa glandifera*, of old writers. This plant grows on marshy grounds in Egypt, and some of the neighbouring countries. The fruit is eaten either raw or boiled, and is a tonic and astringent.

NYMPHOI'DES. (From νυμφαια, the water-lily, and ειδος, likeness.) Resembling the water-lily; thus, *Menyanthes nymphoides*.

NYMPHOMA'NIA. (*a, æ.* f.; from νυμφα, nympha, which is the seat of the irritation, and μανια, madness.) Excessive and violent desire for coition in women; called also, *Furor uterinus*, *Acrai*, *Brachuna*, *Arascon*, *Arsatum*, *Œstromania*. This affection acknowledges the same causes as satyriasis; but as females, especially in warm climates, have a more irritable fibre, they are apt to suffer more severely than the males.

It is a species of temporary madness, or an high degree of hysterics. The effects, as described by Juvenal, in his sixth satire, are most humiliating to human nature. Its immediate cause is a preternatural irritability of the uterus and nymphæ and clitoris of women, or an unusual acrimony of the fluids in these parts. Its presence is known by the wanton behaviour of the female; she speaks and acts with unrestrained obscenity, and, as the disorder increases, she scolds, cries, and laughs by turns. While reason is retained, she is silent, and seems melancholy, but her eyes discover an unusual wantonness. The symptoms are better or worse, until the greatest degree of the disorder approaches, and then, by every word and action, her condition is too manifest. The strong and sanguineous require bleeding and cooling purgatives, with an abstemious diet, to remove this disease; and the nervous and irritable, sedatives, tonics, and a more generous diet. Marriage, or sexual intercourse, is the most natural remedy.

NYMPHOTOMY. (*Nymphotomania, æ.* f.; from νυμφα, the nympha, and τεμνω, to cut.) The operation of removing the nympha, when too large or diseased.

NYSTA'GMUS. (*us, i.* m.; from νυσταω, to sleep.) A twinkling of the eyes, such as happens when a person is very sleepy. Authors also define nystagmus to be an involuntary agitation of the oculary bulb. It is known by the instability or involuntary and constant motions of the globe of the eye, from one canthus to another, or in some other directions. Sometimes it is accompanied with an hippus, or an alternate and repeated dilatation and constriction of the pupil. The species are,

1. *Nystagmus*, from fear. This agitation is observed under the operation for the cataract; and it is checked by persuasion, and waiting a short space of time.

2. *Nystagmus*, from sand or small gravel falling in the eye.

3. *Nystagmus*, from a catarrh, which is accompanied with much inflammation.

4. *Nystagmus*, from saburra in the primæ viæ, as is observed in infants afflicted with worms, and is known by the signs of saburra.

5. *Nystagmus symptomaticus*, which happens in hysteric, epileptic, and sometimes in pregnant persons, and is a common symptom accompanying St. Vitus's dance.

O.

OAK. See *Quercus*.

Oak, Jerusalem. See *Chenopodium botrys*.

Oak, sea. See *Fucus vesiculosus*.

Oak, willow-leaved. See *Quercus phellos*.

Oak leather. See *Xylostroma giganteum*.

Oak lungs. See *Lichen pulmonarius*.

OAT. See *Avena*, and *Triticum*.

OB. In the language of natural history, and especially in botanical composition, it means inversely; as *obcordate*, *obconical*, *obovate*, &c.

OBCORDATUS. Obcordate, or inversely heart-shaped; that is, with the point of the heart next to the stem: applied to leaves, seed-vessels, &c.; as the pericarp of the *Thlaspi bursæ pastoris*, and leaves of some of the trefoils.

OBELÆ'A. (From οβελος, a dart, or a spit.) An epithet for the sagittal suture of the skull.

OBELISCOTHE'CA. (From οβελισκος, an obelisk, and θηκα, a bag: so called from the shape of its seed-bags.) The dwarf sun-flower. See *Cystus helianthemum*.

OBESITY. (*Obesitas, atis*. f.; from *obesus*, fat.) See *Polysarcia*.

OBLESION. (From *ob*, against, and *lædo*, to hurt.) An injury done to any part.

OBLI'QUUS. Oblique. 1. In *Anatomy*, a term applied to parts from their direction.

2. In *Botany*, it means the same as *radix obliquus*, but sometimes it means twisted. *Folium obliquum*, for example, is a leaf, one part of which is vertical, the other horizontal; as in *Fritillaria obliqua*.

OBLIQUUS ASCENDENS ABDOMINIS. See *Obliquus internus abdominis*.

OBLIQUUS ASCENDENS INTERNUS. See *Obliquus internus abdominis*.

OBLIQUUS AURIS. See *Laxator tympani*.

OBLIQUUS CAPITIS INFERIOR. See *Obliquus inferior capitis*.

OBLIQUUS CAPITIS SUPERIOR. See *Obliquus superior capitis*.

OBLIQUUS DESCENDENS ABDOMINIS. See *Obliquus externus abdominis*.

OBLIQUUS DESCENDENS EXTERNUS. See *Obliquus externus abdominis*.

OBLIQUUS EXTERNUS. See *Obliquus externus abdominis*.

OBLIQUUS EXTERNUS ABDOMINIS. A muscle of the abdomen, so named by Morgagni, Albinus, and Winslow. It is the *Obliquus descendens* of Vesalius and Douglas, and the *Obliquus major* of Haller, and some others. It is a broad, thin muscle, fleshy posteriorly, and tendinous in the middle and lower part, and is situated immediately under the integuments, covering all the other muscles of the lower belly. It arises from the lower edges of the eight, and sometimes, though rarely, of the nine inferior ribs, not far from their cartilages, by as many distinct fleshy portions, which indigitate with corresponding parts of the serratus major anticus, and the latissimus dorsi. From these several origins, the fibres of the muscle descend obliquely forwards, and soon degenerate into a broad and thin aponeurosis, which terminates in the linea alba. About an inch and a half above the pubes, the fibres of this aponeurosis separate from each other, so as to form an aperture, which extends obliquely inwards and forwards, more than an inch in length, and is wider above than below, being nearly of an oval figure. This is what is sometimes, though erroneously, called the *ring* of the abdominal muscles, *annulus abdominis*, for it belongs only to the external oblique, there being no such opening either in the obliquus internus, or in the transversalis, as some writers, and particularly Douglas and Cheselden, would give us to understand. This opening, or ring, serves for the passage of the spermatic vessels in men, and of the round ligament of the uterus in women, and is of a larger size in the former than in the latter. The two tendinous portions, which, by their separation, form this aperture, are called the *columns* of the ring. The anterior, superior, and inner column, which is the broadest and thickest of the two, passes over the symphysis pubis, and is fixed to the opposite os pubis; so that the anterior column of the right obliquus externus intersects that of the left, and is, as it were, interwoven with it, by which means their insertion is strengthened, and their attachment made firmer. The posterior, inferior, and exterior column approaches the anterior one as it descends, and is fixed behind and below it to the os pubis of the same side. The fibres of that part of the obliquus externus, which arises from the two inferior ribs, descend almost perpendicularly, and are inserted, tendinous and fleshy, into the outer edge of the anterior half of the spine of the ilium. From the anterior superior spinous process of that bone, the external oblique is stretched tendinous to the os pubis, forming what is called *Poupart*'s, and sometimes *Fallopius*'s ligament, Fallopius having first described it. Winslow, and many others, name it the *inguinal* ligament. But, after all, it has no claim to this name, it being nothing more than the tendon of the muscle, which is turned or folded inwards at its interior edge. It passes over the blood-vessels of the lower extremity, and is thickest near the pelvis; and in women, from the greater size of the pelvis, it is longer and looser than in men. Hence we find that women are most liable to crural herniæ: whereas men, from the greater size of the ring of the external oblique, are most subject to the inguinal. From this ligament, and from that part of the tendon which forms the ring, we observe a detachment of tendin-

ous fibres, which are lost in the *fascia lata* of the thigh. This may, in some measure, account for the pain which, in cases of strangulated herniæ, is felt when the patient stands upright, and which is constantly relieved upon bending the thigh upwards. This muscle serves to draw down the ribs in expiration; to bend the trunk forwards when both muscles act, or to bend it obliquely in one side, and, perhaps, to turn it slightly upon its axis, when either acts singly; it also raises the pelvis obliquely when the ribs are fixed; it supports and compresses the abdominal viscera, assists in the evacuation of the urine and fæces, and is likewise useful in parturition.

Obliquus inferior. See *Obliquus inferior capitis*, and *Obliquus inferior oculi.*

Obliquus inferior capitis. This muscle of the head, the *obliquus inferior sive major*, of Winslow, is larger than the obliquus superior capitis. It is very obliquely situated between the two first vertebræ of the neck. It arises tendinous and fleshy from the middle and outer side of the spinous process of the second vertebra of the neck, and is inserted tendinous and fleshy into the lower and posterior part of the transverse process of the first vertebra. Its use is to turn the first vertebra upon the second, as upon a pivot, and to draw the face towards the shoulder.

Obliquus inferior oculi. *Obliquus minor oculi*, of Winslow. An oblique muscle of the eye, that draws the globe of the eye forwards, inwards, and downwards. It arises by a narrow beginning from the outer edge of the orbitar process of the superior maxillary bone, near its junction with the lachrymal bone, and running obliquely outwards, is inserted into the sclerotic membrane of the eye.

Obliquus inferior sive major. See *Obliquus inferior capitis.*

Obliquus internus. See *Obliquus internus abdominis.*

Obliquus internus abdominis. *Musculus acclivis.* A muscle of the abdomen. The *obliquus ascendens*, of Vesalius, Douglas, and Cowper; the *obliquus minor*, of Haller; the *obliquus internus*, of Winslow; the *obliquus ascendens internus*, of Innes. It is situated immediately under the external oblique, and is broad and thin like that muscle, but somewhat less considerable in its extent. It arises from the spinous processes of the three inferior lumbar vertebræ, and from the posterior and middle part of the os sacrum, by a thin tendinous expansion, which is common to it, and to the serratus posticus inferior; by short tendinous fibres, from the whole spine of the ilium, between its posterior tuberosity and its anterior and superior spinous process; and from two thirds of the posterior surface of what is called Fallopius's ligament, at the middle of which we find the round ligament of the uterus in women, and the spermatic vessels in men, passing under the thin edge of this muscle; and in the latter, it likewise sends off some fibres, which descend upon the spermatic chord, as far as the tunica vaginalis of the testis, and constitute what is called the *cremaster* muscle, which surrounds, suspends, and compresses the testicle. From these origins, the fibres of the internal oblique run in different directions: those of the posterior portion ascend obliquely forwards, the middle ones become less and less oblique, and at length run in an horizontal direction, and those of the anterior portion extend obliquely downwards. The first of these are inserted, by very short tendinous fibres, into the cartilages of the fifth, fourth, and third of the false ribs; the fibres of the second, or middle portion, form a broad tendon, which, after being inserted into the lower edge of the cartilage of the second false rib, extends towards the linea alba, and separates into two layers; the anterior layer, which is the thickest of the two, joins the tendon of the obliquus externus, and runs over the two upper thirds of the rectus muscle, to be inserted into the linea alba; the posterior layer runs under the rectus, adheres to the anterior surface of the tendon of the transversalis, and is inserted into the cartilages of the first of the false, and the last of the true ribs, and likewise into the linea alba. By this structure we may perceive that the greater part of the rectus is enclosed, as it were, in a sheath. The fibres of the anterior portion of the internal oblique, or those which arise from the spine of the ilium and the ligamentum Fallopii, likewise form a broad tendon, which, instead of separating into two layers, like that of the other part of the muscle, runs over the lower part of the rectus, and adhering to the under surface of the tendon of the external oblique, is inserted into the fore part of the pubes. This muscle serves to assist the obliquus externus; but it seems to be more evidently calculated than that muscle is to draw the ribs downwards and backwards. It likewise serves to separate the false ribs from the true ribs, and from each other.

Obliquus major abdominis. See *Obliquus externus abdominis.*

Obliquus major capitis. See *Obliquus inferior capitis.*

Obliquus major oculi. See *Obliquus superior oculi.*

Obliquus minor abdominis. See *Obliquus internus abdominis.*

Obliquus minor capitis. See *Obliquus superior capitis.*

Obliquus minor oculi. See *Obliquus inferior oculi.*

Obliquus superior capitis. Riolanus, who was the first that gave particular names to the oblique muscles of the head, called this muscle *obliquus minor*, to distinguish it from the inferior, which, on account of its being much larger, he named *obliquus major*. Spigelius afterwards distinguished the two, from their situation with respect to each other, into *superior* and *inferior*; and in this he is followed by Cowper and Douglas. Winslow retains both names. This little muscle, which is nearly of the same shape as the *recti capitis*,

is situated laterally between the cociput and the first vertebra of the neck, and is covered by the complexus and the upper part of the splenius. It arises, by a short thick tendon, from the upper and posterior part of the transverse process of the first vertebra of the neck, and ascending obliquely inwards and backwards, becomes broader, and is inserted, by a broad flat tendon, and some few fleshy fibres, into the occipitis, behind the back part of the mastoid process, under the insertion of the complexus and splenius, and a little above that of the rectus major. The use of this muscle is to draw the head backwards, and perhaps to assist in its rotatory motion.

OBLIQUUS SUPERIOR OCULI. *Trochlearis. Longissimus oculi. Obliquus major*, of Winslow. An oblique muscle of the eye, that rolls the globe of the eye, and turns the pupil downwards and outwards. It arises, like the straight muscles of the eye, from the edge of the foramen opticum at the bottom of the orbit, between the rectus superior and rectus internus; from thence runs straight along the papyraceous portion of the ethmoid bone to the upper part of the orbit, where a cartilaginous trochlea is fixed to the inside of the internal angular process of the os frontis, through which its tendon passes, and runs a little downwards and outwards, enclosed in a loose membranaceous sheath, to be inserted into the sclerotic membrane.

OBLIQUUS SUPERIOR SIVE MINOR. See *Obliquus superior capitis.*

OBLIQUUS SUPERIOR SIVE TROCHLEARIS. See *Obliquus superior oculi.*

OBLONGUS. Oblong. A term used very generally. In *Botany*, it is applied to leaves, petals, seeds, &c., which are three or four times longer than broad. The term is used with great latitude, and serves chiefly in a specific character to contrast a leaf which has a variable, or not very decided, form with others that are precisely round, ovate, linear, &c.

The *petals* of the genus Citrus and Hedera, and those of the Narcissus moschatus, are *oblong*, and the *seeds* of the Boerhaavia diffusa.

OBOVATUS. Obovate. Used to designate shape, and applied to leaves, &c. which are ovate, with a broader end uppermost; as those of the primrose and daisy. Linnæus first used the words *obsersi ovatum.*

OBSIDIAN. (*Obsidianum, i.* n.; so called from its resemblance to a kind of stone, which one Obsidius discovered in Ethiopia, of a very black colour, though sometimes pellucid, and of a muddy water. Pliny says that *obsidianum* was a sort of colour with which vessels were glazed. Hence the name is applied, by Libavius, to glass of antimony.) A mineral, of which there are two kinds, the translucent and transparent.

1. The *translucent obsidian.* This is of a velvet-black colour, and occurs in beds in porphyry and various secondary trap rocks in Iceland and Tokay.

2. The *transparent* is of a duck-blue colour, and occurs imbedded in pearl-stone porphyry in Siberia and Mexico.

OBSIDIA'NUM. See *Obsidian.*

OBSOLETE. *Obsoletus.* In the language of *Botany* it means indistinct.

OBSTETRIC. (*Obstetricus;* from *obstetrix*, a nurse.) Belonging to midwifery.

OBSTIPA'TION. (*Obstipatio, onis. f.*; from *obstipo*, to stop up.) See *Costiveness.*

OBSTRUENOUS. (From *obstruo*, to shut up.) Closing the orifices of the ducts, or vessels.

OBSTUPEFACIE'NS. (From *obstupefacio*, to stupify.) Stupifying.

OBTUNDENS. (From *obtundo*, to make blunt.) Having the property of sheathing or blunting irritation; as bland, oily, or mucilaginous matters, which form a covering on inflamed and irritable surfaces, particularly those of the stomach, lungs, and anus.

OBTURA'TOR. (*or, oris.* m.; from *obturo*, to shut up.) A stopper up, or that which covers any thing.

OBTURATOR EXTERNUS. A small flat muscle, situated obliquely at the upper and anterior part of the thigh, between the pectinalis and the fore-part of the foramen thyroideum, and covered by the abductor brevis femoris. It arises tendinous and fleshy from all the inner half of the circumference of the foramen thyroideum, and likewise from part of the obturator ligament. Its radiated fibres collect and form a strong roundish tendon, which runs outwards; and, after adhering to the capsular ligament of the joint, is inserted into a cavity at the inner and back part of the root of the great trochanter. The chief uses of this muscle are to turn the thigh obliquely outwards, to assist in bending the thigh, and in drawing it inwards. It likewise prevents the capsular ligament from being pinched in the motions of the joint.

OBTURATOR INTERNUS. *Marsupialis, seu obturator internus*, of Douglas. *Marsupialis, seu bursalis*, of Cowper; and *Intrapelvio-trochanterien*, of Dumas. A considerable muscle, a great part of which is situated within the pelvis. It arises, by very short tendinous fibres, from somewhat more than the upper half of the internal circumference of the foramen thyroideum of the os innominatum. It is composed of several distinct fasciculi, which terminate in a roundish tendon that passes out of the pelvis, through the niche that is between the spine and the tuberosity of the ischium; and after running between the two portions of the gemini, which enclose it as in a sheath, is inserted into the cavity at the root of the great trochanter, after adhering to the adjacent part of the capsular ligament of the joint. This muscle rolls the os femoris obliquely outwards, by pulling it towards the ischiatic niche, upon the cartilaginous surface of which its tendon, which is surrounded by a membraneous sheath, moves as upon a pulley.

OBTURATOR NERVE. A nerve of the thigh, that is lost upon the muscles situated on the inside of the thigh.

OBTUSE. *Obtusus.* Blunt; not pointed. In general use in every department of science.

OBTUSUS. Blunt: applied to a leaf which terminates in a segment of a circle; as that of the *Linum catharticum,* the petals of the *Tropæolum majus.* This form of leaf has sometimes a small point, *obtusum cum acumine,* in the *Statyce limonium.*

OCCIPITAL. *Occipitalis.* Belonging to the occiput or back part of the head.

OCCIPITAL BONE. *Os occipitis. Os memoriæ. Os nervosum. Os basilare.* This bone, which forms the posterior and inferior part of the skull, is of an irregular figure, convex on the outside and concave internally. Its external surface, which is very irregular, serves for the attachment of several muscles. It affords several inequalities, which sometimes form two semicircular hollows separated by a scabrous ridge. The inferior portion of the bone is stretched forwards in form of a wedge, and hence is called the *cuneiform* process, or basilary process. At the base of this process, situated obliquely on each side of the foramen magnum, are two flat, oblong protuberances, named *condyles.* They are covered with cartilage, and serve for the articulation of the head with the first vertebra of the neck. In the inferior portion of this bone, at the basis of the cranium, and immediately behind the cuneiform process, we observe a considerable hole, through which the medulla oblongata passes into the spine. The nervi accessorii, the vertebral arteries, and sometimes the vertebral veins likewise, pass through it. Man being designed for an erect posture, this foramen magnum is found nearly in the middle of the basis of the human cranium, and at a pretty equal distance from the posterior part of the occiput, and the anterior part of the lower jaw; whereas in quadrupeds it is nearer the back part of the occiput. Besides this hole, there are four other smaller foramina, viz. two before, and two behind the condyles. The former serve for the transmission of the ninth pair of nerves, and the two latter for the veins which pass from the external parts of the head to the lateral sinuses. On looking over the internal surface of the os occipitis, we perceive the appearance of a cross, formed by a very prominent ridge, which rises upwards from near the foramen magnum, and by two transverse sinuosities, one on each side of the ridge. This cross occasions the formation of four fossæ, two above and two below the sinuosities. In the latter are placed the lobes of the cerebellum, and in the former the posterior lobes of the brain. The two sinuosities serve to receive the lateral sinuses. In the upper part of this bone is seen a continuation of the sinuosity of the longitudinal sinus; and at the basis of the cranium we observe the inner surface of the cuneiform process made concave, for the reception of the medulla oblongata. The occipital bone is thicker and stronger than any of the other bones of the head, except the petrous part of the ossa temporum; but it is of unequal thickness. At its lateral and inferior parts, where it is thinnest, it is covered by a great number of muscles. The reason for so much thickness and strength in this bone seems to be, that it covers the cerebellum, in which the least wound is of the utmost consequence; and that it is, by its situation, more liable to be fractured by falls than any other bone of the cranium. For if we fall forwards, the hands are naturally put out to prevent the forehead touching the ground; and if on one side, the shoulders, in a great measure, protect the sides of the head; but if a person fall backwards, the hind part of the head consequently strikes against the earth, and that, too, with considerable violence. Nature, therefore, has wisely constructed this bone so as to be capable of the greatest strength at its upper part, where it is the most exposed to injury. The os occipitis is joined, by means of the cuneiform process, to the sphenoid bone, with which it often ossifies, and makes but one bone in those who are advanced in life. It is connected to the parietal bones by the lamboidal suture, and to the temporal bones by the additamentum of the temporal suture. The head is likewise united to the trunk by means of this bone. The two condyles of the occipital bone are received into the superior oblique processes of the atlas, or first vertebra of the neck, and it is by means of this articulation that a certain degree of motion of the head backwards and forwards is performed. But it allows only very little motion to either side; and still less of a circular motion, which the head obtains principally by the circumvolution of the atlas on the second vertebra, as is described more particularly in the account of the vertebræ. In the fœtus, the os occipitis is divided by an unossified cartilaginous substance into four parts. One of these, which is the largest, constitutes all that portion of the bone which is above the foramen magnum; two others, which are much smaller, compose the inside of the foramen magnum, and include the condyloid processes; and the fourth is the cuneiform process. This last is sometimes not completely united with the rest, so as to form one bone, before the sixth or seventh year.

OCCIPITO. Names compounded of this word belong to the occiput.

OCCIPITO-FRONTALIS. *Digastricus cranii. Epicranius,* of Albinus. *Frontalis et occipitalis,* of Winslow and Cowper. A single, broad, digastric muscle, that covers the cranium, pulls the skin of the head backwards, raises the eyebrows upwards, and, at the same time, draws up and wrinkles the skin of the forehead. It arises from the posterior part of the occiput, goes over the upper part of the os parietale and os frontis, and is lost in the eyebrows.

O'CCIPUT. (*ut, itis.* n.) The hinder part of the head. See *Caput.*

OCCLUSUS. Occluse: shut up. Applied

to the florets of the fig, which are shut up in the fleshy receptacle that forms the fruit.

OCCULT. *Occultus.* Hidden. A term that has been much used by writers that had not clear ideas of what they undertook to explain; and which served therefore only for a cover to their ignorance: hence occult cause, occult quality, occult disease.

OCHE'MA. (From οχεω, to carry.) A vehicle, or thin fluid.

OCHETEU'MA. (From οχετος, a duct.) The nostril.

O'CHETUS. (From οχεω, to convey.) A canal or duct: applied formerly to the urinary or abdominal passages.

O'CHEUS. (From οχεω, to carry.) The bag of the scrotum.

O'CHRA. (*a, æ.* f.; from ωχρος, pale: so named because it is often of a pale colour.) 1. Ochre. An argillaceous earth, impregnated with iron, of a red or yellow colour. The Armenian bole, and other earths, are often adulterated with ochre.

2. The fore-part of the tibia.

OCHRACEUS. Ochrelike: applied to designate a yellowish colour striped with brown. See *Colour.*

OCHROITS. See *Cerite.*

O'CHRUS. (From ωχρος, pale: so called from the pale muddy colour in its flowers.) Applied by Tournefort to some leguminous plants.

OCHTHO'DES. (From οχθος, importing the tumid lips of ulcers, callous, tumid.) An epithet for ulcers, the lips of which are callous and tumid, and consequently difficult to heal.

OCIMA'STRUM. (Diminutive of *ocimum*, basil.) A species of basil.

O'CIMUM. (*um, i.* n.; from ωκυς, swift: so called from its quick growth.) *Ocymum.* The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

OCIMUM BASILICUM. The systematic name of the common or citron basil. *Basilicum. Herba regia. Ocimum—foliis ovatis glabris; calycibus ciliatis,* of Linnæus. This plant is supposed to possess nervine qualities, but is seldom employed but as a condiment to season high dishes, to which it imparts a grateful odour and taste.

OCIMUM CARYOPHYLLATUM. *Ocimum minimum,* of Caspar Bauhin. Small or bush basil. This plant is mildly balsamic. Infusions are drank as tea, in catarrhal and uterine disorders, and the dried leaves are made into cephalic and sternutatory powders. They are, when fresh, very juicy, of a weak aromatic and very mucilaginous taste, and of a strong and agreeable smell, improved by drying.

OCREA. A term used by Rotball, to the membrane that enfolds the flower-stalks in *Cyperus,* and which Sir J. Smith thinks is a species of bractea.

OCTA'NUS. (From *octo,* eight.) The eighth: applied to an erratic intermitting fever, which returns every eighth day.

OCTANDRIA. (*a, æ.* f.; from οκτω, eight, and ανηρ, a husband.) The name of a class of plants in the sexual system of Linnæus, consisting of those which have hermaphrodite flowers, furnished with eight stamina.

OCTAVUS. The eighth.

OCTAVUS HUMERI. See *Teres minor.*

OCTAVUS HUMERI PLACENTINI. See *Teres minor.*

OCULA'RIA. (*a, æ.* f.; from *oculus,* the eye: so called from its uses in disorders of the eye.) See *Euphrasia officinalis.*

OCULA'RIS COMMUNIS. A name for the nerve called *Motor oculi.*

O'CULUS. (*us, i.* m.; from οκκος, *i. e.* οφθαλμος, the eye.) The eye. See *Eye.*

OCULUS BOVINUS. See *Hydrophthalmia.*

OCULUS BOVIS. See *Chrysanthemum.*

OCULUS BUBULUS. See *Hydrophthalmia.*

OCULUS CHRISTI. Austrian flea-bane; a species of *inula,* sometimes used as an astringent by continental physicians.

OCULUS ELEPHANTINUS. See *Hydrophthalmia.*

OCULUS GENU. The knee-pan.

OCULUS LACHRYMANS. The *Epiphora.*

OCULUS MUNDI. A species of *opal,* generally of a yellowish colour. By lying in water it becomes of an amber colour, and also transparent.

OCULI ADDUCTOR. See *Rectus internus.*

OCULI ATTOLLENS. See *Rectus superior.*

OCULI CANCRORUM. See *Cancer.*

OCULI DEPRESSOR. See *Rectus inferior.*

OCULI ELEVATOR. See *Rectus superior.*

OCULI LEVATOR. See *Rectus superior.*

OCULI OBLIQUUS INFERIOR. See *Obliquus inferior oculi.*

OCULI OBLIQUUS MAJOR. See *Obliquus superior oculi.*

OCULI OBLIQUUS MINOR. See *Obliquus inferior oculi.*

ODAXI'SMOS. (*us, i.* m.; from οδους, a tooth.) A biting sensation, pain, or itching in the gums.

ODONTAGO'GOS. (*us, i.* m.; from οδους, a tooth, and αγω, to draw.) The name of an instrument to draw teeth, one of which, made of lead, Forrestus relates to have been hung up in the Temple of Apollo, denoting, that such an operation ought not to be made, but when the tooth was loose enough to be drawn with as little force as was required with it.

ODONTA'GRA. (*a, æ.* f.; from οδους, a tooth, and αγρα, a seizure.) 1. The toothache.

2. The gout in the teeth.

3. A tooth-drawer.

ODONTA'LGIA. (*a, æ.* f.; from οδους, a tooth, and αλγος, pain.) *Odontia. Odaxismus* The toothache. This well-known disease makes its attack by a most violent pain in the teeth, most frequently in the molares, more rarely in the incisorii, reaching sometimes up to the eyes, and sometimes backwards into the cavity of the ear. Toothache arises from a variety of causes.

1. The most common cause is caries of the

tooth in which the pain is. When pain takes place in a carious tooth, it is from the admission of cold air, which irritates the exposed nervous fibrils in the hollow or carious part. The pain thus produced will sometimes cease very suddenly; especially upon the application of an opiate, some acrid essential oil, or solution of pure potash: but the irritation is often communicated to the internal periosteum, which inflames and swells, and hence the pain becomes permanent and distressing, for the inflamed membrane is incapable of relieving itself by stretching. In all these cases, the inflammation must be removed by bleeding the gums, blisters, or extraction. If the pain abate without extraction, which should always be avoided when there is inflammation present, the carious part may be filled with gold or zinc, or such compositions as dentists use.

There are very many cures for toothache from caries: burning the nerve with a hot iron probe; or destroying it by caustic, cajeput oil, oil of thyme, the root of the *peteveria alliacea*, or guinea-hen-weed; the sedative juice of the *coccinella septem punctata*, or lady-bird, brandy, alkohol, the tincture of pyrethrum, electricity, magnetism, tractorism, &c.

2. The next cause of toothache is rheumatism. This may affect a carious tooth, and often does. Rheumatic odontalgia is known by the soreness that attends the gums and face from the very beginning, and from the pains communicating to the muscles about the jaw. It requires the remedies for rheumatism — blisters behind the ears, fomentations, the internal exhibition of Dover's powder; antimony, with opium and calomel; saline medicines: guaiacum is an excellent medicine against rheumatic toothache: washing the mouth with stimulating gargles composed of sialagogues, as the pyrethrum, seseli vulgare, or laserpitium siler.

3. Cutting the permanent teeth and wise teeth. When toothache results from this cause, it is from inflammation of the gums, and requires that the gums be separated or divided, and the person put on an antiphlogistic diet.

The toothache is sometimes merely a rheumatic affection, arising from cold, but more frequently from a carious tooth. It is also a symptom of pregnancy, and takes place in some nervous disorders. It may attack persons at any period of life, though it is most frequent in the young and phletoric. From the variety of causes which may produce this affection, it has been named by authors odontalgia cariosa, scorbutica, catarrhalis, arthritica, gravidarum hysterica, stomachica, and rheumatica.

Many empirical remedies have been proposed for the cure of the toothache, but have not in any degree answered the purpose. When the affection is purely rheumatic, blistering behind the ear will almost always remove it; but when it proceeds from a carious tooth, the pain is much more obstinate. In this case it has been recommended to touch the pained part with a hot iron, or with oil of vitriol, in order to destroy the aching nerve; to hold spirits in the mouth; to put a drop of oil of cloves into the hollow of the tooth, or a pill made of camphire, opium, and oleum caryophylli. Others recommend gum mastich, dissolved in oleum terebinthinæ, applied to the tooth upon a little cotton. The great Boerhaave is said to have applied camphire, opium, oleum caryophylli, and alkohol, upon cotton. The caustic oil which may be collected from writing paper, rolled up tight, and set fire to at the end, will sometimes destroy the exposed nervous substance of a hollow tooth. The application of radix pyrethri, by its power of stimulating the salivary glands, either in substance or in tincture, has also been attended with good effects. But one of the most useful applications of this kind, is strong nitrous acid, diluted with three or four times its weight of spirit of wine, and introduced into the hollow of the tooth, either by means of a hair pencil, or a little cotton. When the constitution has had some share in the disease, the Peruvian bark has been recommended, and perhaps with much justice, on account of its tonic and antiseptic powers. When the pain is not fixed to one tooth, leeches applied to the gum are of great service. But very often all the foregoing remedies will fail, and the only infallible cure is to draw the tooth.

ODONTA'LGIC. (*Odontalgicus*; from οδονταλγια, the toothache.) Relating to the toothache.

ODONTIA. (*a, æ.* f.; from οδους, a tooth.) The toothache. See *Odontalgia*.

ODONTI'ASIS. (*is, is.* f.; from οδοντιαω, to put forth the teeth.) Dentition, or cutting teeth. See *Dentition, difficult*.

ODO'NTICUS. (From οδους, a tooth.) *Odontic*. Appertaining to the teeth.

ODONTIRRHŒ'A. (*a, æ.* f.; from οδους, a tooth, and ρεω, to flow.) Bleeding from the socket of the jaw, after drawing a tooth.

ODO'NTIS. (From οδους, a tooth: so called because its decoction was supposed useful in relieving the toothache.) A species of lychnis.

ODONTI'TIS. (*is, idis.* f.; from οδους, a tooth, and ιτις.) Inflammation of a tooth.

ODONTOGLY'PHUM. (*um, i.* n.; from οδους, a tooth, and γλυφω, to scrape.) An instrument for scaling and scraping the teeth.

ODONTOID. (*Odontoides*; from οδους, a tooth, and ειδος, form: because it is shaped like a tooth.) Tooth-like. See *Dentatus*.

ODONTOLI'THOS. (*us, i.* m.; from οδους, a tooth, and λιθος, a stone.) The tartar, or stony crust upon the teeth.

ODONTOPHY'IA. (*a, æ.* f.; from οδους, a tooth, and φυω, to grow.) Dentition, or cutting teeth. See *Teething*.

Odontotri'mma. (From οδους, a tooth,

and τριβω, to wear away.) A dentifrice, or medicine to clean the teeth.

ODOR. See *Odour.*

ODORIFEROUS. (*Odoriferus*; from *odor*, a smell, and *fero*, to bear.) Having a smell.

ODORIFEROUS GLANDS. *Glandulæ odoriferæ.* Small glands which are situated around the corona glandis of the male, and under the skin of the labia majora and nymphæ of females. They secrete a sebaceous matter, which emits a peculiar odour.

ODOUR. (*Odor, oris.* m.; from *odeo*, i. e. *oleo.*) Smell. This, which is the emanation of an odoriferous body, is generally ascribed to a portion of the body itself, converted into vapour: but, from some experiments lately instituted, it would seem probable, that in many cases the odour is owing not to the substance itself, but to a gas or vapour resulting from its combination with an appropriate vehicle, capable of diffusion in space.

ODOXI'SMUS. Toothache.

Œ'A. (Οιη; from οιω, to bear: so named from its fruitfulness.) The *Cratægus terminalis*, or service tree.

ŒCONOMY. (*Œconomia, æ.* f.; from οικος, a house, and νομος, a law.) The conduct of Nature, or any department of Nature, in preserving bodies and following her usual order: hence animal œconomy, and vegetable œconomy, &c.

ŒCONOMY, ANIMAL. *Œconomia animalis.* The doctrine or laws of every thing which appertains to animal life. It is, in fact, synonymous with physiology, and embraces the structure of the animal, the phænomena of life, its nature and causes, and the effects arising from them.

ŒDE'MA. (*a, atis.* n. Οἴδημα, οἶδος. *Oedos*; from οιδεω, to swell.) Formerly applied to a partial dropsical swelling of the feet or extremities. Now used synonymously with anasarca. See *Anasarca.*

ŒDEMATO'DES. (From οιδεω, to swell, and ειδος, resemblance.) Like to an œdema.

ŒDEMOSA'RCA. (From οιδημα, a swelling, and σαρξ, flesh.) A tumour mentioned by Severinus, of a middle nature, betwixt an *œdema* and *sarcoma.*

ŒNA'NTHE. (*e, es.* f.; from οινος, wine, and ανθος, a flower: so called because its flowers smell like the vine.) 1. The name of a genus of the umbelliferous plants. Class, *Pentandria*; Order, *Digynia.*

2. The pharmacopœial name of the hemlock dropwort. See *Œnanthe crocata.*

ŒNANTHE CROCATA. The hemlock dropwort. *Œnanthe—chærophylli foliis*, of Linnæus. An active poison, that has too often proved fatal, by being eaten in mistake instead of water-parsnep. The juice, nevertheless, cautiously exhibited, promises to be an efficacious remedy in inveterate scorbutic eruptions. The root of this plant is not unpleasant to the taste. It is esteemed to be the most deleterious of all the vegetables which this country produces. Mr. Howel, surgeon at Haverfordwest, relates, that "eleven French prisoners had the liberty of walking in and about the town of Pembroke. Three of them being in the fields a little before noon, dug up a large quantity of this plant, which they took to be wild celery, to eat with their bread and butter for dinner. After washing it, they all three ate, or rather tasted of the roots. As they were entering the town, without any previous notice of sickness at the stomach, or disorder in the head, one of them was seized with convulsions. The other two ran home, and sent a surgeon to him. The surgeon endeavoured first to bleed, and then to vomit him; but those endeavours were fruitless, and he died presently. Ignorant of the cause of their comrade's death, and of their own danger, they gave of these roots to the other eight prisoners, who ate of them with their dinner. A few minutes afterwards the remaining two who gathered the plants were seized in the same manner as the first, of whom one died; the other was bled, and a vomit, with great difficulty, forced down, on account of his jaws being, as it were, locked together. This operated, and he recovered, but was some time affected with dizziness in his head, though not sick, or the least disordered in the stomach. The other eight, being bled and vomited immediately, were soon well." At Clonmell, in Ireland, eight boys mistaking this plant for water-parsnep, ate plentifully of its roots. About four or five hours after, the eldest boy became suddenly convulsed, and died: and before the next morning, four of the other boys died in a similar manner. Of the other three, one was maniacal several hours, another lost his hair and nails, but the third escaped unhurt. Stalpaart Vander Wiel mentions two cases of the fatal effects of this root: these, however, were attended with great heat in the throat and stomach, sickness, vertigo, and purging; they both died in the course of two or three hours after eating the root. Allen, in his Synopsis Medicinæ, also relates that four children suffered greatly by eating this poison. In these cases great agony was experienced before the convulsions supervened: vomitings likewise came on, which were encouraged by large draughts of oil and warm water, to which their recovery is ascribed. The late Sir William Watson, who refers to the instances here cited, also says, that a Dutchman was poisoned by the leaves of the plant boiled in pottage. It appears, from various authorities, that most brute animals are not less affected by this poison than man: and Lightfoot informs us, that a spoonful of the juice of this plant given to a dog rendered him sick and stupid: but a goat was observed to eat the plant with impunity. The great virulence of this plant has not, however, prevented it from being taken medicinally. In a letter from Dr. Pulteney to Sir William Watson, we are told that a severe and inveterate cutaneous disorder was cured by the juice of the root, though not

without exciting the most alarming symptoms. Taken in the dose of a spoonful, in two hours afterwards, the head was affected in a very extraordinary manner, followed with violent sickness and vomiting, cold sweats, and rigors; but this did not deter the patient from continuing the medicine, in somewhat less doses, till it effected a cure.

Œna'rea. (Οιναρεη; from οιναρα, the cuttings of vines.) The ashes prepared of the twigs, &c. of vines.

Œnelæ'um. (From οινος, wine, and ελαιον, oil.) A mixture of oil and wine.

ŒNO'GALA. (*a, æ.* f.; from οινος, wine, and γαλα, milk.) A sort of potion made of wine and milk. According to some, it is wine as warm as new milk.

Œno'garum. (*um, i.* n.; from οινος, wine, and γαρον, garum.) A mixture of wine and garum.

ŒNO'MELI. (*i, itis.* n.; from οινος, wine, and μελι, honey.) Mead, or wine made of honey, or sweetened with honey.

Œno'plia. (From οινος, wine.) The great jubeb-tree. The juice of the fruit is like that of the grape.

ŒNOSTA'GMA. (From οινος, wine, and ςαζω, to distil.) Spirit of wine.

ŒNOTHIONIC. (*Œnothionicus;* from οινος, wine.) Appertaining to wine.

Œnothionic acid. An acid produced during the distillation of sulphuric æther, and found in the residue, according to Serturner.

ŒNUS. (*us, i.* m.; from οινος, wine.) Wine.

Œnus anthinos. Flowery wine. Wine impregnated with flowers.

Œnus anthosmias. (From ανθος, a flower, and οσμη, a smell.) Sweet-scented wine.

Œnus apezesmenus. A wine heated to a great degree, and prescribed with other things, as garlic, salt, milk, and vinegar.

Œnus apodædus. Wine in which the dais, or tæda, hath been boiled.

Œnus deuterus. Wine of the second pressing.

Œnus diacheomenus. Wine diffused in larger vessels, cooled and strained from the lees, to render it thinner and weaker. Wines thus drawn off are called *saccus*, and *saccata*, from the bag through which they are strained.

Œnus galactodes. Wine with milk, or wine made as warm as new milk.

Œnus malacus. *Œnus Malthacus.* Soft wine. Sometimes it means weak and thin, opposed to strong wine; or mild, in opposition to austere.

Œnus melichroos. Wine in which is honey.

Œnus œnodes. Strong wine.

Œnus straphidios leucos. White wine made from raisins.

Œnus tethalasmenos. Wine mixed with sea-water.

ŒSOPHAGÆ'US. (From οισοφαγος, the gullet.) The muscle forming the sphincter œsophagi.

ŒSOPHAGI'SMUS. (*us, i.* m.; from οισοφαγος, the gullet.) Difficult swallowing, from spasm.

ŒSOPHA'GITIS. (*is, idis.* f.; from *œsophagus*, the seat of the disease, and *itis*, which implies inflammation.) Inflammation of the œsophagus. It is not a common disease, but does exist in a phlegmonoid character, and an erythematic one. The cellular tissue that connects its coats may be the seat of the inflammation, which, like phlegmonous inflammation in any other part, may be resolved, or end in suppuration. The surface of the membrane which lines the œsophagus may be inflamed, and extend more or less throughout its whole extent.

The symptoms of this disease are, a sense of heat or burning in the œsophagus, with painful and difficult deglutition, and these generally circumscribed, or confined to a part which is pointed out by the patient: if it be high in the canal, it will be in the neck; if low, in the back, between the shoulders, and under the sternum.

As an idiopathic disease, œsophagitis is very rare, although it is much exposed to many of the causes of inflammation. Dissections have found inflammation here in fatal cases of hydrophobia.

In stricture, small-pox, measles, and tumours in the neighbourhood, the disease often is symptomatic.

The cure is to be effected by the usual means, bleeding, saline purgatives, and blistering; and, if the fever which attends be of the phlogistic character, and urgent, by a perseverance in their use, and the exhibition of diaphoretics.

ŒSO'PHAGUS. (*us, i.* m.; from οιω, to carry, and φαγω, to eat: because it carries the food into the stomach.) The membraneous and muscular tube that descends in the neck, from the pharynx to the stomach. It is composed of three tunics or membranes, viz. a common, muscular, and mucous. Its arteries are branches of the œsophageal, which arises from the aorta. The veins empty themselves into the vena azygos. Its nerves are from the eighth pair and great intercostal; and it is every where, under the internal or mucous membrane, supplied with glands that separate the mucus of the œsophagus, in order that the masticated bole may readily pass down into the stomach.

ŒSTROMA'NIA. (*a, æ.* f.; from οιςρος, the pudenda of a woman, and μαινομαι, to rage.) See *Nymphomania.*

Œ'STRUM. (*um, i.* n.; from *œstrus*, a gad-bee: because by its bite, or sting, it agitates cattle.) The orgasm, or pleasant sensation, experienced during the operation of the appetites or passions.

Œstrum venereum. 1. The pleasurable sensation experienced during coition.

2. The clitoris is so called, as being the seat of the sensation.

Œ'sype. (From οις, a sheep, and συπος, sordes.) *Œsypos. Œsypum. Œsypus.* It

frequently is met with in the ancient pharmacy, for a certain oily substance, boiled out of particular parts of the fleeces of wool, as what grows on the flank, neck, and parts most used to sweat.

O'FFA ALBA. (*Offa*, from *phath*, a fragment, Hebrew.) Van Helmont thus calls the white coagulation which arises from a mixture of a rectified spirit of wine with urine.

OFFICINAL. (*Officinalis*; from *officina*, a shop.) Any medicine directed by the colleges of physicians to be kept in the shops, is so termed.

OFFUSCA'TIO. *Obfuscatio.* Obscurity of vision. See *Amaurosis.*

OIL. See *Oleum.*

Oil, ætherial. See *Oleum æthereum.*

Oil, almond. See *Amygdalus.*

Oil of allspice. See *Oleum pimentæ.*

Oil of amber. See *Oleum succini.*

Oil of caraway. See *Oleum carui.*

Oil, castor. See *Ricinus communis.*

Oil of chamomile. See *Anthemis.*

Oil of juniper. See *Oleum juniperi.*

Oil of lavender. See *lavendulæ.*

Oil of linseed. See *Oleum lini.*

Oil of mace. See *Oleum macis.*

Oil, olive. See *Olea europæa.*

Oil of origanum. See *Oleum origani.*

Oil, palm. See *Cocos butyracea.*

Oil of pennyroyal. See *Oleum pulegii.*

Oil of peppermint. See *Oleum menthæ piperitæ.*

Oil, rock. See *Petroleum.*

Oil of spearmint. See *Mentha viridis.*

Oil, sulphuretted. See *Oleum sulphuratum.*

Oil of turpentine. See *Oleum terebinthinæ.*

Oil of vitriol. See *Sulphuric acid.*

OINTMENT. See *Unguentum.*

OISANITE. Pyramidal ore of titanium.

OLDENLANDIA. (*a, æ.* f.: so called in honour of Oldenland, a Dane, who made a visit to the Cape of Good Hope, about the year 1695, for the purpose of collecting plants, where he soon after died. Linnæus described many plants from his Herbarium.) The name of a genus of plants. Class, *Pentandria*; Order, *Digynia.*

OLDENLANDIA UMBELLATA. The roots of this plant, which grows wild on the coast of Coromandel, and is also cultivated there, are used by dyers and calico printers, for the same purposes as madder in this country, giving the beautiful red so much admired in the Madras cottons.

O'LEA. (*a, æ.* f.; from ελαια, oil.) The name of a genus of plants in the Linnæan system. Class, *Monandria*; Order, *Monogynia.*

OLEA EUROPÆA. The systematic name of the plant from which the olive oil is obtained; called also *Oliva*, and *Olea sativa*. *Olea—foliis lanceolatis integerrimis, racemis axillaribus coarctatis*, of Linnæus. The olive-tree, in all ages, has been greatly celebrated, and held in peculiar estimation, as the bounteous gift of heaven. It was formerly exhibited in the religious ceremonies of the Jews, and is still continued as emblematic of peace and plenty. The varieties of this tree are numerous, distinguished not only by the form of the leaves, but also by the shape, size, and colour of the fruit; as the large Spanish olive, the small oblong Provence olive, &c. &c. These, when pickled, are well known to us by the names of Spanish and French olives, which are extremely grateful to many stomachs, and said to excite appetite and promote digestion: they are prepared from the green unripe fruit, which is repeatedly steeped in water, to which some quicklime or alkaline salt is added, in order to shorten the operation: after this, they are washed and preserved in a pickle of common salt and water, to which an aromatic is sometimes added. The principal consumption, however, of this fruit is in the preparation of the common salad oil, or *oleum olivæ* of the pharmacopœias, which is obtained by grinding and pressing them when thoroughly ripe: the finer and purer oil issues first by gentle pressure, and the inferior sorts on heating what is left, and pressing it more strongly. The best olive oil is of a bright pale amber colour, bland to the taste, and without any smell: it becomes rancid by age, and sooner if kept in a warm situation. With regard to its utility, oil, in some shape, forms a considerable part of our food, both animal and vegetable, and affords much nourishment. With some, however, oily substances do not unite with the contents of the stomach, and are frequently brought up by eructation: this happens more especially to those whose stomachs abound with acid. — Oil, considered as a medicine, is supposed to correct acrimony, and to lubricate and relax the fibres; and therefore has been recommended internally to obviate the effects of various stimuli, which produce irritation, and consequent inflammation: on this ground it has been generally prescribed in coughs, catarrhal affections, and erosions. The oil of olives is successfully used in Switzerland against the *tænia osculis superficialibus*; and it is in very high estimation in this and other countries against nephritic pains, spasms, colic, constipation of the bowels, &c. Externally it has been found an useful application to bites and stings of various poisonous animals, as the mad dog, several serpents, &c.; also to burns, tumours, and other affections, both by itself, or mixed in liniments or poultices. Oil rubbed over the body is said to be of great services in dropsies, particularly ascites. Olive oil enters several officinal compositions, and when united with water, by the intervention of alkali, is usually given in coughs and hoarsenesses.

OLEA'MEN. (*en, inis.* n.; from *oleum*, oil.) A thin liniment, composed of oils.

OLEA'NDER. (*er, ri.* m.; from *olea*, the olive-tree, which it resembles.) The rose-bay.

OLEA'STER. (*er, ri.* m.; diminutive of *olea*, the olive-tree.) The wild olive.

OLE'CRANON. (*on, i.* n.; from ωλενη,

the ulna, and κρανον, the head.) The elbow, or process of the ulna, upon which a person leans. See *Ulna*.

OLEFIANT GAS. See *Carburetted hydrogene gas*.

OLEIC. (*Oleicus*; from *oleum*: because obtained from oil.) The name of an acid.

OLEIC ACID. *Acidum oleicum.* When potash and hog's lard are saponified, the margarite of the alkali separates in the form of a pearly-looking solid, while the fluid fat remains in solution, combined with the potash. When the alkali is separated by tartaric acid, the oily principle of fat is obtained, which Chevreuil purifies by saponifying it again and again, recovering it two or three times, by which means the whole of the margarine is separated. As this oil has the property of saturating bases, and forming neutral compounds, he has called it oleic acid.

O'LENE. 'Ωλενη. The cubit, or ulna.

OLEOSA'CCHARUM. (*um, i.* n.; from *oleum*, oil, and *saccharum*, sugar.) An essential oil, ground up with sugar.

OLERACEUS. (From *oleo*, to grow.) *Holeraceus.* Partaking of the nature of potherbs.

OLERACEÆ. (From *olus*, a pot-herb.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as have incomplete inelegant flowers, heaped together in the calyces; as beta, chenopodium, spinacia, &c.

O'LEUM. (*um, ei.* n.; from *olea*, the olive: this name being at first confined to the oil expressed from the olive.) A proper juice of a fat or unctuous nature, either solid or fluid, indissoluble in water, combustible with flame, and volatile in different degrees. Oils are never formed but by organic bodies; and all the substances in the mineral kingdom, which present oily characters, have originated from the action of vegetable or animal life. They are distinguished into fat, and essential oils. Under the former head are comprehended oil of olives, almonds, rape, ben, linseed, hemp, cocoa, &c. Essential oils differ from fat oils by the following characters: their smell is strong and aromatic; their volatility is such that they arise with the heat of boiling water, and their taste is very acrid; they are likewise much more combustible than fat oils; they are obtained by pressure, distillation, &c from strong-smelling plants, as that of peppermint, aniseed, caraway, &c. The use of fat oils in the arts, and in medicine, is very considerable: they are medicinally prescribed as relaxing, softening, and laxative remedies; they enter into many medical compounds, such as balsams, unguents, plasters, &c. and they are often used as food on account of the mucilage they contain. See *Olea*. Essential oils are employed as cordial, stimulant, and antispasmodic remedies. See *Adeps*.

OLEUM ABIETANUM. The resinous juice which exudes spontaneously from the silver and red firs. It is supposed to be superior to that obtained by wounding the tree.

OLEUM ÆTHEREUM. Æthereal oil. *Oleum vini.* After the distillation of sulphuric æther, carry on the distillation with a less degree of heat, until a black froth begins to rise; then immediately remove the retort from the fire. Add sufficient water to the liquor in the retort, that the oily part may float upon the surface. Separate this, and add to it as much lime-water as may be necessary to neutralise the adherent acid, and shake them together. Lastly, collect the ætherial oil which separates. In this way a very small portion of very impure ætherial oil is obtained. It may be obtained, Mr. Brande says, in larger quantities by distilling one part of alkohol, by measure, with one of sulphuric acid, and comes over, sometimes in considerable quantity, in the usual process for making carburetted hydrogene or olefiant gas. It is best purified by washing it with weak solution of subcarbonate of potash. Its specific gravity is 1·060; it is insoluble in water, but soluble in alkohol and æther. It has a fragrant odour, and an aromatic, bitterish, and pungent flavour. In its composition and general character, it resembles the vegetable essential oils. This oil is used as an ingredient in the compound spirit of æther. It is of a yellow colour, less volatile than æther.

OLEUM AMYGDALÆ. See *Amygdalus*.

OLEUM AMYGDALARUM. See *Amygdalus*.

OLEUM ANIMALE. *Oleum animale Dippelii.* An empyreumatic oil obtained by distillation from bones and animal substances. It is sometimes exhibited as an antispasmodic and diaphoretic, in the dose of from ten to forty drops.

OLEUM ANIMALE DIPPELII. See *Oleum animale*.

OLEUM ANISI. Formerly, *Oleum essentiale anisi; Oleum e seminibus anisi.* Oil of anise. The essential oil of aniseed possesses all the virtues attributed to the anisum, and is often given as a stimulant and carminative, in the dose of from five to eight drops, mixed with an appropriate vehicle. See *Pimpinella anisum.*

OLEUM ANTHEMIDIS. Oil of chamomile; formerly called, *Oleum e floribus chamæmeli.* See *Anthemis nobilis.*

OLEUM CAMPHORATUM. See *Linimentum camphoræ.*

OLEUM CARPATHICUM. A fine essential oil, distilled from the fresh cones of the tree which affords the common turpentine. See *Pinus sylvestris.*

OLEUM CARUI. Formerly called, *Oleum essentiale carui; Oleum essentiale e seminibus carui.* The oil of caraways is an admirable carminative, diluted with rectified spirit into an essence, and then mixed with any proper fluid. See *Carum.*

OLEUM CARYOPHYLLI AROMATICI. A stimulant and aromatic preparation of the clove. See *Eugenia caryophyllata.*

OLEUM CEDRINUM. *Essentia de cedro.* The oil of the peel of citrons, obtained without distillation, in Italy.

Oleum cinnamomi. A warm, stimulant, and delicious stomachic. Given in the dose of from one to three drops, rubbed down with some yoke of egg, in a little wine, it allays violent emotions of the stomach from morbid irritability, and is particularly serviceable in debility of the primæ viæ, after cholera.

Oleum cornu cervi. This is applied externally as a stimulant to paralytic affections of the limbs.

Oleum gabianum. See *Bitumen.*

Oleum juniperi. Formerly called, *Oleum essentiale juniperi baccæ; Oleum essentiale e baccis juniperi.* Oil of juniper. Oil of juniper-berries possesses stimulant, carminative, and stomachic virtues, in the dose of from two to four drops, and in a larger dose proves highly diuretic. It is often administered in the cure of dropsical complaints, when the indication is to provoke the urinary discharge. See *Juniperus communis.*

Oleum lavendulæ. Formerly called, *Oleum essentiale lavendulæ; Oleum essentiale e floribus lavendulæ.* Oil of lavender. Though mostly used as a perfume, this essential oil may be exhibited internally, in the dose of from one to five drops, as a stimulant in nervous headaches, hysteria, and debility of the stomach. See *Lavenda spica.*

Oleum lauri. *Oleum laurinum.* An anodyne and antispasmodic application, generally rubbed on sprains and bruises unattended with inflammation.

Oleum limonis. The essential oil of lemons possesses stimulant and stomachic powers, but is principally used externally, mixed with ointments, as a perfune.

Oleum lini. Linseed oil is emollient and demulcent, in the dose of from half an ounce to an ounce. It is frequently given in the form of clyster in colics and obstipation. Cold-drawn linseed oil, with lime-water and extract of lead, forms, in many instances, the best application for burns and scalds. See *Linum usitatissimum.*

Oleum lucii piscis. See *Esox lucius.*

Oleum macis. *Oleum myristicæ expressum.* Oil of mace. A fragrant sebaceous substance, expressed in the East Indies from the nutmeg. There are two kinds. The best is brought in stone jars, is somewhat soft, of a yellow colour, and resembles in smell the nutmeg. The other is brought from Holland, in flat square cakes. The weak smell and faint colour warrants our supposing it to be the former kind sophisticated. Their use is chiefly external, in form of plaster, unguent, or liniment. See *Myristica moschata.*

Oleum malabathri. An oil similar in flavour to that of cloves, brought from the East Indies, where it is said to be drawn from the leaves of the cassia tree.

Oleum martis per deliquium. The liquid muriate of iron was formerly so called.

Oleum menthæ piperitæ. Formerly called, *Oleum essentiale menthæ piperitidis.* Oil of peppermint. Oil of peppermint possesses all the active principles of the plant. It is mostly used to make the simple water. Mixed with rectified spirit, it forms an essence, which is put into a variety of compounds, as sugar-drops and troches, which are exhibited as stimulants, carminatives, and stomachics. See *Mentha piperita.*

Oleum menthæ viridis. Formerly called, *Oleum essentiale menthæ sativæ.* Oil of spearmint. This essential oil is mostly in use for making the simple water, but may be exhibited in the dose of from two to five drops as a carminative, stomachic, and stimulant. See *Mentha viridis.*

Oleum myristicæ. The essential oil of nutmeg is an excellent stimulant and aromatic, and may be exhibited in every case where such remedies are indicated, with advantage. See *Myristica moschata.*

Oleum myristicæ expressum. This is the oil of mace. See *Oleum macis.*

Oleum neroli. *Essentia neroli.* The essential oil of the flowers of the Seville orange-tree. It is brought to us from Italy and France.

Oleum olivæ. See *Olea europæa.*

Oleum origani. Formerly called, *Oleum essentiale origani.* Oil of origanum. A very acrid and stimulating essential oil. It is employed for alleviating the pain arising from caries of the teeth, and for making the simple water of marjoram. See *Origanum.*

Oleum palmæ. See *Cocos butyracea.*

Oleum petræ. See *Petroleum.*

Oleum pimentæ. See *Myrtus pimenta.*

Oleum pulegii. Formerly called, *Oleum essentiale pulegii.* Oil of pennyroyal. A stimulant and antispasmodic oil, which may be exhibited in hysterical and nervous affections. See *Mentha pulegium.*

Oleum ricini. See *Ricinus communis.*

Oleum rosmarini. Formerly called, *Oleum essentiale rosis marini.* Oil of rosemary. The essential oil of rosemary is an excellent stimulant, and may be given with great advantage in nervous and spasmodic affections of the stomach. See *Rosmarinus officinalis.*

Oleum sabinæ. A stimulating emmenagogue. See *Juniperus sabina.*

Oleum sassafras. An agreeable stimulating carminative and sudorific.

Oleum sinapeos. This is an emollient oil, the acrid principle of the mustard remaining in the seed. See *Sinapis alba.*

Oleum succini. *Oleum succini rectificatum.* Put amber in an alembic, and with the heat of a sand-bath, gradually increased, distil over an acid liquor, an oil, and a salt contaminated with oil. Then re-distil the oil a second and a third time. Oil of amber is mostly used externally, as a stimulating application to paralytic limbs, or those affected with cramp and rheumatism. Hooping-cough, and other convulsive diseases, are said to be relieved also by rubbing the spine with this oil. See *Succinum.*

Oleum sulphuratum. Formerly called, *Balsamum sulphuris simplex.* Sulphuretted oil. Take of washed sulphur, two ounces;

olive oil, a pint. Having heated the oil in a very large iron pot, and the sulphur gradually, stir the mixture after each addition, until they have united. This, which was formerly called simple balsam of sulphur, is an acrid stimulating preparation, and much praised by some in the cure of coughs and other phthisical complaints.

OLEUM SYRIÆ. A fragrant essential oil, obtained by distillation from the balm of Gilead plant. See *Dracocephalum moldavica.*

OLEUM TEMPLINUM. *Oleum templinum verum.* A terebinthinate oil, obtained from the fresh cones of the *Pinus abies* of Linnæus.

OLEUM TEREBINTHINÆ RECTIFICATUM. Take of oil of turpentine, a pint; water, four pints. Distil over the oil. Stimulant, diuretic, and sudorific virtues are attributed to this preparation, in the dose of from ten drops to twenty, which are given in rheumatic pains of the chronic kind, especially sciatica. Its chief use internally, however, is as an anthelmintic and styptic. Uterine, pulmonic, gastric, intestinal, and other hæmorrhages, when passive, are more effectually relieved by its exhibition than by any other medicine. Externally it is applied, mixed with ointments and other applications, to bruises, sprains, rheumatic pains, indolent ulcers, burns, and scalds.

OLEUM TERRÆ. See *Petroleum.*

OLEUM VINI. See *Oleum æthereum.*

OLEUM VITRIOLI. See *Sulphuric acid.*

OLFACTORY. (*Olfactorius*; from *olfactus*, the sense of smelling.) Belonging to the organ or sense of smelling.

OLFACTORY NERVE. The first pair of nerves are so termed, because they are the organs of smelling. They arise from the corpora striata, perforate the ethmoid bone, and are distributed very numerously on the pituitary membrane of the nose.

OLFACTUS. The sense of smell. The act of smelling. See *Smell.*

OLI'BANUM. (*um, i.* n.; from *lebona*, Chaldean.) See *Juniperus lycia.*

OLIGOTRO'PHIA. (*a, æ.* f.; from ολιγος, small, and τρεφω, to nourish.) Deficient nourishment.

OLISTHE'MA. (From ολισθαινω, to fall out.) A luxation.

OLI'VA. (*a, æ.* f.; from ελαια.) See *Olea europæa.*

OLIVA'CEOUS. Resembling the olive: applied to an olive colour.

OLIVA'RIS. (From *oliva*, the olive.) Resembling the olive: applied to two eminences on the lower part of the medulla oblongata, called *corpora olivaria.*

OLIVE. See *Olea europæa.*

Olive, spurge. See *Daphne mezereum.*

Olive-tree. See *Olea europæa.*

OLIVE'NITE. An ore of copper.

OLIVIFORMIS. (From *oliva*, the olive, and *forma*, form, or likeness.) Olive-shape.

OLI'VILE. The name given by Pelletier to the substance which remains after gently evaporating the alkoholic solution of the gum which exudes from the olive-tree. It is a white, brilliant, starchy powder.

OLIVI'NE. A subspecies of prismatic chrysolite. Its colour is olive green. It occurs in basalt, greenstone, porphyry, and lava, and generally accompanied with augite. It is found in Scotland, Ireland, France, Bohemia, &c.

OLLA'RIS LAPIS. Pot-stone.

OLOPHLY'CTIS. (From ολος, whole, and φλυκτις, a pustule.) A small hot eruption covering the whole body. Obsolete.

OLUSA'TRUM. (*um, i.* n.; *id est, olus atrum*, the black herb, from its black leaves.) See *Smyrnium olusatrum.*

OMA. This Greek final usually imports external protuberance; as in *sarcoma, staphyloma, carcinoma*, &c.

OMA'GRA. (*a, æ.* f.; from ωμος, the shoulder, and αγρα, a seizure.) The gout in the shoulder.

OMENTI'TIS. (*is, idis.* f.; from *omentum*, the caul.) The omentum is formed of a duplicature of the peritonæum, and, when inflamed, it is called *omentitis*, and *epiploitis.* The symptoms, causes, and treatment are similar to those of peritonitis. See *Peritonitis.*

OME'NTUM. (*um, i.* n.; from *omen*, a guess: so called because the soothsayers prophesied from an inspection of this part.) The omentum or caul, called also *epiploon*, is an adipose membraneous viscus of the abdomen, attached to the stomach, and lying on the anterior surface of the intestines. It is thin and easily torn, being formed of a duplicature of the peritonæum, with more or less of fat interposed It is distinguished into the great omentum and the little omentum.

1. The *omentum majus*, which is also termed *omentum gastrocolicum*, arises from the whole of the great curvature of the stomach, and even as far as the spleen, from whence it descends loosely behind the abdominal parietes, and over the intestines to the navel, and sometimes into the pelvis. Having descended thus far, its inferior margin turns inwards and ascends again, and is fastened to the colon and the spleen, where its vessels enter.

2. The *omentum minus*, or *omentum hepitaco-gastricum*, arises posteriorly from the transverse fissure of the liver. It is composed of a duplicature of peritonæum, passes over the duodenum and small lobe of the liver: it also passes by the lobulus spigelii and pancreas, proceeds into the colon and small curvature of the stomach, and is implanted ligamentous into the œsophagus. It is in this omentum that Winslow discovered a natural opening, which goes by his name. If air be blown in at this *foramen of Winslow*, which is always found behind the lobulus spigelii, between the right side of the liver and hepatic vessels, the duodenum, the cavity of the omentum, and all its sacs, may be distended.

The omentum is always double, and between its lamellæ, closely connected by very tender cellular substance, the vessels are distributed and the fat collected. Where the top

of the right kidney, and the lobulus spigelii of the liver, with the subjacent large vessels, form an angle with the duodenum, there the external membrane of the colon, which comes from the peritonæum, joining with the membrane of the duodenum, which also rises immediately from the peritonæum lying upon the kidney, enters the back into the transverse fissure of the liver for a considerable space, is continuous with its external coat, contains the gall-bladder, supports the hepatic vessels, and is very yellow and slippery. Behind this membraneous production, betwixt the right lobe of the liver, hepatic vessels, vena portarum, biliary ducts, aorta, and adjacent duodenum, there is the natural opening just mentioned, by which air may be blown extensively into all the cavity of the omentum. From thence, in a course continuous with this membrane from the pyloris and the smaller curvature of the stomach, the external membrane of the liver joins in such a manner with that of the stomach, that a thin membrane of the liver is continued out of the fossa of the venal duct, across the little lobe into the stomach stretched before the lobe and before the pancreas. This little omentum, or *omentum hepatico-gastricum,* when inflated, resembles a cone, and, gradually becoming harder and emaciated, it changes into a true ligament, by which the œsophagus is connected to the diaphragm. But the larger omentum, the *omentum gastrocolicum,* is of a much greater extent. It begins at the first accession of the right gastro-epiploic artery to the stomach, being continued there from the upper plate of the transverse mesocolon, and then from the whole great curve of the stomach, as far as the spleen, and also from the right convex end of the stomach towards the spleen, until it also terminates in a ligament that ties the upper and back part of the spleen to the stomach. This is the anterior lamina. Being continued downwards, sometimes to the navel, sometimes to the pelvis, it hangs before the intestines, and behind the muscles of the abdomen, until its lower edge, being reflected upon itself, ascends, leaving an intermediate vacuity between it and the anterior lamina, and is continued to a very great extent, into the external membrane of the transverse colon, and, lastly, into the sinus of the spleen, by which the large blood-vessels are received, and it ends finally on the œsophagus, under the diaphragm. Behind the stomach, and before the pancreas, its cavity is continuous with that of the smaller omentum. To this the *omentum colicum* is connected, which arises farther to the right than the first origin of the omentum gastrocolicum from the mesocolon, with the cavity of which it is continuous, but produced solely from the colon and its external membrane, which departs double from the intestine. It is prolonged, and terminates by a conical extremity, sometimes of longer, sometimes of shorter extent, above the intestinum cæcum; for all the blood which returns from the omentum and mesocolon goes into the vena portarum, and by that into the liver itself. The omentum gastrocolicum is furnished with blood from each of the gastro-epiploic arteries, by many descending articulated branches, of which the most lateral are the longest, and the lowest anastomose by minute twigs with those of the colon. It also has branches from the splenic, duodenal, and adipose arteries. The omentum colicum has its arteries from the colon, as also the smaller appendices, and also from the duodenal and right epiploic. The arteries of the small omentum come from the hepatics, and from the right and left coronaries. The omentum being fat and indolent, has very small nerves. They arise from the nerves of the eighth pair, both in the greater and lesser curvatures of the stomach. The arteries of the mesentery are in general the same with those which go to the intestine, and of which the smaller branches remain in the glands and fat of the mesentery. Various small accessory arteries go to both mesocolons, from the intercostals, spermatics, lumbars, and capsular, to the transverse portion from the splenic artery, and pancreato-duodenalis, and to the left mesocolon, from the branches of the aorta going to the lumbar glands. The veins of the omentum in general accompany the arteries, and unite into similar trunks; those of the left part of the gastrocolic omentum into the splenic, and also those of the hepatico-gastric, which likewise sends its blood to the trunk of the vena portarum: those from the larger and right part of the gastrocolic omentum, from the omentum colicum, and from the appendices epiploicæ into the mesenteric trunk. All the veins of the mesentery meet together, and end in the vena portarum, being collected first into two large branches, of which the one, the mesenteric, receives the gastro-epiploic vein, the colicæ mediæ, the iliocolica, and all those of the small intestines, as far as the duodenum; the other, which going transversely, inserts itself into the former, above the origin of the duodenum, carries back the blood of the left gastric veins, and those of the rectum, except the lowermost, which belongs partly to those of the bladder and partly to the hypogastric branches of the pelvis. The vein which is called hæmorrhoidalis interna is sometimes inserted rather into the splenic than into the mesenteric vein. The omentum has also lymphatic vessels: and there are conglobate glands, both in the little omentum and in the gastro-colicum.

Omentum colicum. See *Omentum.*

Omentum gastro-colicum. See *Omentum.*

Omentum hepatico-gastricum. See *Omentum.*

Omentum majus. See *Omentum.*

Omentum minus. See *Omentum.*

OMO. (From ωμος, the shoulder.) Names compounded with this word belong to muscles which are attached to the scapula.

OMOCO'TYLE. (*e, es.* f.; from ωμος, the shoulder, and κοτυλη, a cavity.) The cavity in the extremity of the neck of the

scapula, in which the head of the humerus is articulated.

OMO-HYOIDE'US. A muscle situated between the os hyoides and shoulder, that pulls the os hyoides obliquely downwards. *Coraco-hyoideus*, of Albinus and Douglas. It arises broad, thin, and fleshy, from the superior costa of the scapula, near the semilunar notch, and from the ligament that runs across it; thence ascending obliquely, it becomes tendinous below the sternocleido-mastoideus, and, growing fleshy again, is inserted into the base of the os hyoides.

OMOPLA'TA. (*a, æ.* f.; from ὠμος, the shoulder, and πλατυς, broad.) See *Scapula*.

OMOPLATO-HYOIDEUS. See *Omo-hyoideus*.

OMO'TOCOS. (From ωμος, crude, and τικτω, to bring forth.) A miscarriage.

OMO'TRIBES. (From ωμος, crude, and τριβω, to bruise.) Oil expressed from unripe olives.

OMPHA'CINUM. (From ομφακιον, the juice of unripe grapes.) Oil expressed from unripe olives.

OMPHA'CION. (From ομφακος, an unripe grape.) *Omphacium*. The juice of unripe grapes; and by some applied to that of wild apples, or crabs, commonly called *Verjuice*.

OMPHACITE. A variety of augite, of a pale leek-green colour. It occurs in primitive rocks, with precious garnet, in Carinthia.

OMPHACI'TIS. (From ομφακος, an unripe grape.) A small kind of gall-nut, which resembles an unripe grape.

OMPHACO'MELI. (From ομφακος, an unripe grape, and μελι, honey.) An oxymel made of the juice of unripe grapes and honey.

OMPHALOCA'RPUS. (From ομφαλος, the navel, and καρπος, fruit: so called because its fruit resembles a navel.) Cleavers. See *Galium aperine*.

OMPHALOCE'LE. (*e, es.* f.; from ομφαλος, the navel, and κηλη, a tumour.) See *Hernia umbilicalis*.

OMPHALO'DES. (From ομφαλος, the navel, and ειδος, resemblance: so named because the calyx is excavated in the middle like the human navel.) A plant resembling the navel, which the leaf of the cotyledon and hydrocotyle does.

OMPHALOMA'NTIA. (From ομφαλος, the navel, and μαντεαω, to prophecy.) The foolish vaticination of midwives, who pretend to foretell the number of the future offspring from the number of knots in the navel.

OMPHALOS. (*us, i.* m.; from ομφιελισκω, to roll up.) The navel. See *Umbilicus*.

OMPHALOTO'MIA. (*a, æ.* f.; from ομφαλος, the navel, and τεμνω, to cut.) The division or separation of the navel-string.

ONA'GRA. (*a, æ.* f.; from οναγρος, the wild ass.) 1. An American plant: so called because it is said to tame wild beasts.

2. A name for the rheumatism in the elbow.

ONEIRODY'NIA. (*a, æ.* f.; from ονειρον, a dream, and οδυνη, anxiety.) Disturbed imagination during sleep. There are two species:—

1. *Oneirodynia activa*, walking in the sleep.

2. *Oneirodynia gravans*, or nightmare. See *Ephialtes*.

ONEIRO'GMOS. (From ονειρωττω, to dream.) A venereal dream.

ONEIRO'GONOS. (From ονειρος, a dream, and γονη, the seed.) *Oneirogmos*. An emission of the semen in sleep from venereal dreams.

ONION. See *Allium cepa*.

Onion, sea. See *Scilla*.

ONI'SCUS. (*us, i.* m.; from ονος, an ass: so called because, like the ass, it requires much beating before it is useful.) 1. The stock-fish.

2. The slow-worm.

3. The name of a genus of insects of the order *Aptera*.

ONISCUS ARMADILLO. The systematic name of the woodlouse: called also, slaters, hog-lice, church-bugs, sow-bugs; and *Centipedes, Polypedes, Cutio, Cyamus, Cubaris, Millepes*, and *Millepeda*. These insects, though they obtain a place in the pharmacopœias, are very seldom used: they are said to act as stimulants and slight diuretics. The expressed juice of forty or fifty living millepedes, given in a mild drink, has been said to cure very obstinate jaundices. They are now justly rejected in this country.

ONI'TIS. (*is, is.* f.; from ονος, an ass, because asses covet it.) See *Origanum vulgare*.

ONOBRY'CHIS. (From ονος, an ass, and βρυχω, to bray: so called, according to Blanchard, because the smell or taste makes asses bray.) See *Hedysarum onobrychis*.

ONO'NIS. (*is, is.* f.; from ονος, an ass: because it interrupts asses when at plough.)

1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

2. The pharmacopœial name of the rest-harrow. See *Ononis spinosa*.

ONONIS ARVENSIS. See *Ononis spinosa*.

ONONIS SPINOSA. The systematic name of the rest-harrow: called also, *Resta bovis, Arresta bovis*, and *Remora aratri*. The roots of this plant have a faint unpleasant smell, and a sweetish, bitterish, somewhat nauseous taste. Their active matter is confined to the cortical part, which has been sometimes given in powder, or other forms, as an aperient and diuretic.

ONOPO'RDIUM. (*um, ii.* n. Ονοπορδον; from ονος, an ass, and περδω, to break wind: so named from its being much coveted by asses, and from the noise it makes upon pressure.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*.

2. The pharmacopœial name of the cotton thistle. See *Onopordium acanthium*.

ONOPORDIUM ACANTHIUM. The systematic name of the cotton-thistle. Called also, *Carduus tomentosus*. The plant distinguished by this name is thus described by Linnæus: *Onopordium—calycibus squamosis; squamis patentibus; foliis ovato-oblongis, sinuatis*. Its expressed juice has been recommended as a

cure for cancer, either applied by moistening lint with it, or mixing some simple farinaceous substance, so as to form a poultice, which should be in contact with the disease, and renewed twice a day.

ONO'SMA. (*a, æ.* f.; from οσμη, a sweet smell or savour.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

ONOSMA ECHIOIDES. The systematic name of the plant, the root of which is called *Anchusa lutea* in some pharmacopœias. It is supposed to possess emmenagogue virtues.

ONY'CHIA. (*a, æ.* f.; from ονυξ, the nail.) A whitlow at the side of the finger-nail.

O'NYX. (*yx, ychis.* m. Ονυξ.) 1. In *Surgery*, an abscess, or collection of pus between the lamellæ of the cornea: so called from its resemblance to the stone called onyx, and *unguis* from its resemblance to the nail of the finger. The diagnostic signs are, a white spot or speck, prominent, soft, and fluctuating. It is sometimes superficial, arising from inflammation; not dangerous, for it vanishes when the inflammation is resolved by the use of astringent collyria.

In other instances, it is a deep abscess, seated between the lamellæ of the cornea, sometimes breaking internally, and forming an hypopium: when it opens externally, it leaves a fistula upon the cornea; whenever the pus is exsiccated, there remains a leucoma.

2. In *Mineralogy*, a species of calcedony, in which there is an alternation of white, black, and dark brown layers.

OOEI'DES. (From ωον, an egg, and ειδος, a likeness.) An epithet for the aqueous humour of the eye.

OPACITY. (*Opacitas, atis.* f.) The faculty of obstructing the passage of light.

OPAL. (*Opalus, i.* m.; and *um, i.* n.) A silicious stone, of which there are seven kinds, according to Professor Jameson.

1. *Precious opal*; of a milk-white colour, inclining to blue. It occurs in small veins, in clay porphyry, in Hungary.

2. *Common opal*; of a milk-white colour, found in Cornwall.

3. *Fire opal*; the colour of a hyacinth-red, found only in Mexico.

4. *Mother of pearl opal*, or *cacholong*; a variety of calcedony.

5. *Semi opal*; of a white, brown, or grey colour, found in Greenland, Iceland, and Scotland.

6. *Jaspar opal*, or *ferruginous opal*. This is of a scarlet, red, or grey colour, and comes from Tokay, in Hungary.

7. *Wood opal*; of various colours, and found in alluvial land at Zastravia, in Hungary.

OPALINE. *Opalinus*. Having the milky semi-transparency of opal.

OPERCULATE. *Operculatus*. Having a lid-like cover.

OPE'RCULUM. (*um, i.* n.; a cover or lid.) The lid or cover of the *peristomum* or fringe of mosses. It is either *convex*, *acuminate*, *flat*, or *permanent*, never leaving the fringe; as in *Phascum*.

OPHI'ASIS. (*is, is.* f.; from οφις, a serpent: so called from the serpentine direction in which the disease travels round the head.) A form of porrigo decalvans, which commences at the occiput, and winds to each ear, and sometimes to the forehead. See *Baldness*.

OPHIOGLOSSOI'DES. (From οφιογλοσσον, ophioglossum, and ειδος, a likeness.) A fungus resembling the ophioglossum, or adder's tongue.

OPHIOGLO'SSUM. (*um, i.* n.; from οφις, a serpent, and γλωσσα, a tongue: so called from the resemblance of its fruit.) The name of a genus of plants. Class, *Cryptogamia*; Order, *Filices*.

OPHIOGLOSSUM LUNARIA. Moon-wort. *Lunaria*. *Osmunda lunaria*. The leaves are astringent, and used by the country people against fluxes.

OPHIOGLOSSUM OSMUNDA. See *Osmunda regalis*.

OPHIOGLOSSUM SPICATUM. Adder's tongue: called also, *Brassidella*, *Brassadella*, *Ophioglossum vulgatum*, and *Ophioglossum*. This was formerly a celebrated vulnerary.

OPHIORRHI'ZA. (*a, æ.* f.; from οφις, a serpent, and ριζα, a root: because the plant, says Hermann, is regarded in Ceylon as a grand specific for the bite of the naja or ribband snake.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

OPHIORRHIZA MUNGOS. The systematic name of the plant, the root of which is called *Radix serpentum* in the pharmacopœias. *Mungos-radix*. The bitter root is much esteemed in Java, Sumatra, &c., as preventing the effects which usually follow the bite of the *naja*, a venomous serpent, and those of the bite of a mad dog, or hydrophobia, with which view it is eaten by them; and Kæmpfer highly extols it. Gremmius, who practised with great reputation at Columbo, employed it against the bite of a mad dog very largely. It is also said to be exhibited medicinally in the cure of intestinal worms.

OPHIOSCO'RODON. (*um, i.* n.; from οφις, a serpent, and σκοροδον, garlic: so named because it is spotted like a serpent.) Broad-leaved garlic.

OPHIOSTA'PHYLUM. (*um, i.* n.; from οφις, a serpent, and σταφυλη, a berry: so called because serpents feed upon its berries.) See *Bryonia alba*.

OPHIO'XYLUM. (*um, i.* n.; from οφις, and ξυλον: because its root spreads in a zigzag manner, like the twisting of a serpent.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*. Serpentine-wood plant.

OPHIOXYLUM SERPENTINUM. The systematic name of the tree, the wood of which is termed lignum serpentum. The nature of this root does not appear to be yet ascertained. It is very bitter. In the cure of the bite of

venomous serpents, and malignant diseases, it is said to be efficacious.

O'PHRYS. (*ys, os.* f. Οφρυς; from οφυς, the eyebrow.) 1. The lowest part of the forehead, where the eyebrows grow.

2. An herb so called because its juice was used to make the hair of the eyebrows black.

OPHTHA'LMIA. (*a, æ.* f.; from οφθαλμος, the eye.) A term universally applied to an inflammation of the membranes of the eye, or of the whole bulb of the eye; but which, according to the modern nomenclature of diseases, should be called ophthalmitis. See *Ophthalmitis.*

OPHTHALMIC. (*Ophthalmicus, i.* m.; from οφθαλμος, an eye.) 1. Relating to the eye; as ophthalmic nerve, muscle; ophthalmic remedy, disease, &c.

2. An oculist.

Ophthalmic ganglion. *Ganglion ophthalmicum.* Lenticular ganglion. This ganglion is formed in the orbit by the union of a branch of the third or fourth pair with the first branch of the fifth pair of nerves.

Ophthalmic nerve. *Nervus ophthalmicus.* Orbital nerve. The first branch of the ganglion or expansion of the fifth pair of nerves. It is from this nerve that a branch is given off, to form, with a branch of the sixth, the great intercostal nerve.

Ophthalmici externi. See *Motores oculorum.*

OPHTHALMITIS. (*itis, itidis.* f.; from οφθαλμος, the eye, and ιτις, the terminal, which imports inflammation.) An inflammation of one or more of the membranes constituting the eye, or of the whole bulb of the eye. It has the following species;—

1. *Ophthalmitis conjunctivæ.* This is the common inflammation of the eye, which is usually produced by a cold and keen easterly wind, dust, or any external irritation, &c. It was called by the ancients *taraxis,* &c. It generally begins with the appearance of a network of blood-vessels on some part of the conjunctive or sclerotic membranes. The eyelids become swollen and tender, and the redness soon covers the whole of the tunica conjunctiva, the vessels of which are turgid with florid blood. There is more or less of constant pain, and a sensation as if particles of fine sand, or some gritty substance, had insinuated themselves under the eyelid, accompanied by a great heat and pricking pain. A glutinous matter is now secreted, especially in the night, which causes the eyelids to stick very firmly together. It is no unusual thing for the disease to commence in one eye, and, in a day or two, to seize the other. Mild cases of conjunctive ophthalmitis generally run their course in a few days, and cease spontaneously, or are removed by the application of a few leeches to the temples, a purgative, and abstaining from the usual diet. The best local applications are a warm and filtered decoction of poppy-heads, or one fluid drachm of the tinctura opii, in eight fluid ounces of distilled water. The eye should be well cleansed from the glutinous matter, with warm milk and water; and when the pain abates, and the vessels of the inflamed part become relaxed, solutions of acetate of lead, sulphate of alumen, and zinc, will be best calculated to remove the disease.

Inflammation of the conjunctiva is not always so mild a disease, but is sometimes very acute, all the symptoms enumerated being very violent in a few days, with excessive pain in the head, and active fever; and, when so, it requires not only continued application of leeches, and cupping and blisters behind the ears, but general blood-letting and purgatives, a strict antiphlogistic diet, and the regular exhibition of mercury and opium. The light of the room should be diminished, and the air temperate. Cold applications of iced water may be applied to the forehead, and the eye-waters should also have their temperature reduced by being kept in cold water. Many practitioners resort to vomits, in cases of acute inflammation of the eye. The quarter of a grain or more may be exhibited every half-hour, until it vomits or purges: but this must be preceded by the lancet, and proper evacuants, to reduce the concomitant fever. Conjunctival ophthalmitis presents itself under other forms than that just mentioned; namely,

a. The whole of the membrane becomes very rapidly inflamed, and the whole of the albuginia of a universal red colour, and swelled so as to be raised above the transparent cornea, which does not present any appearance of disease, but has the appearance of a gap or aperture, from which circumstance it received the name of *chemosis.* If the inflamed conjunctiva be attentively examined, the radiated or arborescent vessels will not be so perceptible as in the common ophthalmitis, and the cellular structure beneath the conjunctive membrane will be seen filled with a sanguineous secretion, which elevates the membrane, and stops at the edge which marks the line of separation between the cornea opaca and cornea transparens.

This form of conjunctival inflammation requires precisely the same treatment as the former.

b. Another seat of ophthalmitis is the internal membranes of the eye, and, generally, the iris. Until very lately, it was described as deep-seated or internal ophthalmia. Dr. Schmidt, of Vienna, first pointed out the real seat of it to be the iris, and unclassically called it *iritis,* the proper term being *iriditis:* but it occasionally begins in the choroid coat. Iriditis commences with pain in the eye, and intolerance of light; a change takes place in the colour of the iris, which, if naturally greyish or blue, becomes green, or, if naturally brown or black, becomes reddish, which is caused by the secretion of coagulable lymph, which spreads over it in a fine flake, like a cobweb. There is always a considerable degree of fever

attending this inflammation; and, as the severity of the local symptoms increases, the fever keeps increasing also, with strong exacerbations. If the inflammation does not yield to the curative treatment, a yellowish red tubercle forms on some part of the surface of the iris, enlarges, projects, and is distinctly seen to be an abscess, which at length bursts, and discharges its contents into the anterior chamber of the eye. The inflammation now diminishes; the pus and blood, if any be thrown forth, are absorbed; and the disease subsides, but with a total loss of vision: for the iris remains permanently expanded, with an utter inability of motion, and the pupil is closed, or rather filled up, by the greyish or ash-coloured web or membrane already noticed.

The most frequent cause of *ophthalmitis iridis*, or iriditis, is the operation for cataract. A syphilitic taint in the system also produces it occasionally: but any of the ordinary causes of inflammation may excite it.

The medical treatment is similar to that of acute ophthalmitis, before described, with the speedy introduction of mercury into the system, by calomel and opium, so as to affect the gums. Blisters, leeches, and cold applications to the eye, are to be constantly employed.

Another form of conjunctival ophthalmitis is when the internal surface of the palpebræ are very much inflamed, as well as the conjunctiva of the ball of the eye, and there is a copious secretion of a purulent fluid. Of this purulent inflammation of the eyes, there are three distinct varieties mentioned by writers on the diseases of the eyes: — the Egyptian, the metastatic, and that which takes place in infants.

a. The *Egyptian ophthalmia* is that which our soldiers brought from Egypt, and which was so destructive to the armies of the French and English in their respective expeditions to the banks of the Nile. It was at first ascribed to the minute and glassy spiculæ of the sands: but it has since been traced either to a peculiar miasm, generated in marsh lands, or to sleeping on damp or swampy grounds, with insufficient covering, and surrounded by a moist atmosphere; and as these causes exist also in other parts of the world, the disease has been since detected in other parts as well. A peculiar miasm, however, formed in hot and swampy soils, is perhaps the real cause, and renders it epidemic. This cause acts on the mucous follicles of the conjunctive membrane, which secretes a puriform fluid, impregnated with the specific contagion: and hence it is propagated with great rapidity between those who come in contact with each other, or with materials, as towels, &c. that have been used by the infected.

The symptoms and their progress are like those of common ophthalmitis; and, from the violence of the inflammation, the eyelids soon become excessively tense and œdematous, sometimes inseparably closed, with the edges drawn inwards, and sometimes gaping, with the edges broad, turgid, and everted. The secretion of a puriform fluid and of tears is very great. An ulceration soon takes place, and, in some cases, during the first night of the attack. It commences usually in the cornea, which, from the onset of the disease, looks more or less muddy, or is studded with white spots. The ulcerative process is sometimes checked before it spreads over the whole disk of the pupil, and in this case the sight is partially preserved; but very generally it makes a rapid and irresistible advance over the entire cornea, lays open the iris, and works its way internally: the humours escape; the iris protrudes, and more or less adheres to the ulcerated cornea; and the eye loses its figure, as well as its power of vision. The pain, through the whole progress, is intolerable: in the eye itself there is a sense of scalding or burning, and an agony in the head that is indescribable.

In some cases, the symptoms are less violent, and gradually subside, without ulceration, in a few days, and especially where the disease has been actively opposed by prompt and proper means. But innumerable granulations form, in some cases, in a few days, on the conjunctiva of one or both eyelids, and a destructive irritation is hereby kept up, which becomes a secondary source of blindness.

The treatment of this horrible disease was at first similar to that of the common acute inflammation of the eye. The French and English surgeons both naturally resorted to blood-letting generally and locally, to blisters, purgatives, detergent lotions, and the ordinary antiphlogistic regimen: the former asserted with decidedly good effect: but under the direction of the latter, this plan generally failed, which induced the late Mr. Saunders to give his attention to the disease. He first discovered that the blindness which is apt to follow, even after the first attack of the inflammation has subsided, proceeded from the friction upon the transparent cornea of innumerable irritating granulations, thrown forth from the surface of the tunica conjunctiva that lines the interior of the eyelids, and which became a new source of inflammation, less violent, indeed, but as fatal in its effects; and the disease has hence been very correctly divided into two stages, that of the primary, and that of the secondary or granulating inflammation. Mr. Saunders endeavoured to cut the disease short in the first stage, by exciting nausea, and maintaining it for a considerable length of time, so as to lower the living power, and hereby take off the inflammatory action: and where the disease had proceeded to the granulating stage, he removed the minute caruncles from the membrane by cutting them off with a pair of scissors, and afterwards applied a solution of nitrate of silver, to prevent their sprouting again. The late Sir William Adams pro-

ceeded with the same, but a bolder practice: he gave a grain or two of tartar emetic, every one, two, or three hours, to vomit briskly, and went on with it through the whole of the disease, and pared or sliced away the diseased surface of the conjunctive membrane with a knife, and washed the parts with a solution of alum. His practice was more radical and effectual.

β. The *metastatic ophthalmitis* is caused by the shifting of some diseased action from a remote part, as gout; or the sudden suppression of some discharge, as that of a catarrh; or the transfer of a morbid secretion, as that of a venereal clap, from the urethra or vagina to the eyes.

The treatment of this variety is referable to that of the disease from which the eyes become affected, with the usual external applications.

γ. The other variety attacks *new-born children*. This purulent ophthalmia of infants occurs very soon after birth, and is usually produced by cold; though, in some instances, it may arise from the irritation of acrimonious or specific secretions. It usually makes its appearance within the first week or fortnight from birth. The eyelids look red, and swell rapidly to such a size that it is difficult to separate them. A discharge of a yellow purulent fluid quickly succeeds, which, upon opening the lids, is found to cover the whole globe of the eye; and, from the forcible pressure of lid against lid, both are greatly thickened, and not unfrequently everted.

The late Mr. Ware, whose practice was very extensive, always found the aqua camphorata of Bates's pharmacopœia the best application: others prefer the solution of alum and acetate of lead, in the proportion of one grain to an ounce of distilled water. One of these should be passed round the eye, by means of an ivory syringe, about every six or eight hours; and this should be performed by a skilful operator. The child's bowels are to be kept open, and, if the disease do not give way, a small blister, kept on a few hours, may be serviceable.

The occasional consequences of inflammation of the eye are,—

1. *Opacities* of the transparent cornea, which interfere more or less with the vision, as their size or situation may prevent the rays of light passing to the retina. See *Staphyloma.*

2. An obliteration of the pupil, from an adhesion of the sides of the iris, or the deposition of some adventitious substance, as albuminous matter, or organised adhesions. See *Synizesis.*

3. The total destruction of the internal eye.

δ. *Ophthalmitis tarsalis.* Here the inflammation is confined to the eyelids, and especially to the sebaceous glands, between the conjunctive membrane and the tarsus. Mr. Ware and Dr. Plenk called it *psorophthalmia.* It consists in an inflamed state of Meibomius's or the sebaceous glands, the ducts of which open on the edge of each eyelid, which causes them to pour forth a viscid or glutinous matter, that encrusts and hardens, and during sleep, when the eyelids have been for some time in contact, cements them so firmly together, that they cannot be separated without many a painful effort. This secretion, instead of being mild and lubricant, as in health, is now not only viscid, but acrimonious and erosive: whence the eye is irritated, and the edges of the lids ulcerated; and the disease is apt to become chronic, and will sometimes last for years, or even for life.

Measles and small-pox produce this disease, and any of the common exciting causes of inflammation upon a scrofulous habit.

It is more under the influence of local stimulants than any other medicines. The unguentum hydrargyri nitratis is, of all others, the best, lowered by common cerate, so as just to produce a bearable pain, when applied by a pencil-brush every night, or occasionally. A drop of the vinum opii into the eye at bed-time, has, in some cases, been useful; and the vapour of oil of turpentine in others.

ε. The several varieties of ophthalmitis which have been considered, occasionally leave a chronic form of disease, called *lippitudo,* which consists in a weakness and weeping of the eyes, with more or less, and generally very little, redness, and a thickened tarsus, which is sometimes inverted, with a permanent redness of the edge.

Scarifying the eyelid is serviceable before any inversion takes place; but nothing short of an operation will return the eyelid, when everted. The astringent collyria are all serviceable in their turn; and the unguentum hydrargyri nitrati is here, also, an excellent application. See *Lippitudo,* and *Ectropium.*

OPHTHALMODY'NIA. (*a, æ.* f.; from οφθαλμος, an eye, and οδυνη, pain.) A vehement pain in the eye, without, or with very little redness, and not produced by inflammation. The sensation of pain is various, as itching, burning, or as if gravel were between the globe of the eye and lids, or a heavy dull pain, or a most excruciating one. It may be the result of rheumatism, gout, hysteria, &c.; or produced by incipient organic diseases, as cancer, hæmatoma, or an affection purely of the nerves. The cure requires the removal of the cause. When an intermittent affection, it is cured by cold applications, and the internal use of bark and the like.

OPHTHALMOPO'NIA. (*a, æ.* f.; from οφθαλμος, the eye, and πονεω, to labour.) An intense pain in the eye, whence the light is intolerable.

OPHTHALMOPTO'SIS. (*is, is.* f.; from οφθαλμος, an eye, and πτωσις, a fall.) A falling down of the globe of the eye on the cheek, canthus, or upwards, the globe itself

being scarce altered in magnitude. The cause is a relaxation of the muscles, and ligamentous expansions of the globe of the eye. It is produced,—

1. By a violent contusion or strong stroke, as happens sometimes in boxing. The eye falls out of the socket on the cheek or canthus of the eye, and, from the elongation and extension of the optic nerve, occasions immediate blindness.

2. By a tumour within the orbit. An exostosis, toph, abscess, encysted tumour, as atheroma, hygroma, or scirrhus, forming within the orbit, or induration of the orbital adeps, may throw the bulb of the eye out of the socket upwards, downwards, or towards either canthus.

3. Or it is caused by a palsy of the recti muscles, whence a stronger power in the oblique muscles of the bulb.

4. Sometimes by a staphyloma, when it depresses the inferior eyelid, and extends on the cheek.

OPIATE. (*Opiatum*; from the effects being like that of opium.) 1. Any preparation of opium.

2. A medicine that procures sleep, &c. See *Anodyne*.

O'PION. Οπιον. Opium.

Opi'smus. (*us, i.* m.; from οπιον, opium.) An opiate confection.

OPISTHENAR. (*ar, aris.* n.; from οπισθεν, backwards, and θεναρ, the palm.) The back part of the hand.

OPISTHOCRA'NIUM. (*um, ii.* n.; from οπισθεν, backward, and κρανιον, the head.) The occiput, or hinder part of the head.

Opisthocypho'sis. (From οπισθεν, backward, and κυφωσις, a gibbosity.) A curved spine.

OPISTHO'TONOS. (*os. i.* m.; from οπισθεν, backwards, and τεινω, to draw.) A fixed spasm of several muscles, so as to keep the body in a fixed position, and bent backwards. Cullen considers it as a variety of tetanus. See *Tetanus*.

O'PIUM. (*um, ii.* n.; probably from οπος, juice; or from *opi*, Arabian.) The inspissated juice of the poppy. See *Papaver somniferum*.

OPOBA'LSAMUM. (*um, i.* n.; from οπος, juice, and βαλσαμον, balsam.) See *Amyris gileadensis*.

OPOCA'LPASON. (*um, i.* n.; from οπος, juice, and καλπασον, a tree of that name.) *Opocarpason*. A kind of bdellium which resembles myrrh, but is poisonous.

OPO'DELDOC. A term of no meaning, frequently mentioned by Paracelsus. Formerly it signified a plaster for all external injuries, but now is confined to a camphorated soap liniment.

Opodeoce'le. A rupture through the foramen ischii, or into the labia pudendi.

OPO'PANAX. (*ax, acis.* f.; from οπος, juice, and πανακ, the panacea.) See *Pastinaca opopanax*.

Opo'pia. (From οπτομαι, to see.) The bones of the eyes.

OPO'RICE. (*e, es.* f.; from οπωρα, autumnal fruits.) A conserve made of ripe fruits.

OPPILA'TION. (*Oppilatio, onis.* f.; from *oppilo*, to shut up.) *Oppilation* is a close kind of obstruction; for, according to Rhodius, it signifies, not only to shut out, but also to fill.

Oppilati'vus. (From *oppilo*, to shut up.) Shutting up the pores of the skin.

OPPO'NENS. Opposing. A name given to some muscles from their office.

Opponens pollicis. See *Flexor ossis metacarpi pollicis*.

OPPOSITIFO'LIUS. (From *oppositus*, set, put, or placed against or opposite to, and *folium*, a leaf.) Applied to a flower-stalk, when opposite to a leaf; the *Geranium molle*, and *Sium angustifolium*, afford examples of the *Pedunculus oppositifolius*.

OPPO'SITUS. Opposite to each other: used in *Natural History*, and applied to leaves, branches, &c.; as the leaves of *Saxifraga oppositifolia*, and *Ballote nigra*.

OPPRE'SSION. (*Oppressio, onis.* f.) 1. A sensation of weight, as oppression of breathing, when it seems to be difficult to breathe from a sense of weight obstructing respiration: and hence, also, *oppressio præcordiorum*, which is a feeling of pressure about the *præcordia*.

2. The catalepsy has been called *oppressio cerebri*.

Opsi'gonos. (From οψι, late, and γινομαι, to be born.) A late-cut tooth; as the *dens sapientiæ*.

OPTIC. (*Opticus*; from οπτομαι, to see.) Relating to the eye.

Optic nerve. *Nervus opticus*. The second pair of nerves of the brain. They arise from the thalami nervorum opticorum, perforate the bulb of the eye, and in it form the retina.

OPU'NTIA. (*a, æ.* f.; *ab opunte*, from the city *Opus*, near which it flourished.) See *Cactus*.

ORACHE. See *Atriplex sativa*, and *Chenopodium*.

ORANGE. See *Citrus aurantium*.

Orange, Seville. See *Citrus aurantium*.

Orange, shaddock. See *Shaddock*.

ORBI'CULAR. (*Orbicularis*; from *orbiculus*, a little ring.) Round: a term in very general use in *Natural History*, *Anatomy*, &c. See *Orbiculatus*.

Orbicula're os. 1. The name of a bone of the carpus.

2. A very small round bone, not larger than a pin-head, that belongs to the internal ear.

Orbicularis oris. *Sphincter labiorum*, of Douglas; *semi-orbicularis*, of Winslow; *constrictor oris*, of Cowper. A muscle of the mouth, formed in a great measure by those of the lips; the fibres of the superior descending, those of the inferior ascending and decussating each other about the corner of the mouth, they run along the lip to join those of the opposite side, so that the fleshy fibres appear to surround the mouth like a sphincter. Its use is to shut the mouth, by contracting and drawing

both lips together, and to counteract all the muscles that assist in opening it.

ORBICULARIS PALPEBRARUM. A muscle common to both the eyelids. *Orbicularis palpebrarum ciliaris*, of authors. It arises by a number of fleshy fibres from the outer edge of the orbitar process of the superior maxillary bone, and from a tendon near the inner angle of the eye; these fibres run a little downwards and outwards, over the upper part of the cheek, below the orbit, covering the under eyelid, and surround the external angle, being closely connected only to the skin and fat; they then run over the superciliary ridge of the os frontis, towards the inner canthus, where they mix with the fibres of the occipito-frontalis and corrugator supercilii: then covering the upper eyelid, they descend to the inner angle opposite to their inferior origin, and firmly adhere to the internal angular process of the os frontis, and to the short round tendon which serves to fix the palpebræ and muscular fibres arising from it. It is inserted into the nasal process of the superior maxillary bone, by a short round tendon, covering the anterior and upper part of the lachrymal sac, which tendon can be easily felt at the inner canthus of the eye. The use of this muscle is to shut the eye, by drawing both lids together, the fibres contracting from the outer angle towards the inner, press the eyeball, squeeze the lachrymal gland, and convey the tears towards the puncta lachrymalia.

ORBICULARIS PALPEBRARUM CILIARIS. See *Orbicularis palpebrarum*.

ORBICULA'TUS. Orbiculate: round and flat. Applied to a leaf that is circular or orbicular, the length and breadth being equal, and the circumference an even circular line. Precise examples of this are scarcely to be found. Some species of pepper approach it, and the leaf of the *Hedysarum styracifolium* is perfectly orbicular, except a notch at the base.

ORBIT. (*Orbitum*, *i.* n.) The two cavities under the forehead, in which the eyes are situated, are termed orbits. The angles of the orbits are called *canthi*. Each orbit is composed of seven bones, viz. the frontal, maxillary, jugal, lachrymal, ethmoid, palatine, and sphenoid. The use of this bony socket is to maintain and defend the organ of sight, and its adjacent parts.

ORCHEA. Galen says it is the *scrotum*.

ORCHIDEÆ. The name of an order in Linnæus's Fragments of a Natural Method, consisting of those which have fleshy roots and orchideal corols.

ORCHI'DEUS. (From *orchis*, the name of a plant.) Orchideal: like the orchis.

ORCHIS. (*is*, *is*. m. Ορχις, a testicle; from ορεγομαι, to desire.) 1. A testicle.

2. (*Orchis*, *itis*. f.; so called because *habet radices instar testiculorum*.) The name of a genus of plants in the Linnæan system. Class, *Gynandria*; Order, *Diandria*.

ORCHIS BIFOLIA. The systematic name of the butterfly orchis, the root of which is used indifferently with that of the male orchis. See *Orchis mascula*.

ORCHIS MASCULA. The systematic name of the male orchis; called also, dog's stones, male orchis, and satyrion.

Orchis—bulbis indivisis, nectarii labio quadrilobo crenulato, cornu obtuso petalis dorsalibus reflexus, of Linnæus. The root has a place in the Materia Medica of the Edinburgh Pharmacopœia, on account of the glutinous slimy juice which it contains. The root of the *orchis bifolia* is also collected. Satyrion root has a sweetish taste, a faint and somewhat unpleasant smell. Its mucilaginous or gelatinous quality has recommended it as a demulcent. Salep, which is imported here from the East, is a preparation of an analogous root which is considered as an article of diet, is accounted extremely nutritious, as containing a great quantity of farinaceous matter in a small bulk. The supposed aphrodisiac qualities of this root, which have been noitced ever since the days of Dioscorides, seem to be founded on the fanciful doctrine of signatures.

ORCHIS MORIO. The systematic name of the orchis plant, from the root of which the salep is made. Salep is a farinaceous powder imported from Turkey. It may be obtained from several other species of the same genus of plants. It is an insipid substance, of which a small quantity, by proper management, converts a large portion of water into a jelly, the nutritive powers of which have been greatly over-rated. Salep forms a considerable part of the diet of the inhabitants of Turkey, Persia, and Syria. The method of preparing salep is as follows:—The new root is to be washed in water, and the fine brown skin which covers it is to be separated by means of a small brush, or by dipping the root in warm water, and rubbing it with a coarse linen cloth. The roots thus cleaned are to be spread on a tin plate, and placed in an oven, heated to the usual degree, where they are to remain six or ten minutes. In this time they will have lost their milky whiteness, and acquired a transparency like horn, without any diminution of bulk. Being arrived at this state, they are to be removed in order to dry and harden in the air, which will require several days to effect; or they may be dried in a few hours, by using a very gentle heat. Salep, thus prepared, contains a great quantity of vegetable aliment: as a wholesome nourishment, it is much superior to rice; and has the singular property of concealing the taste of salt water. Hence, to prevent the dreadful calamity of famine at sea, it has been proposed that the powder of it should constitute part of the provisions of every ship's company. With regard to its medicinal properties, it may be observed, that its restorative, mucilaginous, and demulcent qualities render it of considerable use in various diseases, when employed as aliment, particularly in sea-scurvy, diarrhœa, dysentery, symptomatic fever, arising from the absorption of pus, and the stone or gravel.

ORCHI'TIS. (*is*, *idis*. f.; from ορχις, a testicle.) Inflammation of the testicle: which being always accompanied by a swelling, and the swelling being simultaneous nearly with

the inflammation, the disease is better known by the name of swelled testicle than inflamed testicle. The most common cause of it is a suppression of the discharge of a clap; but it takes place from blows, and all the causes of inflammation. When it takes place in the progress of a clap it is a sympathetic inflammation, and often follows every kind of irritation on the urethra, whether produced by strictures, injections, or bougies. The swelling and inflammation appear suddenly, and as suddenly disappear, or go from one testicle to the other. The epididymis remains swelled, however, even for a considerable time afterwards.

The first appearance of swelling is generally a soft pulpy fulness of the body of the testicle, which is tender to the touch: this increases to a hard swelling, accompanied with considerable pain. The epididymis, towards the lower end of the testicle, is generally the hardest part. The hardness and swelling, however, often pervade the whole of the epididymis. The spermatic cord, and especially the vas deferens, are often thickened, and sore to the touch. The spermatic veins sometimes become varicose. A pain in the loins, and sense of weakness there, and in the pelvis, are other casual symptoms. Colicky pains, uneasiness in the stomach and bowels, flatulency, sickness, and even vomiting, are not unfrequent. The whole testicle is swelled, and not merely the epididymis, as has been asserted.

The inflammation of the part most probably arises from its sympathising with the urethra. The swelling of the testicle coming on, either removes the pain in making water, and suspends the discharge, which does not return till such swelling begins to subside, or else the irritation in the urethra, first ceasing, produces a swelling of the testicle, which continues till the pain and discharge return; thus rendering it doubtful which is the cause and which the effect. Occasionally, however, the discharge has become more violent, though the testicle has swelled; and such swelling has even been known to occur after the discharge has ceased; yet the latter has returned with violence, and remained as long as the hernia humoralis.

Orchitis, with stoppage of the discharge, is apt to be attended with strangury. A very singular thing is, that the inflammation more frequently comes on when the irritation in the urethra is going off, than when at its height.

This disease requires perfect rest, and the same treatment as inflammation of any other viscus. Blood must be taken from the arm, and from the part; the general blood-letting repeated according to the degree of the accompanying fever, and the leeches to be repeated as long as there is much local heat: after which, cold lotions to the part. The bowels are to be purged from time to time, and a strict antiphlogistic diet enforced as long as there is feverish excitement. Opiates at bedtime are required when there is much pain.

O'rchos. (From *ορχος*, a plantation or orchard: so called from the regularity with which the hairs are inserted.) The extremities of the eyelids, where the eyelashes grow.

ORCHO'TOMY. (*Orchotomia, æ.* f.; from *ορχις*, a testicle, and *τεμνω*, to cut.) Castration. The operation of extracting a testicle.

ORDER. *Ordo.* An association of genera, forming a division of a class: so that a class embraces different orders, which have all the essential characters of the class. See *Class*, *Genus*, and *Species*.

ORE. The mineral substance from which metals are extracted.

OREOSELI'NUM. (*um, i.* n.; from *ορος*, a mountain, and *σελινον*, parsley: so named because it grows wild upon mountains.) See *Athamanta oreoselinum.*

Ore'stion. (From *ορος*, a mountain.) In Dioscorides it is the *Helenium*, or a kind of elecampane growing upon mountains.

ORE'XIA. (*a, æ.* f.; from *ορεγομαι*, to desire.) A desire or appetite.

ORE'XIS. Desire or appetite.

ORGAN. (*Ὄργανον.* *Organum, i.* n.) An organ is a part of an animal or vegetable which has a determined office in its economy: hence the organ of sensation, motion, sight, hearing; the organs of generation, organs of deglutition, digestion, &c. It is applied,

1. To the whole apparatus by which the function is perfected: thus the membranes and humours of the eye, and the optic nerve, constitute the organ of vision, &c.

2. To the particular part of the apparatus by which the function is determined: thus the penicillated extremities of the vessels, or acini of the liver, are the secretory organs of the bile; the nervous expansion on the membraneous ampullæ of semicircular canals are the immediate organ of hearing, &c.

ORGANIC. (*Organicus*; from *organum*, an organ.) 1. Having a structure in which there are traces of organisation.

2. Belonging to an organ. In the present day this term is in general use to distinguish a disease of structure from a functional disease; thus, when the liver is converted into a hard, tuberculated, or other structure, it is called an *organic* disease; but when it merely furnishes a bad bile, and has its natural structure, the disease is said to be *functional.*

ORGANISATION. *Organisatio.* A construction or texture in which the parts are so arranged as to have their determined structure.

ORGANISE. To construct a form of materials which establish and maintain a characteristic appearance.

ORGASM. (*Orgasmus, i.* m.; from *οργαω*, *appeto impatienter; proprie de anemantibus dicitur, quæ turgent libidine.— Scapula.*) Salacity. See *Œstrum.*

ORGASTICUS. Affecting the orgasm.

ORIBASIUS, an eminent physician of the 4th century, born at Pergamus, or, according to others, at Sardes, where he resided for some time. He is mentioned as one of the most learned and accomplished men of his

age, and the most skilful in his profession. He was chiefly a compiler; but some valuable practical remarks first occur in his writings. He made extensive *Collections* from Galen, and other preceding authors, in about seventy books, of which only seventeen now remain; and afterwards made a *Synopsis* of this vast work, for the use of his son, in nine books. There are also extant four books, in medicines and diseases, entitled *Euporistorum Libri.*

ORICHA'LCUM. (*um, i.* n.; from ὄρος, a mountain, and χαλκος, brass.) Mountain brass. The brass of the ancients.

ORI'CIA. (From *Oricus*, a city of Epirus, near which it grows.) A species of fir or turpentine tree, from Oricus.

ORIENTA'LIA FOLIA. The leaves of senna were so called.

ORI'GANUM. (*um, i.* n.; from ορος, a mountain, and γανοω, to rejoice: so called because it grows upon the side of mountains.)

1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia.*

2. The pharmacopœial name of the wild marjoram. See *Origanum vulgare.*

ORIGANUM CRETICUM. See *Origanum dictamnus.*

ORIGANUM DICTAMNUS. The systematic name of the dittany of Crete. *Dictamnus creticus*; called also, *Origanum creticum*, and *Onitis.* The leaves of this plant, *Origanum—foliis inferioribus tomentosis, spicis nutantibus*, of Linnæus, are now rarely used. They have been recommended as emmenagogue and alexipharmic.

ORIGANUM MARJORANA. The systematic name of sweet marjoram: called also, *Marjorana.* This plant, *Origanum—foliis ovatis obtusis, spicis subrotundis compactis pubescentibus*, of Linnæus, has been long cultivated in our gardens, and is in frequent use for culinary purposes. The leaves and tops have a pleasant smell, and a moderately warm, aromatic, bitterish taste. They yield their virtues to aqueous and spirituous liquors, by infusion, and to water in distillation, affording a considerable quantity of essential oil. The medicinal qualities of the plant are similar to those of the wild plant (see *Origanum vulgare*); but being much more fragrant, it is thought to be more cephalic, and better adapted to those complaints known by the name of nervous; and may therefore be employed with the same intentions as lavender. It was directed in the *pulvis sternutatorius*, by both pharmacopœias, with a view to the agreeable odour which it communicates to the asarabacca, rather than to its errhine power, which is very inconsiderable; but it is now wholly omitted in the Pharm. Lond. In its recent state, it is said to have been successfully applied to scirrhous tumours of the breast.

ORIGANUM SYRIACUM. The Syrian herb mastich. See *Teucrium marum.*

ORIGANUM VULGARE. The systematic name of the wild marjoram; also named, *Agrioriganum*, *Marjorana*, *Mancurana*, *Origanum heracleoticum*, *Onitis*, and *Zazarhendi herba.* *Origanum—spicis subrotundis paniculatis conglomeratis, bractis calyce longioribus ovalis*, of Linnæus. This plant grows wild in many parts of Britain. It has an agreeable aromatic smell, approaching to that of marjoram, and a pungent taste, much resembling thyme, to which it is likewise thought to be more allied in its medicinal qualities, and therefore deemed to be emmenagogue, tonic, stomachic, &c. The dried leaves, used instead of tea, are said to be exceedingly grateful. They are employed in medicated baths and fomentations.

ORIS CONSTRICTOR. See *Orbicularis oris.*

ORLEANA TERRA. (Named *Orleana*, from the place where it grows.) See *Bixa orleana.*

ORMSKIRK. The name of a place in which Mr. Hill lived, who invented a medicine for the cure of hydrophobia, and died without making known its composition. See *Hydrophobia.*

ORNITHO'LOGY. (*Ornithologia, æ.* f.; from ορνις, a bird, and λογος, a discourse.) That part of natural history which treats of birds.

ORNITHOPO'DIUM. (*um, ii.* n.; from ορνις, a bird, and πους, a foot: so called from the likeness of its pods to a bird's claw.) Bird's foot. The *Ornithopus perpusillus*, and the *Ornithopus scorpioides*, of Linnæus, have been both so called.

OROBA'NCHE. (*e, es.* f.; from οροϐος, the wild pea, and αγχω, to suffocate: so called because it twines round the orobus and destroys it.) The name of a genus of plants in the Linnæan system. Classes, *Gynandria* and *Didynamia*; Order, *Angiospermia.*

OROBRY'CHIS. (From οροϐος, the wood-pea, add βρυχω, to eat.) The same as orobanche.

O'ROBUS. (*us, i.* m.; from ερεπτω, to eat.)

1. The name of a genus of plants in the Linnæan system, Class, *Diadelphia*; Order, *Decandria.*

2. The pharmacopœial name of the ervum. See *Ervum.*

OROBUS TUBEROSUS. The heath-pea. The root of this plant is said to be nutritious. The Scotch islanders hold these peas in great esteem, and chew them like tobacco.

OROSELI'NUM. See *Oreoselinum.*

ORPIMENT. (*Orpimentum, i.* n.) A sulphuret of arsenic. See *Arsenic.*

ORPINE. See *Sedum telephium.*

ORRHOPY'GIUM. (From ορος, the extremity, and πυγη, the buttocks.) The extremity of the spine, which is terminated by the os coccygis.

O'RRHOS. (From ρεω, to flow.) 1. Serum; whey.

2. The raphe of the scrotum.

3. The extremity of the sacrum.

ORRIS. See *Iris.*

Orris, Florentine. See *Iris florentina.*

Orseille. See *Lichen rocella.*

ORTHITE. A mineral: so named because it always occurs in straight layers, generally in felspar. It resembles gadolinite. It is found in the mine of Fimbo in Sweden.

ORTHOCO'LON. (*on, i.* m.; from ορθος, straight, and κωλον, a limb.) It is a species of stiff joint, when it cannot be bended, but remains straight.

ORTHOPNŒ'A. (*a, æ.* f.; from ορθος, erect, and πνοη, breathing.) A very quick and laborious breathing, during which the person is obliged to be in an erect posture.

Orva'le. (*Orvale,* French.) A species of clary or horminum.

Orvieta'num. A medicine that resists poisons; from a mountebank of Orvieta, in Italy, who first made himself famous by taking such things upon the stage, after doses of pretended poisons; though some say its inventor was one Orvietanus, and that it is named after him.

ORY'ZA. (*a, æ.* f.; from *orez,* Arabian.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia.* The rice plant.

2. The pharmacopœial name for rice. See *Oryza sativa.*

Oryza sativa. The systematic name of the plant which affords the rice, which is the principal food of the inhabitants in all parts of the East, where it is boiled, and eaten either alone or with their meat. Large quantities of it are annually sent into Europe, and it meets with a general esteem for family purposes. The people of Java have a method of making puddings of rice which seems to be unknown here; but it is not difficult to put in practice if it should merit attention. They take a conical earthen pot, which is open at the large end, and perforated all over. This they fill about half full with rice, and putting it into a large earthen pot of the same shape, filled with boiling water, the rice in the first pot soon swells, and stops the perforations, so as to keep out the water. By this method the rice is brought to a firm consistence, and forms a pudding, which is generally eaten with butter, oil, sugar, vinegar, and spices. The Indians eat stewed rice with good success against the bloody flux; and in most inflammatory disorders they cure themselves with only a decoction of it. The spirituous liquor called arrack is made from this grain. Rice grows naturally in moist places, and will not come to perfection, when cultivated, unless the ground be sometimes overflowed, or plentifully watered. The grain is of a grey colour when first reaped; but the growers have a method of whitening it before it is sent to market. The manner of performing this, and beating it out, in Egypt, is thus described by Hasselquist:—They have hollow iron cylindrical pestles, about an inch in diameter, lifted by a wheel worked with oxen. A person sits between the pestles, and, as they rise, pushes forward the rice, whilst another winnows and supplies fresh parcels. Thus they continue working until it is entirely free from chaff. Having in this manner cleaned it, they add one thirtieth part of salt, and rub them both together, by which the grain acquires a whiteness; then it is passed through a sieve, to separate the salt again from it. In the island of Ceylon they have a much more expeditious method of getting out the rice; for, in the field where it is reaped, they dig a round hole, with a level bottom, about a foot deep, and eight yards in diameter, and fill it with bundles of corn. Having laid it properly, the women drive about half a dozen oxen continually round the pit; and thus they will tread out forty or fifty bushels a day. This is a very ancient method of treading out corn, and is still practised in Africa upon other sorts of grain.

OS. 1. (*Os, ossis.* n.; supposed to be derived from the Hebrew *ozam,* strength.) A bone: a hard, dry, insensible part of the body, of a whitish colour, and composed of a spongy, compact, or reticular substance. Bones vary much in their appearances, some being long and hollow, others flat and compact, &c. The greater number of bones have several processes and cavities, which are distinguished from their figure, situation, use, &c. Thus, processes extended from the end of a bone, if smooth and round, are called *heads;* and *condyles,* when flattened either above or laterally. That part which is beneath the head, and which exceeds the rest of the bone in smallness and levity, is called the neck. Rough, unequal processes are called *tuberosities,* or tubercles: but the longer and more acute, *spinous,* or *styloid* processes, from their resemblance to a thorn. Thin broad processes, with sharp extremities, are known by the name of *cristæ,* or *sharp edges.* Other processes are distinguished by their form, and called *alar,* or *pterygoid; mamillary,* or *mastoid; dentiform,* or *odontoid,* &c. Others, from their situation, are called *superior, inferior, exterior,* and *interior.* Some have their name from their direction; as *oblique, straight, transverse,* &c.; and some from their use, as *trochanters, rotators,* &c. *Furrows, depressions,* and *cavities,* are destined either for the reception of contiguous bones, to form an articulation with them, when they are called *articular cavities,* which are sometimes deeper, sometimes shallower; or they receive hard parts, but do not constitute a joint with them. Cavities serve also for the transmission and attachment of soft parts. Various names are given to them, according to the magnitude and figure of bones. If they be broad and large at the beginning, and not deep, but contracted at their ends, they are called *foveæ,* or *pits.* Furrows are open canals, extending longitudinally in the surface of bones. A hollow, circular tube, for the most part of the same diameter from beginning to end, and more or less crooked or straight, long or short, is named a *canal. Foramina* are the apertures of canals, or they are formed of the excavated margins of two bones, placed against each other. If such be the form of the margin of a bone, as if a portion were taken but of it, it is called a *notch.* Respecting the formation of bones, see *Osteogeny.*

A Table of the Bones.

				No.
Bones of the Head.	Bones of the *cranium* or *skull*		Frontal	1
			Parietal	2
			Occipital	1
			Temporal	2
			Ethmoid	1
			Sphenoid	1
	Bones of the *face*		Superior maxil	2
			Jugal	2
			Nasal	2
			Lachrymal	2
			Palatine	2
			Inferior spongy	2
			Vomer	1
			Inferior maxil	1
	Dentes or *teeth*		Incisores	8
			Cuspidati	4
			Molares	20
	Bone of the *tongue*		Hyoides os	1
	Bones of the *ear*, within the temporal bones		Malleus	2
			Incus	2
			Stapes	2
			Orbiculare os	2
Bones of the Trunk.	*The spine.*	Vertebræ	Cervical	1
			Dorsal	12
			Lumbar	5
		Sacrum		1
		Coccygis os		1
	The *thorax*		Sternum	1
			Ribs	24
	The *pelvis*		Innominata ossa	2
Bones of the Upper Extrem.	The *shoulder*		Clavicle	2
			Scapula	2
	The *arm*		Humeri os	2
	The *fore-arm*		Ulna	2
			Radius	2
	The hand.	*Carpus* or *wrist.*	Naviculare os	2
			Lunare os	2
			Cuneiforme os	2
			Orbiculare os	2
			Trapezium os	2
			Trapezoides os	2
			Magnum os	2
			Unciforme os	2
		Metacarpus		10
		Phalanges		28
Bones of the Low. Extr.	The *thigh*		Femur	2
	The *leg*		Patella	2
			Tibia	2
			Fibula	2
	The foot.	*Tarsus* or *instep*	Calcaneus	2
			Astragalus	2
			Cuboides os	2
			Naviculare os	2
			Cuneiformia ossa	6
		Metatarsus		10
		Phalanges		28
Sesamoid bones of the thumb and great toe, occasionally found				8
			Total	248

Chemical analysis.—Calcined human bones, according to Berzelius, are composed, in 100 parts, of 81·9 phosphate of lime, 3 fluate of lime, 10 lime, 1·1 phosphate of magnesia, 2 soda, and 2 carbonic acid. 100 parts of bones by calcination are reduced to 63. Fourcroy and Vauquelin found the following to be the composition of 100 parts of ox bones: 51 solid gelatine, 37·7 phosphate of lime, 10 carbonate of lime, and 1·3 phosphate of magnesia; but Berzelius gives the following as their constituents: 33·3 cartilage, 55·35 phosphate of lime, 3 fluate of lime, 3·85 carbonate of lime, 2·05 phosphate of magnesia, and 2·45 soda, with a little common salt.

About 1-30th of phosphate of magnesia was obtained from the calcined bones of fowls, by Fourcroy and Vauquelin. When the enamel of teeth, rasped down, is dissolved in muriatic acid, it leaves no albumen, like the other bones. Fourcroy and Vauquelin state its components to be, 27·1 gelatine and water, 72·9 phosphate of lime. Messrs. Hatchett and Pepys rate its composition at 78 phosphate of lime, 6 carbonate of lime, and 16 water and loss. Berzelius, on the other hand, found only 2 per cent. of combustible matter in teeth. The teeth of adults, by Mr. Pepys, consist of 64 phosphate of lime, 6 carbonate of lime, 20 cartilage, and 10 water or loss. The fossil bones from Gibraltar, are composed of phosphate of lime and carbonate, like burnt bones. Much difference of opinion exists with regard to the existence of fluoric acid in the teeth of animals, some of the most eminent chemists taking opposite sides of the question. It appears that bones buried for many centuries still retain their albumen, with very little diminution of its quantity.

Fourcroy and Vauquelin discovered phosphate of magnesia in all the bones they examined, except human bones. The bones of the horse and sheep afford about 1-36th of phosphate of magnesia; those of fish nearly the same quantity as those of the ox. They account for this by observing, that phosphate of magnesia is found in the urine of man, but not in that of animals, though both equally take in a portion of magnesia with their food.

The experiments of Mr. Hatchett show, that the membraneous or cartilaginous substance, which retains the earthy compound within its interstices, and appears to determine the shape of the bone, is albumen. Mr. Hatchett observes, that the enamel of tooth is analogous to the porcellaneous shells, while mother-of-pearl approaches in its nature to true bone.

A curious phænomenon with respect to bones is the circumstance of their acquiring a red tinge, when madder is given to animals with their food. The bones of young pigeons will thus be tinged of a rose-colour in twenty-four hours, and of a deep scarlet in three days; but the bones of adult animals will be a fortnight in acquiring a rose colour. The bones most remote from the heart are the longest in acquiring this tinge. Mr. Gibson informs us, that extract of logwood, too, in considerable quantity, will tinge the bones of young pigeons purple. On desisting from

the use of this food, however, the colouring matter is again taken up into the circulation, and carried off, the bones regaining their natural hue in a short time. It was said by Du Hamel, that the bones would become coloured and colourless in concentric layers, if an animal were fed alternately one week with madder, and one week without; and hence he inferred, that the bones were formed in the same manner as the woody parts of trees. But he was mistaken in the fact; and indeed had it been true, with the inference he naturally draws from it, the bones of animals must have been out of all proportion larger than they are at present.

Bones are of extensive use in the arts. In their natural state, or dyed of various colours, they are made into handles of knives and forks, and numerous articles of turnery. The manufacture is now very general of volatile alkali from bones, the coal of which forms bone-black; or if they be afterwards calcined to whiteness in the open air, they constitute the bone ashes of which cupels are made, and which, finely levigated, are used for cleaning articles of paste, and some other trinkets, by the name of burnt hartshorn. The shavings of hartshorn, which is a species of bone, afford an elegant jelly; and the shavings of other bones, of which those of the calf are the best, are often employed in their stead. On this principle, Mr. Proust has recommended an economical use of bones, particularly with a view to improve the subsistence of the soldier. He first chops them into small pieces, throws them into a kettle of boiling water, and lets them boil about a quarter of an hour. When this has stood till it is cold, a quantity of fat, excellent for culinary purposes when fresh, and at any time fit for making candles, may be taken off the liquor. This, in some instances, amounted to an eighth, and in others even to a fourth, of the weight of the bones. After this the bones may be ground, and boiled in eight or ten times their weight of water, of which that already used may form a part, till about half is wasted, when a very nutritious jelly will be obtained. The boiler should not be of copper, as this metal is easily dissolved by the jelly; and the cover should fit very tight, so that the heat may be greater than that of boiling water, but not equal to that of Papin's digester, which would give it an empyreuma. The bones of meat that have been boiled are nearly as productive as fresh bones; but Dr. Young found those of meat that had been roasted afforded no jelly, at least by simmering, or gentle boiling.

2. (*Os, oris.* n.; from οσσα, the voice.) The mouth. 1. In *Anatomy*, applied to openings of parts; as *externum* and *internum*, *os tincæ*, &c.

2. In *Botany*, applied to flowers, &c. which resemble the mouth of certain animals; as the flower of the snapdragon, which is called *os leonis*, &c. See *Faux*, and *Mouth*.

Os EXTERNUM. The entrance into the vagina is so named, in opposition to the mouth of the *uterus*, which is called the *os internum*.

Os INTERNUM. The orifice or mouth of the uterus.

Os LEONIS. The *Antirrhinum linaria*.

Os SPONGIOSUM. The spongy bones are two in number, and are called *ossa spongiosa inferiora*. The ethmoid bone has two turbinated portions, which are sometimes called the superior spongy bones. These bones, which, from their shape, are sometimes called *ossa turbinata*, have, by some anatomists, been described as belonging to the ethmoid bone; and by others, as portions of the ossa palati. In young subjects, however, they are evidently distinct bones. They consist of a spongy lamella in each nostril. The convex surface of this lamina is turned towards the septum narium, and its concave part towards the maxillary bone, covering the opening of the lachrymal duct into the nose. From their upper edge arise two processes: the posterior of these, which is the broadest, hangs as it were upon the edge of the antrum highmorianum; the anterior one joins the os unguis, and forms a part of the lachrymal duct. These bones are complete in the fœtus. They are lined with the pituitary membrane; and, besides their connection with the ethmoid bone, are joined to the ossa maxillaria superiora, ossa palati, and ossa unguis. Besides these ossa spongiosa inferiora, there are sometimes two others, situated lower down, one in each nostril. These are very properly considered as a production of the sides of the maxillary sinus turned downwards. In many subjects, likewise, we find other smaller bones standing out into the nostrils, which, from their shape, might also deserve the name of *turbinata*, but they are uncertain in their size, situation, and number.

Os TINCÆ. See *Tincæ os*.

OSCE'DO. (*o, inis.* f.) A yawning.

OSCHEAL. (*Oschealis*; from οσχεον, the scrotum.) Relating to the scrotum.

OSCHEOCE'LE. (*e, es.* f.; from οσχεον, the scrotum, and κηλη, a tumour.) 1. Any tumour of the scrotum.

2. A scrotal hernia. See *Hernia*.

O'SCHEON. Οσχεον. The scrotum. Galen gives the name to the *os uteri*.

OSCHEOPHY'MA. (*a, atis.* n.; from οσχεον, the scrotum, and φυμα, a tumour.) A swelling of the scrotum.

OSCILLATION. *Oscillatio*. Vibration. See *Irritability*

O'SCITANS. (From *oscito*, to gape.) *Oscitatio*. Yawning; gaping.

OSCULATO'RIUS. (From *osculo*, to kiss: so called because the action of kissing is performed by it.) The sphincter muscle of the lips.

O'SCULUM. (*um, i.* n.; diminutive of *os*, a mouth.) A little mouth.

OSMAZOME. If cold water, which has been digested for a few hours on slices of raw muscular fibre, with occasional pressure, be evaporated, filtered, and then treated with

pure alkohol, a peculiar animal principle will be dissolved, to the exclusion of the salts. By dissipating the alkohol with a gentle heat, osmazome is obtained. It has a brownish yellow colour, and the taste and smell of soup. Its aqueous solution affords precipitates, with infusion of nut-galls, nitrate of mercury, and nitrate and acetate of lead. According to some experiments lately published by Gsell, Gmelin, and Wienholt, osmazome has been found in most of the component parts of the body, as well solids as fluids, although in very different proportions.

OS'MIUM. A new metal lately discovered by Tennant among platina, and so called by him from the pungent and peculiar smell of its oxide.

OSMUND. See *Osmunda regalis.*

OSMU'NDA. (*a, æ.* f.; from *Osmund*, who first used it.) The name of a genus of plants. Class, *Cryptogamia*; Order, *Filices.*

Osmunda lunaria. See *Ophioglossum lunaria.*

Osmunda regalis. The systematic name of the osmund-royal. *Filix florida. Ophioglossum osmunda.* Its root possesses astringent and emmenagogue virtues. The young shoots, made into a conserve, are said to be a specific for the rickets.

O'SPHYS. Ὀσφυς. The loins.

Ossa spongiosa. See *Os spongiosum.*

OSSEOUS. (*Osseus*; from *os*, a bone.) Bony.

OSSI'CULUM. (*um, i.* n.; diminutive of *os*, a bone.) A little bone.

Ossicula auditus. The small bones of the internal ear are four in number; viz. the malleus, incus, stapes, and os orbiculare; and are situated in the cavity of the tympanum. See *Malleus, Incus, Stapes*, and *Orbiculare os.*

OSSIFICATION. (*Ossificatio, onis.* f.; from *os*, a bone, and *facio*, to make.) Ossification, or the formation of bone. See *Osteogeny.*

OSSI'FRAGUS. (*us, i.* m.; from *os*, a bone, and *frango*, to break.) *Ossifraga.* Bone-breaker. See *Osteocolla.*

OSSI'VORUS. (From *os*, a bone, and *voro*, to devour.) That which destroys or devours bone. Applied to a species of tumour or ulcer which destroys the bone.

OSTA'GRA. (From οςεον, a bone, and αγρα, a laying hold of.) A forceps to take out bones with.

OSTEI'TES. (From οςεον, a bone.) The bone-binder. See *Osteocolla.*

OSTEOCO'LLA. (*a, æ.* f.; from οςεον, a bone, and κολλαω, to glue.) Glue-bone, stone, or bone-binder: called also, *Ossifraga, Holosteus, Osteites, Amosteus, Osteolithos*, and *Stelochites.* A particular carbonate of lime found in some parts of Germany, particularly in the Marché of Brandenburg, and in other countries. It is met with in loose sandy grounds, spreading from near the surface to a considerable depth, into a number of ramifications, like the roots of a tree. It is of a whitish colour, soft whilst under the earth, friable when dry, rough on the surface, for the most part either hollow within, or filled with a solid wood, or with a powdery white matter. It was formerly celebrated for promoting the coalition of fractured bones, and the formation of callus, which virtues are not attributed to it in the present day.

OSTEO'COPUS. (From οςεον, a bone, and κοπος, uneasiness.) A very violent fixed pain in any part of the bone.

Osteoge'nicus. (From οςεον, a bone, and γενναω, to beget.) Promoting the generation of bone or callus.

OSTEOGENY. (*Osteogenia, æ.* f.; from οςεον, a bone, and γενεια, generation.) The growth of bones. Bones are either formed between membranes, or in the substance of cartilage; and the bony deposition is effected by a determined action of arteries. The secretion of bone takes place in cartilage in the long bones, as those of the arm, leg, &c.; and betwixt two layers of membrane, as in the bones of the skull, where true cartilage is never seen. Often the bony matter is formed in distinct bags, and there it grows into form, as in the teeth; for each tooth is formed in its little bag, which, by injection, can be filled and covered with vessels. An artery of the body can assume this action, and deposit bone, which is formed also where it should not be, in the tendons and in the joints, in the great arteries and in the valves, in the flesh of the heart itself, or even in the soft and pulpy substance of the brain.

Most of the bones in the fœtus are merely cartilage before the time of birth. This cartilage is never hardened into bone, but, from the first, it is an organised mass. It has its vessels, which are at first transparent, but which soon dilate; and whenever the red colour of the blood begins to appear in them, ossification very quickly succeeds, the arteries being so far enlarged as to carry the coarser parts of the blood. The first mark of ossification is an artery which is seen running into the centre of the jelly which is formed. Other arteries soon appear, and a network of vessels is formed, and then a centre of ossification begins, stretching its rays according to the length of the bone, and then the cartilage begins to grow opaque, yellow, and brittle: it will no longer bend, and a bony centre may easily be discovered. Other points of ossification are successively formed, preceded by the appearance of arteries. The ossification follows the vessels, and buries and hides those vessels by which it is formed. The vessels advance towards the end of the bone, the whole body of the bone becomes opaque, and there is left a small vascular circle only at either end. The heads are separated from the body of the bone by a thin cartilage, and the vessels of the centre, extending still towards the extremities of the bone, perforate the cartilage, pass into the head of the bone, and then its ossification also begins, and a small

nucleus of ossification is formed in its centre. Thus the heads and the body are at first distinct bones, formed apart, joined by a cartilage, and not united till the age of fifteen or twenty years. Then the deposition of bone begins: and while the bone is laid by the arteries, the cartilage is conveyed away by the absorbing vessels; and while they convey away the superfluous cartilage, they model the bone into its due form, shape out its cavities, cancelli, and holes, remove the thinner parts of the remaining cartilage, and harden it into due consistence. The earth which constitutes the hardness of bone, and all its useful properties, is inorganised, and lies in the interstices of bone, where it is made up of gelatinous matter, to give it consistence and strength, furnished with absorbents to keep it in health, and carry off its wasted parts; and pervaded by blood-vessels to supply it with new matter. During all the process of ossification, the absorbents proportion their action to the stimulus which is applied to them: they carry away the serous fluid, when jelly is to take place; they remove the jelly as the bone is laid; they continue removing the bony particles also, which (as in a circle) the arteries continually renew. This renovation and change of parts goes on even in the hardest bones, so that after a bone is perfectly formed, its older particles are continually being renewed, and new ones are deposited in their place. The bony particles are so deposited in the flat bones of the skull as to present a radiated structure, and the vacancies between the fibres which occasion this appearance, are found, by injection, to be chiefly passages for blood-vessels. As the fœtus increases in size, the osseous fibres increase in number, till a lamina is produced; and as the bone continues to grow, more laminæ are added, till the more solid part of a bone is formed. The ossification which begins in cartilage is considerably later than that which has its origin between membranes. The generality of bones are incomplete until the age of puberty, or between the fifteenth and twentieth years, and, in some few instances, not until a later period. The small bones of the ear, however, are completely formed at birth.

OSTEOGRAPHY. (*Osteographia, æ.* f.; from οςεον, a bone, and γραφω, to describe.) The description of the bones. See *Os.*

Osteoli'thos. (From οςεον, a bone, and λιθος, a stone.) See *Osteocolla.*

OSTEOLOGY. (*Osteologia, æ.* f.; from οςεον, a bone, and λογος, a discourse.) The doctrine of the bones.

OSTEOPŒDION. (*on, ii.* n.; from οςεον, a bone, and παις, παιδος, an infant.) *Lithopædion.* A term given to the mass of an extra uterine fœtus, which had become osseous, or of an almost stony consistence.

OSTHE'XIA. (*a, æ.* f.; from οςωδης, osseous or bony, and εξις, habit.) Osthexy, or ossific diathesis.

Ostia'rius. (From *ostium*, a door.) The pylorus has been so called.

OSTI'OLUM. (*um, i.* n.; diminutive of *ostium*, a door.) A little door. The valves of the heart have been called *ostiola.* The term is also applied to small openings or mouths of vessels.

OSTIUM. (*um, ii.* n.) A door or opening. Applied to foramina or openings.

O'STREA. (*a, æ.* f.; from οςρακον, a shell.) The oyster. The name of a genus of shell-fish. Class, *Vermes;* Order, *Testacea.*

Ostrea edulis. The common oyster. Of this well-known and highly esteemed species there are six varieties, found in different parts of the European and Indian seas, affixed to rocks, or to large beds. The shell is of various sizes, forms, and colours, white within, and often glossy, like mother of pearl. It is supposed by naturalists to be an hermaphrodite animal. The spawn, which they cast in May, adheres to the rocks, and other substances at the bottom of the sea, and the shell is said to be formed in twenty-four hours.

Oysters are of different colours in different places. In Spain they are found of a red and russet colour; in Illyria they are brown, but the fish is black; and in the Red Sea, of the colour of the rainbow. The green oyster, which is eaten in Paris, is brought from Dieppe. The oysters from Brittany have been long famous; but those which are brought from Merennes, in Saintonge, are in the highest estimation. Britain has been long noted for its oysters; and the ancient Romans, who were extremely fond of this fish, had their layers or stews for oysters, as we have at present. Sergius Orata was the inventor of them, as early as the time of Lucius Crassus, the orator. This country still preserves its superiority in oysters over other countries, and they are found in plenty in most parts of our coast.

As an article of diet or luxury, oysters are in very general use. When deprived of their beards, or fringe-like part, and the harder flesh by which they adhere to the shell, they are easy of digestion, and very nutritious, either raw, boiled, stewed, or roasted. For weak stomachs they are often recommended; and they are in general use in sauces and minced meats, to give a flavour which is highly esteemed.

The shell of this fish is occasionally used medicinally: its virtues are similar to those of the carbonate of lime. See *Creta.*

Ostrea maxima. The scallop. This is found in most of the European seas, in large beds. The shell is that which was formerly worn by pilgrims, on the hat or coat, as a mark that they had crossed the sea, for the purpose of paying their devotions in the Holy Land. The flesh of this fish is much more coarse than that of the oyster, and should never be indulged in, for it is very difficult of digestion unless it is well stewed; and even then it requires the addition of some warm stimulating substance.

OSY'RIS. (*is, is.* f. Οσυρις, of Dioscorides, which he describes as a small shrub,

with numerous dark, tough branches; and Professor Martyn conjectures its derivation from οζος, a branch. Some take the *antirrhinum linaria* for the true *Osyris.*) The name of a genus of plants in the Linnæan system. Class, *Diœcia*; Order, *Triandria*.

Osyris alba. Poet's cassia or gardrobe; Poet's rosemary. *Cassia poetica lobelli. Cassia latinorum. Cassia lignea monspeliensium. Cassia monspeliensium.* The whole shrub is astringent. It grows in the southern parts of Europe.

OTA'LGIA. (*a, æ.* f.; from *ους*, the ear, and *αλγος*, pain.) The earache.

OTENCHY'TES. (From *ωτος*, the genitive of *ους*, an ear, and *εγχευω*, to pour in.) A syringe for the ears.

O'TICUS. (From *ους*, the ear.) Appertaining to the ear: thus, *medicamenta outica*; medicines against diseases of the ear.

Oti'tes. (From *ους*, the ear.) An epithet of the little finger, because it is commonly made use of in scratching the ear.

OTI'TIS. (*is, idis.* f.; from *ους*, the ear.) The term applies to inflammation of the external ear, properly so called; and also to the internal ear, to which it is generally confined. Otitis is known by pain in the internal part of the ear, confusion of sound, deafness, and more or less of fever. It is not uncommon with children, but is seldom attended with much disturbance of the system. It is generally produced by cold; and occasionally by extraneous bodies that have, by accident or otherwise, got into the meatus auditorius externus, as worms, insects or their larvæ, cherry-stones, &c., of which many curious accounts are published in medical journals.

It is sometimes a serious disease, producing much fever, and ending in suppuration. Several very acute cases of inflammation of the internal ear of adults, which caused active fever and delirium, have occurred to the author; which, but for copious and repeated bleeding, blisters, and purges, as directed against inflammation of the brain, would have terminated, most probably, fatally.

Otopla'tos. (From *ους*, the ear.) A stinking ulcer behind the ears.

OTOPYO'SIS. (*is, is.* f.; from *ους*, the ear, and *πυον*, pus.) A purulent discharge from the ear.

OTORRHÆ'A. (*a, æ.* f.; from *ους*, the ear, and *ρεω*, to flow.) A discharge from the ear.

OUROLOGY. (*Ourologia, æ.* f.; from *ουρον*, urine, and *λογος*, a discourse.) The doctrine of the judgment of diseases from inspecting the urine.

OURONOSCOPE. (*Ouronoscopus, i.* m.; from *ουρον*, urine, and *σκοπεω*, to see or explore.) An instrument by which it is pretended the nature of the urine is ascertained.

OUROSCOPY. (*Ouroscopia, æ.* f.; from *ουρον*, urine, and *σκοπεω*, to see.) The art of ascertaining the nature of the urine, and deducing therefrom the state of the body, as regards disease.

OVA'LIS. Oval. Some parts of animals and vegetables receive this name from being of this shape; as *foramen ovale, centrum ovale, folium ovale, receptaculum ovale.*

OVARIAN. (*Ovarianus*, from *ovarium.*) Ovarial: belonging to the ovarium.

OVA'RIUM. (*um, ii.* n.; diminutive of *ovum*, an egg.) The ovaria are two flat oval bodies, about one inch in length, and rather more than half in breadth and thickness, suspended in the broad ligaments, about the distance of one inch from the uterus behind, and a little below the Fallopian tubes. To the ovaria, according to the idea of their structure entertained by different anatomists, various uses have been assigned, or the purpose they answer has been differently explained. Some have supposed that their texture was glandular, and that they secreted a fluid equivalent and similar to the male semen; but others, who have examined them with more care, assert that they are ovaria in the literal acceptation of the term, and include a number of vesicles, or ova, to the amount of twenty-two of different sizes, joined to the internal surface of the ovaria by cellular threads or pedicles; and that they contain a fluid which has the appearance of thin lymph. These vesicles are, in fact, to be seen in the healthy ovaria of every young woman. They differ very much in their number in different ovaria, but are very seldom so numerous as has just been stated. All have agreed that the ovaria prepare whatever the female supplies towards the formation of the fœtus; and this is proved by the operation of spaying, which consists in the extirpation of the ovaria; after which the animal not only loses the power of conceiving, but desire is for ever extinguished. The outer coat of the ovaria, together with that of the uterus, is given by the peritonæum; and whenever an ovum is passed into the Fallopian tube, a fissure is observed at the part through which it is supposed to have been transferred. These fissures healing, leave small longitudinal cicatrices on the surface, which are said to enable us to determine, whenever the ovarium is examined, the number of times a woman has conceived. The corpora lutea are oblong glandular bodies of a yellowish colour, found in the ovaria of all animals when pregnant, and, according to some, when they are salacious. They are said to be calyces, from which the impregnated ovum is dropped; and their number is always in proportion to the number of conceptions found in the uterus. They are largest and most conspicuous in the early state of pregnancy, and remain for some time after delivery, when they gradually fade and wither till they disappear. The corpora lutea are very vascular, except at their centre, which is whitish; and in the middle of the white part is a small cavity, from which the impregnated ovum is thought to have immediately proceeded. The ovaria are the seat of a particular kind of dropsy, which most commonly happens to women at

the time of the final cessation of the menses, though not unfrequently at a more early period of life. It is of the encysted kind, the fluid being sometimes limpid and thin, and at others discoloured and gelatinous. In some cases it has been found contained in one cyst, often in several; and in others the whole tumefaction has been composed of hydatids not larger than grapes. The ovaria are also subject, especially a short time after delivery, to inflammation, terminating in suppuration, and to scirrhous and cancerous diseases, with considerable enlargement. In the former state, they generally adhere to some adjoining part, as the uterus, rectum, bladder, or external integuments, and the matter is discharged from the vagina, by stool, by urine, or by an external abscess of the integuments of the abdomen.

OVATUS. Ovate: egg-shaped. 1. Leaves, petals, seeds, &c. are so called when of the shape of an egg, cut lengthwise, the base being rounded, and broader than the extremity,—a very common form of leaves; as in *Vinca major*, and *Urtica pilulifera*; the *petals* of the *Allium flavum*, and *Narcissus pseudo-narcissus*; and the *receptacle* of the *Omphalea*.

2. A shape resembling the solid substance of an egg; as the seeds of the *Quercus*.

OVIDUCT. (*Oviductus*; from *ovum*, an egg, and *ductus*, a canal.) The duct or canal through which the ovum, or egg, passes. In the human species, the Fallopian tube is so called, which runs from the ovary to the bottom of the womb.

OVIPAROUS. (*Oviparus*; from *ovum*, an egg, and *pario*, to bring forth.) Animals which exclude their young in the egg, which are afterwards hatched.

OVIS. The name of a genus of animals. Class, *Mammalia*; Order, *Pecora*. The sheep.

OVIS ARIES. The common sheep. The flesh of this animal is the best of all food for man, being easy of digestion, and highly nutritious. The lamb is considered as a delicacy.

OVO'RUM TESTÆ. Egg-shells. A testaceous absorbent.

O'VULUM. (*um*, *i*. n.; diminutive of *ovum*.) A little egg. See *Egg*.

O'VUM. (*um*, *i*. n.; from the Greek ὠὸν, an egg.) See *Egg*.

OVUM PHILOSOPHICUM. *Ovum chymicum*. A glass body, round like an egg.

OVUM RUFFUM. An obsolete alchemistic term used in the transmutation of metals.

OX. See *Bos taurus*.

Ox-eye daisy. See *Chrysanthemum*.

Ox's tongue. See *Picris echiodes*.

OXALATE. (*Oxalas*, *atis*. m.; so called, because formed with the oxalic acid.) A salt formed by the combination of the oxalic acid with a salifiable basis; thus, *oxalate of ammonia*.

OXALIC ACID. *Acidum oxalicum*. This acid abounds in wood-sorrel. Combined with a small portion of potash, as it exists in that plant, it has been sold under the name of *salt of lemons*, to be used as a substitute for the juice of that fruit, particularly for discharging ink-spots and iron-moulds, and was long supposed to be analogous to that of tartar. In the year 1776, however, Bergman discovered, that a powerful acid might be extracted from sugar by means of the nitric; and, a few years afterwards, Scheele found this to be identical with the acid existing naturally in sorrel. Hence the acid began to be distinguished by the name of *saccharine*, but has since been generally known by that of oxalic.

It may be obtained, readily and economically, from sugar, in the following way:—To six ounces of nitric acid in a stoppered retort, to which a large receiver is luted, add, by degrees, one ounce of lump sugar, coarsely powdered. A gentle heat may be applied during the solution, and nitric oxide will be evolved in abundance. When the whole of the sugar is dissolved, distil off a part of the acid, till what remains in the retort has a syrupy consistence, and this will form regular crystals, amounting to 58 parts from 100 of sugar. These crystals must be dissolved in water, recrystallised, and dried on blotting paper.

Oxalic acid crystallises in quadrilateral prisms, the sides of which are alternately broad and narrow, and summits dihedral; or, if crystallised rapidly, in small irregular needles. They are efflorescent in dry air, but attract a little humidity if it be damp; are soluble in one part of hot and two of cold water; and are decomposable by a red heat, leaving a small quantity of coaly residuum. 100 parts of alkohol take up near 56 at a boiling heat, but not above 40 cold. Their acidity is so great, that when dissolved in 3600 times their weight of water, the solution reddens litmus paper, and is perceptibly acid to the taste.

The oxalic acid is a good test for detecting lime, which it separates from all the other acids, unless they are present in excess. It has, likewise, a greater affinity for lime than for any other of the bases, and forms with it a pulverulent insoluble salt, not decomposable except by fire, and turning syrup of violets green.

Oxalic acid acts as a violent poison, when swallowed in the quantity of 2 or 3 drachms; and several fatal accidents have lately occurred in London, in consequence of its being improperly sold instead of Epsom salts. Its vulgar name of *salts*, under which the acid is bought for the purpose of whitening boot-tops, has frequently occasioned these lamentable mistakes. But the powerfully acid taste of the latter substance, joined to its prismatic or needle-formed crystallisation, are sufficient to distinguish it from every thing else. The immediate rejection from the stomach of this acid by an emetic, aided by copious draughts of warm water containing bicarbonate of pot-

ash, or soda, chalk, or carbonate of magnesia, are the proper remedies.

With *barytes* it forms an insoluble salt.

The *oxalate of strontian* and *magnesia* are also insoluble, unless the acid be in excess.

The *oxalate of potash* exists in two states, that of a neutral salt, and that of an acidule. The latter is generally obtained from the juice of the leaves of the *oxalis acetosella*, wood-sorrel, or from the *rumex acetosa*, or common sorrel. The expressed juice, being diluted with water, should be set by for a few days, till the feculent parts have subsided, and the supernatant fluid is become clear; or it may be clarified, when expressed, with the whites of eggs. It is then to be strained off, evaporated to a pellicle, and set in a cool place to crystallise. The first product of crystals being taken out, the liquor may be further evaporated, and crystallised; and the same process repeated till no more can be obtained.

It unites with barytes, magnesia, soda, ammonia, and most of the metallic oxides, into triple salts. It attacks iron, lead, tin, zinc, and antimony.

This salt, besides its use in taking out ink-spots, and as a test of lime, forms with sugar and water a pleasant cooling beverage; and, according to Berthollet, it possesses considerable powers as an antiseptic.

The neutral oxalate of potash is very soluble, and assumes a gelatinous form, but may be brought to crystallise in hexahedral prisms with dihedral summits, by adding more potash to the liquor than is sufficient to saturate the acid.

Oxalate of soda likewise exists in two different states, those of an acidulous and a neutral salt, which in their properties are analogous to those of potash.

The *acidulous oxalate of ammonia* is crystallisable, not very soluble, and capable, like the preceding acidules, of combining with other bases, so as to form triple salts.

The oxalic acid readily dissolves *alumina*, and the solution gives, on evaporation, a yellowish transparent mass, sweet and a little astringent to the taste, deliquescent, and reddening tincture of litmus, but not syrup of violets. This salt swells up in the fire, loses its acid, and leaves the alumina a little coloured.

OX'ALIS. (*is, is.* f.; from οξυς, sharp: so called from the sharpness of its juice.) The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Pentagynia*. Wood-sorrel.

Oxalis acetosella. The systematic name of the wood-sorrel; called also, *Lugula*, and *Alleluja*.

Oxalis—foliis ternatis, scapo unifloro, flore albo, capsulis pentagonis elasticis, radice squamoso-articulata, of Linnæus. This plant grows wild in the woods, and flowers in April and May. The leaves are shaped like a heart, standing three together on one stalk. The acetosella is totally inodorous, but has a grateful acid taste, on which account it is used in salads. Its taste is more agreeable than the common sorrel, and approaches nearly to that of the juice of lemons, or the acid of tartar, with which it corresponds in a great measure in its medical effects, being esteemed refrigerant, antiscorbutic, and diuretic.

Its sourness is derived from the presence of a quadroxalate of potash.

It is recommended by Bergius, in inflammatory, bilious, and putrid fevers. The principal use, however, of the acetosella, is to allay inordinate heat, and to quench thirst; for this purpose, a pleasant whey may be formed by boiling the plant in milk, which, under certain circumstances, may be preferable to the conserve directed by the London College, though an extremely grateful and useful medicine. Many have employed the root of lujula, probably on account of its beautiful red colour rather than for its superior efficacy. A salt is prepared from this plant, known by the name of essential salt of lemons, which is an acidulous oxalate of potash, and commonly used for taking ink-stains out of linen. See *Oxalic acid*. What is sold under the name of essential salt of lemons in this country, is said by some to consist of cream of tartar, with the addition of a small quantity of sulphuric acid. The leaves of wood-sorrel, when employed externally in the form of poultices, are powerful suppurants, particularly in indolent scrofulous tumours.

Oxa'lme. (*e, es.* f.; from οξυς, sharp, and αλς, salt.) A mixture of vinegar and salt.

Oxid. See *Oxide*.

OXIDATION. (*Oxidatio, onis.* f.) The process of converting metals and other substances into oxides, by combining with them a certain portion of oxygene. It differs from acidification in the addition of oxygene not being sufficient to form an acid with the substances oxided.

OXIDE. (*Oxydum, i.* n.; formed of *oxygene*, which enters into its composition, with the terminal *ide.* See *Ide.*) Oxid. A substance combined with oxygene, without being in the state of an acid. Many substances are susceptible of several stages of oxidisement, on which account chemists have employed various terms to express the characteristic distinctions of the several oxides. The specific name is often derived from some external character, chiefly the colour: thus we have the black and red oxides of iron, and of mercury; the white oxide of zinc: but, in most instances, the denominations proposed by Dr. Thompson are adopted. When there are several oxides of the same substance, he proposes the terms *protoxide, deutoxide, tritoxide*, signifying the first, second, and third stage of oxidisement. Or if two oxides only are known, he proposes the appellation of *protoxide* for that at the minimum, and of *peroxide* for that at the maximum of oxidation. The compounds of oxides and water, in which the water exists in a condensed state, are termed *hydrates*, or *hydroxures*.

Oxide of carbon, gaseous. See *Carbon, gaseous oxide of.*

Oxide, nitric. See *Nitrogene.*

Oxide, nitrous. See *Nitrogene.*

OXIDUM ANTIMONII. See *Antimonii oxidum.*

OXIDUM ARSENICI ALBUM. See *Arsenic.*

OXIDUM CUPRI VIRIDE ACETATUM. See *Verdigris.*

OXIDUM FERRI LUTEUM. See *Ferri subcarbonas.*

OXIDUM FERRI NIGRUM. Black oxide of iron, or *Limatura ferri* of the shops. The scales which fall from iron, when heated, consist of iron combined with oxygene. These have been employed medicinally, producing the general effects of chalybeates, but not very powerfully.

OXIDUM FERRI RUBRUM. Red oxide of iron, which is more highly oxidised than the black. It may be formed by long-continued exposure to heat and air. Its properties in medicine are similar to other preparations of iron. It is frequently given internally.

OXIDUM HYDRARGYRI CINEREUM. See *Hydrargyri oxidum cinereum.*

OXIDUM HYDRARGYRI NIGRUM. See *Hydrargyri oxidum cinereum.*

OXIDUM HYDRARGYRI RUBRUM. See *Hydrargyri oxidum rubrum.*

OXIDUM PLUMBI ALBUM. See *Plumbi subcarbonas.*

OXIDUM PLUMBI RUBRUM. See *Lead.*

OXIDUM PLUMBI SEMIVITREUM. See *Lithargyrus.*

OXIDUM STIBII ALBUM. See *Antimonii oxidum.*

OXIDUM STIBII SEMIVITREUM. A vitreous oxide of antimony. It was formerly called *Vitrum antimonii,* and consists of an oxide of antimony with a little sulphur: it is employed to make antimonial wine.

OXIDUM STIBII SULPHURATUM. This is an oxide of antimony with sulphur, and was formerly called *Hepar antimonii, Crocus metallorum,* and *Crocus antimonii.* It was formerly exhibited in the cure of fevers and atonic diseases of the lungs. Its principal use now is in preparing other medicines.

OXIDUM ZINCI. See *Zinci oxidum.*

OXIDUM ZINCI SUBLIMATUM. See *Zinci oxidum.*

OXIODIC ACID. See *Iodic acid.*

OXYCA'NTHA. (*a, æ.* f.; from οξυς, sharp, and ακανθα, a thorn: so called from the acidity of its fruit.) See *Berberis.*

OXYCANTHA GALENI. See *Berberis.*

OXYCE'DRUS. (*us, i.* f.; from οξυ, acutely, and κεδρος, a cedar: so called from the sharp termination of its leaves.) 1. A kind of cedar.

2. Spanish juniper, a species of *juniperus.*

OXYCHLORIC ACID. See *Perchloric acid.*

OXYCO'CCOS. (*os, i.* m.; from οξυς, acid, and κοκκος, a berry: so named from its acidity.) See *Vaccinium oxycoccos.*

OXY'CRATUM. (*um, i.* n.; from οξυς, acid, and κεραννυμι, to mix.) Oxycrate: vinegar mixed with such a portion of water as is required, and rendered still milder by the addition of a little honey.

OXYCRO'CEUM EMPLASTRUM. (From οξυς, acid, and κροκος, saffron.) A plaster in which there is much saffron.

OXYDE'RCICUS. (From οξυς, acute, and δερκω, to see.) Having the property of strengthening the sight.

OXYDULE. *Oxydulas.* Synonymous with protoxide.

OXYGARUM. (*um, i.* n.; from οξυς, acid, and γαρον, garum.) A composition of garum and vinegar.

OXYGENE. (*Oxygenium, ii.* n.; from οξυς, acid, and γενναω, to generate: because it is the generator of acidity.) This substance, although existing sometimes in a solid and sometimes in an aëriform state, is never distinctly perceptible to the human senses but in combination.

We know it only in its combination by its effects. Nature never presents it solitary: chemists do not know how to insulate it. It is a principle which was long unknown. It is absorbable by combustible bodies, and converts them into oxides or acids. It is an indispensable condition of combustion, uniting itself always to bodies which burn, augmenting their weight, and changing their properties. It may be disengaged in the state of oxygene gas, from burnt bodies, by a joint accumulation of caloric and light. It is highly necessary for the respiration of animals. It exists universally dispersed through nature, and is a constituent part of atmospheric air, of water, of acids, and of all bodies of the animal and vegetable kingdoms.

One of the most remarkable combinations into which it is capable of entering, is that which it forms with light and caloric. The nature of that mysterious union has not been ascertained; but it is certain that, in that state, it constitutes the gaseous fluid called *oxygene gas.*

Properties of Oxygene Gas.—Oxygene gas is an elastic invisible fluid, like common air, capable of indefinite expansion and compression. It has neither taste nor odour, nor does it show any traces of an acid. Its specific gravity, as determined by Kirwan, is 0·00135, that of water being 1·0000: it is, therefore, 740 times lighter than the same bulk of water. Its weight is to atmospheric air as 1103 to 1000. One hundred and sixteen cubic inches of oxygene gas weigh 39·38 grains. It is not absorbed by water, but entirely absorbable by combustible bodies, which, at the same time, disengage its caloric and light, producing in consequence a strong heat and flame. It rekindles almost extinct combustible bodies. It is indispensable to respiration, and is the cause of animal heat. It hastens germination. It combines with every combustible body, with all the metals, and with the greater number of vegetable and animal substances. It is considered as the cause of acidity; and from this last property

is derived the name *oxygene*, a word denoting the origin of acidity.

The act of its combining with bodies is called *oxidisement*, or *oxygenation*; and the bodies with which it is combined are called *oxides*, or *acids*.

Oxygene gas is the chief basis of the pneumatic doctrine of chemistry.

Methods of obtaining Oxygene Gas.—We are at present acquainted with a great number of bodies from which we may, by art, produce oxygene gas. It is most amply obtained from the oxides of manganese, lead, or mercury; from nitrate of potash; from the green leaves of vegetables, and from oxychlorate of potash or soda. Besides these, there are a great many other substances from which oxygene gas may be procured.

1. In order to procure oxygene gas in a state of great purity, pure oxychlorate of potash or soda must be made use of. With this view, put some of the salt into a small earthen or glass retort, the neck of which is placed under the shelf of the pneumatic trough, filled with water, and heat the retort by means of a lamp. The salt will begin to melt, and oxygene gas will be obtained in abundance, and of great purity, which may be collected and preserved over water.

Explanation.— Oxychlorate of potash consists of oxygene, chlorine, and potash. At an elevated temperature, a decomposition takes place, the oxygene unites to the caloric, and forms oxygene gas. The oxychlorate becomes therefore converted into simple chlorate of potash.

2. Oxygene gas may likewise be obtained from the green leaves of vegetables.

For this purpose, fill a bell-glass with water, introduce fresh-gathered green leaves under it, and place the bell, or receiver, inverted in a vessel containing the same fluid; expose the apparatus to the rays of the sun, and very pure oxygene gas will be liberated.

The emission of oxygene gas is proportioned to the vigour of the plant and the vivacity of the light: the quantity differs in different plants and under different conditions.

Explanation.—It is an established fact, that plants decompose carbonic acid, and probably water, which serve for their nourishment: they absorb the hydrogene and carbon of these fluids, disengaging a part of the oxygene in a state of purity. Light, however, favours this decomposition greatly: in proportion as the oxygene becomes disengaged, the hydrogene becomes fixed in the vegetable, and combines, partly with the carbon and partly with the oxygene, to form the oil, &c. of the vegetable.

3. Nitrate of potash is another substance frequently made use of for obtaining oxygene gas, in the following manner:—

Take any quantity of this salt, introduce it into a coated earthen or glass retort, and fit to it a tube, which must be plunged into the pneumatic trough, under the receiver filled with water. When the apparatus has been properly adjusted, heat the retort gradually, till it becomes red hot; the oxygene gas will then be disengaged rapidly.

Explanation.—Nitrate of potash consists of nitric acid and potash. Nitric acid consists again of oxygene and nitrogene. On exposing the salt to ignition, a partial decomposition of the acid takes place; the greatest part of the oxygene of the nitric acid unites to caloric, and appears under the form of oxygene gas. The other part remains attached to the potash in the state of nitrous acid. The residue in the retort is, therefore, nitrate of potash, if the process has been carried only to a certain extent.

Remark.—If too much heat be applied, particularly towards the end of the process, a total decomposition of the nitric acid takes place: the oxygene gas, in that case, will therefore be mingled with nitrogene gas. The weight of the two gases, when collected, will be found to correspond very exactly with the weight of the acid which had been decomposed. The residue then left in the retort is potash.

4. Black oxide of manganese, however, is generally made use of for obtaining oxygene gas, on account of its cheapness. This native oxide is reduced to a coarse powder: a stone, or rather an iron retort, is then charged with it and heated. As soon as the retort becomes ignited, oxygene gas is obtained plentifully.

Explanation.—Black oxide of manganese is the metal called manganese, fully saturated with oxygene, together with many earthy impurities: on applying heat, part of the solid oxygene quits the metal and unites to caloric, in order to form oxygene gas; the remaindel of the oxygene remains united to the metar with a forcible affinity: the metal, therefore, approaches to the metallic state, or is found in the state of a grey oxide of manganese.

One pound of the best manganese yields upwards of 1400 cubic inches of oxygene gas, nearly pure. If sulphuric acid be previously added to the manganese, the gas is produced by a less heat, and in a larger quantity: a glass retort may then be used, and the heat of a lamp is sufficient.

5. Red oxide of mercury yields oxygene gas in a manner similar to that of manganese.

Explanation.—This oxide consists likewise of solid oxygene and mercury, the combination of which takes place on exposing mercury to a heat of about 610° Fahr. At this degree it attracts oxygene, and becomes converted into an oxide; but if the temperature be increased, the attraction of oxygene is changed. The oxygene then attracts caloric stronger than it did the mercury; it therefore abandons it, and forms oxygene gas. The mercury then reappears in its metallic state.

6. Red oxide of lead yields oxygene gas on the same principle.

Oxygenated muriatic acid. See *Chlorium.*

OXYGENATION. (*Oxygenatio, onis. f.*; from *oxygene*, and γινομαι, to generate.) This

word is often used instead of oxidation, and frequently confounded with it: but it differs in being of more general import, as every union with oxygene, whatever the product may be, is an oxygenation; but oxidation takes place only when an oxide is formed.

Oxygenised muriatic acid. See *Muriatic acid, oxygenised.*

Oxygenised nitric acid. See *Nitric acid, oxygenised.*

OXYGLY'CUM. (*um, i.* n.; from οξυς, acid, and γλυκυς, sweet.) Honey mixed with vinegar.

OXYIODE. A term applied by Sir H. Davy to the triple compounds of oxygene, iodine, and the metallic basis. Lussac calls them *iodates.*

OXYLA'PATHUM. (*um, i.* n.; from οξυς, acid, and λαπαθον, the dock: so named from its acidity.) See *Rumex acutus.*

O'XYMEL. (*el, elis.* n.; from οξυς, acid, and μελι, honey.) Honey and vinegar boiled to a syrup. Called also, *Apomeli, Adipson,* and *Mel acetatum.*— Take of clarified honey, two pounds; acetic acid, a pint. Boil them down to a proper consistence, in a glass vessel, over a slow fire. This preparation of honey and vinegar possesses aperient and expectorating virtues; and is given, with these intentions, in the cure of humoral asthma, and other diseases of the chest, in doses of one or two drachms. It is also employed in the form of gargle, when diluted with water.

Oxymel æruginis. See *Linimentum æruginis.*

Oxymel colchici. Oxymel of meadow saffron is an acrid medicine, but is nevertheless employed, for its diuretic virtues, in dropsies.

Oxymel scillæ. Take of clarified honey, three pounds; vinegar of squills, two pints. Boil them in a glass vessel, with a slow fire, to the proper thickness. Aperient, expectorant, and detergent virtues are attributed to the honey of squills. It is given in doses of two or three drachms, along with some aromatic water, as that of cinnamon, to prevent the great nausea which it would otherwise be apt to excite. In large doses it proves emetic.

Oxymel simplex. See *Oxymel.*

OXYMETER. (*Oxymetrum, i.* n.; from *oxygenium,* and μητρον, a measure.) See *Eudiometer.*

Oxymu'rias hydrargyri. See *Hydrargyri oxymurias.*

Oxymurias potassæ. See *Potassæ oxymurias.*

OXYMURIATIC ACID. See *Chlorine.*

Oxymyrrhine. (*e, es.* f.; from οξυς, acute, and μυρριvη, the myrtle: so called from its resemblance to myrtle, and its pointed leaves.) See *Myrtus communis.*

Oxymyrsine. See *Myrtus communis.*

Oxyni'trum. (From οξυς, acid, and νιτρον, nitre.) A composition chiefly of vinegar and nitre.

OXYODIC. See *Iodic.*

OXYO'PIA. (*a, æ.* f.; from οξυς, acute, and ωψ, the eye.) The faculty of seeing more acutely than usual. Thus there have been instances known of persons who could see the stars in the day-time. The proximate cause is a preternatural sensibility of the retina. It has been known to precede the gutta serena; and it has been asserted that prisoners who have been long detained in darkness, have learned to read and write in darkened places.

OXYPHLEGMA'SIA. (*a, æ.* f.; from οξυς, acute, and φλεγω, to burn.) An acute inflammation.

Oxyphœ'nicon. (From οξυς, acid, and φοινιξ, the tamarind; which was so called because it grew in Phœnicia.) See *Tamarindus.*

OXYPHO'NIA. (*a, æ.* f.; from οξυς, sharp, and φωνη, the voice.) An acuteness of voice. See *Paraphonia.*

OXYPRUSSIC. See *Chlorocyanic.*

OXYRE'GMIA. (*a, æ.* f.; from οξυς, acid, and ερευγω, to break wind.) An acid eructation.

OXYRINCHUS. See *Raia oxyrinchus.*

Oxyrrho'dinon. (From οξυς, acid, and ροδινον, oil of roses.) A composition of the oil of roses and vinegar.

OXYSA'CCHARUM. (*um, i.* n.; from οξυς, acid, and σακχαρον, sugar.) A composition of vinegar and sugar.

Oxy'tocus. (From οξυς, quick, and τικτω, to bring forth.) That which promotes delivery.

OXYTRIPHY'LLUM. (*um, i.* n.; from οξυς, acid, and τριφυλλον, trefoil: so named from its acidity.) See *Oxalis acetosella.*

OXYURIS. (*is, is.* m.; from οξυς, sharp, pointed, and ουρα, the tail.) The name given by Rudolphi, and adopted by Bremser, to the thread-worm, or ascaris. See *Vermes.*

OYSTER. See *Ostrea edulis.*

Oyster, green. See *Ulva lactuca.*

Oyster-shell. See *Ostrea edulis.*

OZÆ'NA. (*a, æ.* f.; from οζη, a stench.) An ulcer situated in the nose, discharging a fœtid purulent matter, and sometimes accompanied with caries of the bones. Some authors have signified by the term, an ill-conditioned ulcer in the antrum. The first meaning is the original one. The disease is described as coming on with a trifling tumefaction and redness about the ala nasi, accompanied with a discharge of mucus, with which the nostril becomes obstructed. The matter gradually assumes the appearance of pus, is most copious in the morning, and is sometimes attended with sneezing, and a little bleeding. The ulceration occasionally extends round the ala nasi to the cheek, but seldom far from the nose, the ala of which also it rarely destroys. The ozæna is often connected with scrofulous and venereal complaints. In the latter cases, portions of the ossa spongiosa often come away. After the complete cure of all venereal complaints, an exfoliating dead piece of bone will often keep up symptoms similar to those of the ozæna, until it is detached. Mr. Pearson remarks, that the ozæna fre-

quently occurs as a symptom of the cachexia syphiloidea. It may perforate the septum nasi, destroy the ossa spongiosa, and even the ossa nasi. Such mischief is now more frequently the effect of the cachexia syphiloidea, than of lues venerea. The ozæna must not be confounded with abscesses in the upper jaw-bone.

O'ZYMUM. (*um, i.* n.; from οζω, to smell: so called from its fragrance.) See *Ocymum.*

P.

P. A contraction of *pugillus,* a pugil, or eighth part of a handful, and sometimes a contraction of *pars* or *partes,* a part or parts.

P. Æ. A contraction of *partes æqualis.*

P. P. A contraction of *pulvis patrum,* which is, powdered bark of cinchona.

PAAW, PETER, was born at Amsterdam, in 1564. Anatomy and botany were his favourite pursuits; and Leyden owes to him the establishment of its botanic garden. He died in 1617. Besides some commentaries on parts of Hippocrates, and other ancient authors, he left a treatise on the Plague, and several other works, chiefly anatomical.

PA'BULUM. (*um, i.* n.; from *pasco,* to feed.) Food; aliment.

PABULUM VITÆ. The food of life. Such are the different kinds of aliment. The animal heat and spirits are also so called.

PACCHIONI, ANTHONIO, was born at Reggio, in 1664. He devoted great attention to dissection, particularly of the membranes of the brain, and announced the discovery of glands near the longitudinal sinus, from which he alleged lymphatics pass to the pia mater. Among his posthumous works is one on the mischief of epispastics in many diseases.

Pacchionian glands. See *Glandulæ Pacchioniæ.*

PACHY'NTICUM. (From παχυνω, to incrassate.) Having the property of incrassating or thickening the fluids.

PA'CHYS. (Παχυς, thick.) The name of a disorder described by Hippocrates, but not known by us.

PÆDANCHO'NE. (*e, es.* f.; from παις, a child, and αγχω, to strangulate.) Quinsy of a child.

PÆDARTHRO'CACE. (*e, es.* f.; from παις, a boy, αρθρον, a joint, and κακον, an evil.) The joint evil. A scrofulous affection of the joints, to which children are subject.

PÆNEA. See *Penæa.*

PÆO'NIA. (*a, æ.* f.; from *Pæon,* who first applied it to medicinal purposes.) Pæony.

1. The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Digynia.*

2. The pharmacopœial name of the common pæony. See *Pæonia officinalis.*

PÆONIA OFFICINALIS. The systematic name of the common pæony; male and female pæony. This plant, *Pæonia,—foliis oblongis,* of Linnæus, has long been considered as a powerful medicine; and, till lately, had a place in the catalogue of the Materia Medica, in which the two common varieties of this plant are indiscriminately directed for use; and, on the authority of G. Bauhin, improperly distinguished into male and female pæony.

The roots and seeds of the pæony have, when fresh, a faint, unpleasant smell, somewhat of the narcotic kind, and a mucilaginous subacrid taste, with a slight degree of bitterness and astringency. In drying, they lose their smell and part of their taste. Extracts made from them by water are almost insipid, as well as inodorous: but extracts made by rectified spirits are manifestly bitterish, and considerably astringent. The flower have rather more smell than any of the other parts of the plant, and a rough sweetish taste, which they impart, together with their colour, both to water and spirit.

The roots, flowers, and seeds of pæony have been esteemed in the character of an anodyne and corroborant, but more especially the roots, which, since the days of Galen, have been very commonly employed as a remedy for the epilepsy. For this purpose, it was usual to cut the root into thin slices, which were to be attached to a string, and suspended about the neck as an amulet: if this failed of success, the patient was to have recourse to the internal use of this root, which Willis directs to be given in the form of a powder, and in the quantity of a drachm, two or three times a day, by which, as we are informed, both infants and adults were cured of this disease. Other authors recommended the expressed juice to be given in wine, and sweetened with sugar, as the most effectual way of administering this plant. Many writers, however, especially in modern times, from repeated trials of the pæony in epileptic cases, have found it of no use whatever; though Professor Home, who gave the radix pæoniæ to two epileptics at the Edinburgh infirmary, declares that one received a temporary advantage from its use. Of the good effects of this plant, in other disorders, we find no instances recorded.

PAGI'NA. (*a, æ.* f.) The surface of a leaf.

PAIGIL. See *Primula veris.*

PAIN. Αλγη. Οδυνη. *Dolor.* An unpleasant sensation, or irritation.

Painter's colic. See *Colica pictonium.*

PAKFONG. The white copper of the Chinese, said to be an alloy of copper, nickel, and zinc.

PALATE. See *Palatum.*

PALATI CIRCUMFLEXUS. See *Circumflexus palati.*

PALATI LEVATOR. See *Levator palati.*

PALATI OS. The palate bone. The palate is formed by two bones of very irregular figure. They are placed between the ossa maxillaria superiora and the os sphenoides, at the back part of the roof of the mouth, and extend from thence to the bottom of the orbit.

Each of these bones may be divided into four parts, viz. the inferior, or square portion, the pterygoid process, the nasal lamella, and orbitar process. The first of these, or the square part of the bone, helps to form the palate of the mouth. The upper part of its internal edge rises into a spine, which makes part of the septum narium. The *pterygoid* process, which is smaller above than below, is so named from its being united with the pterygoid process of the sphenoid bone, with which it helps to form the pterygoid fossæ. It is separated from the square part of the bone, and from the nasal lamella, by an oblique fossa, which, applied to such another in the os maxillare, forms a passage for a branch of the fifth pair of nerves. The *nasal* lamella is nothing more than a very thin bony plate, which arises from the upper side of the external edge of the square part of the bone. Its inner surface is concave, and furnished with a ridge, which supports the back part of the os spongiosum inferius. Externally it is convex, and firmly united to the maxillary bone. The *orbitar* process is more irregular than any other part of the bone. It has a smooth surface, when it helps to form the orbit; and when viewed in its place, we see it contiguous to that part of the orbit which is formed by the os maxillare, and appearing as a small triangle at the inner extremity of the orbitar process of this last-mentioned bone. This fourth part of the os palati likewise helps to form the zygomatic fossa on each side, and there its surface is concave. Between this orbitar process and the sphenoid bone, a hole is formed, through which an artery, vein, and nerve are transmitted to the nostrils. The ossa palati are complete in the fœtus. They are joined to the ossa maxillaria superiora, os sphenoides, os ethmoides, ossa spongiosa inferiora, and vomer.

PALATI TENSOR. See *Circumflexus.*

PALATO. Names compounded of this word belong to muscles, &c. which are attached to the palate.

PALATO-PHARYNGEUS. (So called from its origin in the palate and insertion in the pharynx.) A muscle situated at the side of the entry of the fauces. *Thyro staphilinus*, of Douglas. *Thyro-pharyngo-staphilinus*, of Winslow. It arises by a broad beginning from the middle of the velum pendulum palati, at the root of the uvula posteriorly, and from the tendinous expansion of the circumflexus palati. The fibres are collected within the posterior arch behind the tonsils, and run backwards to the top and lateral part of the pharynx, where the fibres are scattered and mixed with those of the stylo-pharyngeus. It is inserted into the edge of the upper and back part of the thyroid cartilage. Its use is to draw the uvula and velum pendulum palati downwards, and backwards, and at the same time to pull the thyroid cartilage and pharynx upwards, and shorten it; with the *constrictor superior pharyngis* and tongue, it assists in shutting the passage into the nostrils; and in swallowing, it thrusts the food from the fauces into the pharynx,

PALATO-SALPINGEUS. (From *palatum*, the palate, and σαλπιγξ, a trumpet: so called from its origin in the palate, and its trumpet-like shape.) See *Circumflexus.*

PALATO-STAPHILINUS. See *Azygos uvulæ.*

PALA'TUM. (*um, i.* n.; from *palo*, to hedge in: because it is staked in, as it were, by the teeth.) 1. The palate, or roof of the mouth.

2. An eminence of the inferior lip in the inner part of the mouth of gaping blossoms, which closes them; as in *Antirrhinum.* See *Corolla.*

PALATUM DURUM. The hard palate, or that part which is the fore-part of the roof of the mouth, and has the bones of the palate to form it.

PALATUM MOLLE. The soft palate. This lies behind the bony palate; and from the middle of it the uvula hangs down.

PALEA. (*a, æ,* f.; chaff.) *Palæa.* Chaff. Applied, in the language of botany, to short, linear, obtuse, dry scales.

PALEA DE MECHA. See *Juncus.*

PALEACEUS. (From *palea*, chaff.) Paleaceous: chaffy, or covered with chaff. Applied, by botanists, to the receptacles of plants; as those of *Xeranthemum, Zinnia, Anthemis,* &c. See *Receptaculum.*

PALIMPI'SSA. (From παλιν, repetition, and πισσα, pitch.) Dioscorides says, that dry pitch is thus named, because it is prepared of pitch twice boiled.

PALINDRO'MIA. (Παλιν, again, and δρομος, a course.) This term is used by Hippocrates for any regurgitation of humours to the more noble parts; and sometimes for the return of a distemper.

PALIU'RUS. (From παλλω, to move, and ουρον, urine: so called from its diuretic qualities.) The *Rhamnus paliurus.*

PALLADIUM. (*um, ii.* n.) A new metal, first found by Dr. Wollaston, associated with platina, among the ores of which he supposes its ores to exist, or an alloy of it with iridium and osmium; scarcely distinguishable from the crude platina, though it is harder and heavier.

PALLAS, PETER SIMON, was born at Berlin, in 1741. At the age of 17, he read a public course of lectures on anatomy. He made numerous experiments on poisons, and dissections of animals; and composed a

very ingenious treatise on those which are found within others, particularly the worms occurring in the human body; a valuable treatise on zoophytes, and some other publications. In 1768, he set out, with some other philosophers, on a scientific tour, as far as Siberia, which occupied six years. Of this he afterwards published a most interesting account, in five quarto volumes, comprehending every thing memorable in the several provinces which he had visited. This was followed by a particular history of the Mongul tribes, who had, at different periods, over-run the greater part of Asia, and whom he clearly proved to be a distinct race from the Tartars. In 1777, he read before the Academy a dissertation on the formation of mountains, and the changes which this globe has undergone, particularly in the Russian empire. He also published, from time to time, numerous works relative to *Zoology*, *Botany*, *Agriculture*, and *Geology*. In 1794, he travelled to the Crimea, of which he published an account. He died in 1811.

PALLIATIVE. (*Palliativus*; from *pallio*, to dissemble.) That which is given with an intent to palliate, or relieve, or diminish the violence of a disease, but not to cure disorders.

Palm. See *Palma.*

Palm oil. See *Cocos butyracea.*

Palm tree. See *Palmæ.*

PA'LMA. (*a*, *æ*. f.; from παλλω, to move.) 1. The palm of the hand.

2. A palm tree. See *Palmæ.*

PALMA ADY. See *Ady.*

PALMA CHRISTI. See *Ricinus.*

PALMÆ. (From *palma*, the hand: so called because the leaves are extended from the top, like the finger upon the hand.) Palms. One of the natural families of plants which have trunks similar to trees, but come under the term stipes, the tops being frondescent, that is, sending off leaves. Palms are the most lofty, and, in some instances, the most long-lived of plants, and have, therefore, justly acquired the name of trees. Yet Sir James Smith observes, paradoxical as it may seem, they are rather perennial herbaceous plants, having nothing in common with the growth of trees in general. Palms are formed of successive circular crowns of leaves, which spring directly from the root. These leaves, and their footstalks, are furnished with bundles of large sap-vessels, and returning vessels, like the leaves of trees: when one circle of them has performed its office, another is formed within it, which, being confined below, necessarily arises a little above the former. Thus, successive circles grow one above the other; by which the vertical increase of the plant is almost without end. Each circle of leaves is independent of its predecessor, and has its own cluster of vessels; so that there can be no aggregation of woody circles.

PALMA'RIS. (From *palma*, the hand.) 1. Belonging to the hand.

2. The name of two muscles of the hand.

PALMARIS BREVIS. *Palmaris brevis vel caro quadrata*, of Douglas. A small, thin, cutaneous, flexor muscle of the hand, situated between the wrist and the little finger. Fallopius tells us that it was discovered by Cananus. Winslow names it *palmaris cutaneus.* It arises from a small part of the internal annular ligament, and inner edge of the aponeurosis palmaris, and is inserted by small bundles of fleshy fibres into the os pisiforme, and into the skin and fat that cover the abductor minimi digiti. This muscle seems to assist in contracting the palm of the hand.

PALMARIS CUTANEUS. See *Palmaris brevis.*

PALMARIS LONGUS. A flexor muscle of the arm, situated on the fore-arm, immediately under the integuments. *Ulnaris gracilis*, of Winslow. It arises tendinous from the inner condyle of the os humeri, but soon becomes fleshy; and, after continuing so about three inches, terminates in a long slender tendon, which, near the wrist, separates into two portions, one of which is inserted into the internal annular ligament, and the other loses itself in a tendinous membrane, that is nearly of a triangular shape, and extends over the palm of the hand, from the carpal ligament to the roots of the fingers, and is called *aponeurosis palmaris.* Some of the fibres of this expansion adhere strongly to the metacarpal bones, and separate the muscles and tendons of each finger. Several anatomical writers have considered this aponeurosis as a production of the tendon of this muscle, but seemingly without reason, because we now and then find the latter wholly inserted into the carpal ligament, in which case it is perfectly distinct from the aponeurosis in question; and, in some subjects, the palmaris longus is wanting, but the aponeurosis is always to be found. Rhodius, indeed, says that the latter is now and then deficient; but there is good reason to think that he was mistaken. This muscle bends the hand, and may assist in its pronation; it likewise serves to stretch the aponeurosis palmaris.

PALMATUS. Palmate: hand-shaped. Applied to leaves cut, as it were, into several oblong, nearly equal segments, about halfway, or rather more, towards the base, leaving an entire space like the palm of the hand; as in *Passiflora cærulea.*

PA'LMOS. (*us*, *i*. m.; from παλλω, to beat.) A palpitation of the heart.

PA'LMULA. (*a*, *æ*. f.; diminutive of *palma*, the hand: so called from its shape.)

1. A date.

2. The broad and flat end of a rib.

PA'LPEBRA. (*a*, *æ*. f.; *à palpitando*, from their frequent motion.) The eyelid, distinguished into upper and under; at each end they unite and form the canthi.

Palpebræ superioris, levator. See *Levator palpebræ superioris.*

Palpebrarum aperiens rectus. See *Levator palpebræ superioris.*

PALPITA'TION. (*Palpitatio*, *onis*. f.; from *palpito*, to beat, leap, or throb.) 1. A palpitation or convulsive motion of a part.

2. Palpitation of the heart.

PALSY. See *Paralysis*.

Paluda'pium. (*um, ii.* n.; from *palus*, a lake, and *apium*, smallage: so named, because it grows in and about rivulets.) A species of smallage.

Pa'lus sanctus. Guaiacum wood.

Pamphi'lium. (*um, ii.* n.; from πας, all, and φιλος, grateful: so called from its extensive usefulness.) A plaster described by Galen.

PAMPINIFORM. (*Papiniformis;* from *pampinus*, a tendril, and *forma*, a likeness.) Resembling a tendril: applied to the spermatic chord and the thoracic duct.

PANA'CEA. (*a, æ.* f.; from παν, the neuter of πας, all, and ακεομαι, to cure.) An epithet given by the ancients to those remedies which they conceived would cure every disease. Unfortunately for men of the present day there are no such remedies.

Panacea ducis holsatiæ. The sulphate of potash.

Panacea duplicata. Sulphate of potash.

Panacea vegetabilis. Saffron.

PANA'DA. (*a, æ.* f.; diminutive of *pane*, bread, Ital.) *Panata. Panatella.* Bread boiled in water to the consistence of pap. Dry biscuits soaked are the best for this purpose.

Panale'thes. (From παν, all, and αληθης, true.) A name of a cephalic plaster, from its universal efficacy.

PA'NARIS. (Corrupted from *paronychia.*) See *Paronychia.*

PANARI'TIA. (Corrupted from *paronychia.*) See *Paronychia.*

PA'NAX. (*ax, acis.* f.; a name borrowed from the old Greek botanists, whose πανaξ, or πανακης, was so denominated from παν, all, and ακος, medicine, because of its abundant virtues. The name being unoccupied, Linnæus adopted it for the Chinese ginseng, that famous restorative and panacea, the reputed virtues of which yield in no respect to the ancient panax.) 1. The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Diœcia.*

2. A name of the Hercules' all-heal. See *Laserpitium chironium.*

Panax quinquefolium. The systematic name of the plant which affords the ginseng root.

Panax—foliis ternis quinatis, of Linnæus. The root is imported into this country scarcely the thickness of the little finger, about three or four inches long, frequently forked, transversely wrinkled, of a horny texture, and both internally and externally of a yellowish-white colour. To the taste it discovers a mucilaginous sweetness, approaching to that of liquorice, accompanied with some degree of bitterness, and a slight aromatic warmth. The Chinese ascribe extraordinary virtues to the root of ginseng, and have no confidence in any medicine, unless in combination with it. In Europe, however, it is very seldom employed.

Panchre'stos. (*os, i.* m.; from παν, all, and χρηςος, useful: so named from its general usefulness.) *Panchreston.* 1. An epithet of a collyrium described by Galen.

2. A cure for all diseases.

Panchymago'gus. (From παν, all, χυμος, *succus*, humour, and αγω, *duco*, to lead or draw.) A term ascribed formerly to a medicine that was supposed to purge all humours equally alike.

PANCŒ'NUS. (*us, i.* m.; from πας, all, and κοινος, common.) A popular disease, which attacks all descriptions of persons.

Pancra'tium. (*um, ii.* n.; from πας, all, and κρατος, strength: and derived by some from πας, all, and κρατεω, to conquer; and applied to plants, from their supposed power in overcoming all obstructions.) 1. Wrestling.

2. See *Scilla maritima.*

PA'NCREAS. (*as, atis.* n.; from πας, all, and κρεας, flesh: so called from its fleshy consistence.) A glandular viscus of the abdomen, of a long figure, compared to a dog's tongue, situated in the epigastric region under the stomach. It is composed of innumerable small glands, the excretory ducts of which unite and form one duct, called the pancreatic duct, which perforates the duodenum with the ductus communis choledochus, and conveys a fluid, in its nature similar to saliva, into the intestines. The pancreatic artery is a branch of the splenic. The veins evacuate themselves into the splenic vein. Its nerves are from the par vagum and great intercostal. The use of the pancreas is to secrete the pancreatic juice, which is to be mixed with the chyle in the duodenum. The quantity of the fluid secreted is uncertain; but it must be very considerable, if we compare it with the weight of the saliva, the pancreas being three times larger, and seated in a warmer place. It is expelled by the force of the circulating blood, and the pressure of the incumbent viscera in the full abdomen. Its great utility appears from its constancy, being found in almost all animals: nor is this refuted by the few experiments, in which a part of it was cut out from a robust animal without occasioning death; because the whole pancreas cannot be removed without the duodenum; for even a part of the lungs may be cut out without producing death, but they are not, therefore, useless. It seems principally to dilute the viscid cystic bile, to mitigate its acrimony, and to mix it with the food. Hence it is poured into a place remote from the duct from the liver, as often as there is no gall-bladder. Like the rest of the intestinal humours, it dilutes and resolves the mass of aliments, and performs every other office of the saliva.

PANCREATIC. (*Pancreaticus;* from *pancreas*, the name of a viscus.) Of or belonging to the pancreas.

Pancreatic duct. See *Ductus.*

Pancreatic juice. See *Pancreas.*

Pancre'ne. (From πας, all, and κρηνη, a fountain.) A name of the pancreas, from its great secretion.

PANDALI'TIUM. A whitlow.

PANDEMIC. (*Pandemicus;* from παν, all, and δημος, the people.) A disease which attacks all or a great many persons in the same place and at the same time. A pandemic disease is one which is very general.

PANDICULATION. (*Pandiculatio, onis.* f.; from *pandiculo*, to gape and stretch.) Yawning; or a restless stretching or gaping, such as accompanies the cold fit of an ague.

PANDURIFORM. *Panduriformis.* Fiddle-shaped. Applied to a leaf which is oblong, broad at the two extremities, and contracted in the middle, as in the fiddle-dock, *Rumex pulcher.*

PANI'CULA. (*a, æ.* f.) A panicle. A species of compound inflorescence which bears the flowers in a sort of loose, subdivided bunch or cluster, without any order, appearing like a *branched* spike. The flowers of the *Æsculus hippo-castanum, Rhus cotinus, Gypsophylla paniculata*, and *Syringa vulgaris*, are good examples of a panicle: but this species of inflorescence occurs most in grasses; as in *Poa aquatica.* A panicle is said to be,

1. *Patulous*, when the stalks are distant, lax, or spreading; as in *Panicula patula*, and *Campanula patula.*

2. *Coartate*, when dense or crowded; as in *Campanula rapunculus.*

3. *Dichotomous*, forked; as in *Linum flavum.*

4. *Brachiate*, crossing each other in pairs; as in *Salvia paniculata.*

5. *Divaricate*, a more spreading one than the patulous; as in the *Pnenanthes muralis.*

PANICULA'TUS. Paniculate: bunched like a panicle.

PA'NICUM. (*um, i.* n.; *à paniculis*, from its many panicles: the spike consisting of innumerable thick seeds, disposed in many panicles.) The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia.*

PANICUM ITALICUM. The systematic name of the plant which affords the Indian millet-seed, which is much esteemed in Italy, being a constant ingredient in soups, and made into a variety of forms for the table.

PANICUM MILIACEUM. The systematic name of the plant which affords the millet-seed. They are esteemed as a nutritious article of diet, and are often made into puddings in this country.

PANIS. (*is, is* m.) Bread. See *Bread.*

PANIS CUCULI. See *Oxalis acetosella.*

PANIS PORCINUS. A species of cyclamen.

PANNI'CULUS. (*us, i.* m.; from *pannus*, cloth.) 1. A piece of fine cloth.

2. The cellular and carneous membranes are so called, from their resemblance to a piece of fine cloth.

PANNICULUS ADIPOSUS. See *Adipose membrane.*

PANNO'NICA. (*a, æ.* f.; from *pannus*, a rag: so called because its stalk is divided into many uneven points, like the end of a piece of rag.) See *Hypochœris maculata.*

PA'NNUS. (*us, i.* m.; from πενω, to labour.) 1. A piece of cloth.

2. A tent for a wound.

3. A speck in the eye, resembling a bit of rag. See *Pterygium.*

4. An irregular mark upon the skin.

PANO'CTIA. A bubo in the groin.

PANOPHO'BIA. (*a, æ.* f.; from παν, all, and φοβος, fear.) *Pantophobia.* That kind of melancholy which is principally characterised by groundless fears.

PANSY. See *Viola tricolor.*

PANTAGO'GUS. (From πας, all, and αγω, to drive out.) That which expels all morbid humours.

PANTO'LMIUS. (From πας, all, and τολμαω, to dare: so named from its general uses.) A medicine described by Ægineta.

PANTOPHO'BIA. See *Panophobia.*

PA'NUS. (*us, i.* m.; from πενω, to work.)

1. A weaver's roll.

2. A soft tumour, like a weaver's roll.

PAPA'VER. (*er, eris.* n.; from *pappa*, pap: so called because nurses used to mix this plant in children's food to relieve the colic and make them sleep.) 1. The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Monogynia.* The poppy.

2. The pharmacopœial name of the white poppy. See *Papaver somniferum.*

PAPAVER ERRATICUM. See *Papaver rhœas.*

PAPAVER NIGRUM. The black poppy. This is merely a variety of the white poppy, producing black seeds. See *Papaver somniferum.*

PAPAVER RHŒAS. The systematic and pharmacopœial name of the red corn poppy: called also *Papaver erraticum.*

Papaver—capsulis glabris globosis, caule-piloso multifloro; foliis pennatifidis incisis; of Linnæus. The heads of this species, like those of the somniferum, contain a milky juice of a narcotic quality, from which an extract is prepared that has been successfully employed as a sedative. The flowers have somewhat of the smell of opium, and a mucilaginous taste, accompanied with a slight degree of bitterness. A syrup of these flowers is directed in the London Pharmacopœia, which has been thought useful as an anodyne and pectoral, and is prescribed in coughs and catarrhal affections. See *Syrupus rhœados.*

PAPAVER SOMNIFERUM. The systematic name of the white poppy, from which opium is obtained.

Linnæus describes the plant: —*Papaver—calycibus, capsulisque glabris, foliis amplexicaulibus incisis.* This drug is also called *opium thebaicum*, from being anciently prepared chiefly at Thebes: *Opion*, and *manus Dei*, from its extensive medical virtues, &c. The Arabians called it *afflon* and *afium.* It is the concreted milky juice of the capsule or head of the poppy. It is brought from Turkey, Egypt, the East Indies, and other parts of Asia, where poppies are cultivated for this use in fields, as corn among us. The manner in which it is collected has been described long ago by Kæmpfer and others; but the most circum-

stantial detail of the culture of the poppy, and the method of procuring the opium, is that given by Kerr, as practised in the province of Bahar. He says, "The field being well prepared by the plough and harrow, and reduced to an exact level superficies, it is then divided into quadrangular areas of seven feet long, and five feet in breadth, leaving two feet of interval, which is raised five or six inches, and excavated into an aqueduct for conveying water to every area, for which purpose they have a well in every cultivated field. The seeds are sown in October or November. The plants are allowed to grow six or eight inches distant from each other, and are plentifully supplied with water; when the young plants are six or eight inches high, they are watered more sparingly. But the cultivator spreads all over the areas a nourishing compost of ashes, human excrements, cow-dung, and a large portion of nitrous earths, scraped from the highways and old mud walls. When the plants are nigh flowering, they are watered profusely, to increase the juice. When the capsules are half grown, no more water is given, and they begin to collect the opium. At sunset they make two longitudinal double incisions upon each half-ripe capsule, passing from below upwards, and taking care not to penetrate the internal cavity of the capsule. The incisions are repeated every evening until each capsule has received six or eight wounds; then they are allowed to ripen their seeds. The ripe capsules afford little or no juice. If the wound was made in the heat of the day, a cicatrix would be too soon formed. The night dews, by their moisture, favour the exstillation of the juice. Early in the morning, old women, boys, and girls collect the juice, by scraping it off the wounds with a small iron scoop, and deposit the whole in an earthen pot, where it is worked by the hand, in the open sunshine, until it becomes of a considerable spissitude. It is then formed into cakes of a globular shape, and about four pounds in weight, and laid into little earthen basins to be further exsiccated. These cakes are covered over with leaves, and dried until they are fit for sale. Opium is frequently adulterated with cow-dung, the extract of the poppy-plant procured by boiling, and various other substances which they keep in secrecy." This process, however, is now but rarely practised, the consumption of this drug being too great to be supplied by that method of collection.

It comes to the European market in flattish cakes, sprinkled with pieces of dried leaves, and with the seed capsules of some species of rumex. It should be of a rich brown colour, a tough consistency, and a tolerably smooth and uniform texture. Its peculiar narcotic smell should be strong and fresh, and unaccompanied by any burnt odour. Its taste is nauseously bitter, and slightly warm and acrid. Those pieces which are very soft, full of herbaceous impurities, containing patches of a very dark brown or black extract, of an empyreumatic odour, or not smelling duly narcotic, are in general adulterated; and it is not uncommon to find bullets concealed in masses even of the best opium. When good opium is carefully dried, it becomes brittle, and affords a yellow brown powder. It burns with flame, and exhales an odour in which may be traced some resemblance to that of animal matter. These are the characters of the most genuine opium which reaches this country, and which is imported from Turkey: an inferior article, of a much darker colour, a less narcotic odour, and more bitter in taste, is imported under the name of *East India opium*. It is frequently mixed with the Turkey opium, an article which, on account of its large consumption, and high price, is open to a great variety of adulterations, both abroad and at home: indeed, it is not probable that much unadulterated opium ever reaches this country. Opium of very excellent quality has been grown in *England;* and in medicinal powers it has been found fully as effective as the foreign: but the coldness and changeable nature of our climate renders it unlikely that it should ever be produced here in any considerable quantity, so as even to supply a small part of the commercial demands for this drug.

The chemical nature of opium has long been matter of enquiry: but it is only lately that the subject has been at all satisfactorily investigated, and that, through the researches of Sertuerner, Robiquet, and several other chemists, we have been made acquainted with the existence of a peculiar salifiable base in opium, to which the name of *morphia* has been given, and to which its activity as a narcotic may probably be exclusively ascribed.

Morphia, not in a very pure state, is copiously precipitated by adding ammonia to a strong solution of opium; but a better mode of obtaining it, is to triturate powdered opium into a thin paste with acetic acid, and afterwards to add six or eight parts of water. The liquor may be filtered off through coarse paper, and the residue treated with a small additional portion of acetic acid and water, as before. Add excess of ammonia to the filtered liquors, which will occasion a precipitate, to be collected in a filter: evaporate the filtered liquor to about one fifth its bulk; add a little more ammonia, and a second precipitate is obtained, which may be added to the former. These precipitates are impure morphia: they may be cleansed by digestion in small quantities of cold alkohol, which will remove the chief part of the colouring matter, and the residue being dissolved in boiling alkohol, furnishes crystals of pure morphia, as the liquid cools. In this process the salt of morphia, (*meconate of morphia?*) existing in opium, is decomposed by acetic acid, and a solution of acetate of morphia obtained, which the ammonia decomposes. Robiquet's process for obtaining morphia is as follows:—Boil a concentrated solution of opium for a quarter of an hour with a small quantity of magnesia (about two hundred grains of magnesia to a pound of opium is

sufficient): filter, and wash the grey precipitate with cold water: dry it, and digest it in warm but weak alkohol, by which much colour is dissolved; then collect it upon a filter, boil it in highly rectified alkohol, and filter the solution while hot: as it cools it deposits crystallised morphia. In this process, the meconate of morphia, originally existing in the opium, is decomposed by the magnesia, and the precipitate consists of morphia, mixed with meconate of magnesia and a portion of uncombined magnesia. The morphia is separated from the precipitate by boiling alkohol. It seems probable that, in opium, the morphia is combined with an acid, which, being in excess, gives to solutions of opium the property of reddening vegetable blues. This acid (the meconic?) may be obtained from the residuum of the magnesian precipitate, left undissolved by alkohol in the above process for procuring morphia. For this purpose, the magnesian residue is dissolved in very dilute sulphuric acid, and muriate of barytes added to the sulphuric solution: a red precipitate, consisting of sulphate and meconate of barytes, falls. This precipitate is to be boiled with very dilute sulphuric acid, by which the meconate of barytes is decomposed; and the meconic acid may be obtained from the filtered liquor by due evaporation. It may be purified by sublimation at a gentle heat. This acid has no narcotic effect.

By digesting opium in æther, and slowly evaporating the filtered ætherial tincture, a crystallised substance, contaminated by a little oil and caoutchouc, is obtained, which is perfectly distinct from, and independent of, morphia. This is the substance which has been termed *narcotine*, and, from its discoverer, *Derosne*. Upon this the exciting and stimulating power of opium, which usually precedes its sedative effects, is by some supposed to depend. It is insoluble in water, scarcely soluble in alkohol, and not alkaline.

Morphia is a colourless substance, of a bitter taste, and crystallises in quadrangular prisms. It is very little soluble, even in boiling water, but it dissolves in boiling alkohol, and the solution deposits crystals as it cools. It reddens turmeric, and converts vegetable blues to green, in the manner of an alkali: it also combines with the acids, forming with most of them crystallisable salts.

Pure morphia, in consequence of its difficult solubility, is uncertain in its operation as a narcotic; but some of its salts may probably be found useful substitutes for opium. The acetate of morphia is said to have been employed with advantage; and, indeed, acetic tincture of opium, which may be presumed to contain acetate of morphia, has long been used as a preparation less liable to stimulate and excite than most others of opium. It has also been supposed that some advantage may be derived by separating the narcotine from opium, which may be effected by washing the extract of opium, before it is sufficiently inspissated, with repeated portions of sulphuric æther. There is, however, no satisfactory evidence of any improvement in the medical effects of opium derived from such a process.

Exclusive of its active principles, opium contains inert extractive matter, gum, gluten, and a few saline substances: but these, as well as the morphia, vary extremely in their relative proportions, so that it is of little use to state those afforded by any individual sample of the drug. Dr. A. T. Thompson states, in his Dispensatory, that fine Turkey opium contains nearly three times the quantity of morphia yielded by the same weight of East Indian opium. "From a very carefully prepared sample of English opium, I procured," says Professor Brande, "rather a larger quantity of morphia than from the same weight of Turkey opium." The average produce of morphia from a pound of good opium may be estimated at about five hundred grains, or one fourteenth its weight; but it is improbable that the whole is separated in any of our processes.

Morphia, according to its discoverer, melts in a gentle heat; and in that state has very much the appearance of melted sulphur. On cooling, it again crystallises. It burns easily; and, when heated in close vessels, leaves a solid resinous black matter, having a peculiar smell. Morphia acts with great energy on the animal economy. A grain and a half, taken at three different times, produced such violent symptoms upon three young men of seventeen years of age, that Sertuerner was alarmed lest the consequences should have proved fatal.

The use of opium, though not unknown to Hippocrates, can be clearly traced to Diagoras, who was nearly his contemporary; and its importance has ever since been gradually advanced by succeeding physicians of different nations. Its extensive practical utility, however, has not been long well understood; and in this country, perhaps, may be dated from the time of Sydenham. Opium is the chief narcotic now employed: it acts directly upon the nervous power, diminishing the sensibility, irritability, and mobility of the system; and, according to Cullen, in a certain manner suspending the motion of the nervous fluid to and from the brain, and thereby inducing sleep, one of its principal effects. From this sedative power of opium, by which it allays pain, inordinate action, and restlessness, it naturally follows that it may be employed with advantage in a great variety of diseases. Indeed, there is scarcely any disorder in which, under some circumstances, its use is not found proper; and though in many cases it fails of producing sleep, yet, if taken in a full dose, it occasions a pleasant tranquillity of mind, and a drowsiness which approaches to sleep, and which always refreshes the patient. Besides the sedative power of opium, it is known to act more or less as a stimulant, exciting the motion of the blood. By a certain conjoined effort of this sedative and stimulant effect, opium has been thought to produce in-

toxication, a quality for which it is much used in eastern countries.

The principal indications which opium is capable of fulfilling are, supporting the actions of the system, allaying pain and irritation, relieving spasmodic action, inducing sleep, and checking morbidly increased secretions. It is differently administered, as it is designed to fulfil one or other of these indications.

Where opium is given as a stimulus, it ought to be administered in small doses, frequently repeated, and slowly increased, as by this mode the excitement it produces is best kept up. But where the design is to mitigate pain or irritation, or the symptoms arising from these, it ought to be given in a full dose, and at distant intervals, by which the state of diminished power and sensibility is most completely induced.

One other general rule, with respect to the administration of opium, is, that it ought not to be given in any pure inflammatory affection, at least until evacuations have been used, or unless means are employed to determine it to the surface, and produce a diaphoresis.

In continued fevers, not of the pure inflammatory kind, opium is administered sometimes as a general stimulus, and at other times to allay irritation. The great practical rule in such cases is, that it ought to be given in such quantities only, that the pulse becomes slower and fuller from its operation. Its exhibition is improper where local inflammation, especially of the brain, or of its membranes, exists.

In intermittent fever, an opiate renders the paroxysms milder, and facilitates the cure. Dr. Cullen recommends the union of opium with bark, which enables the stomach to bear the latter in larger doses, and adds considerably to its efficacy.

In the profluvia and cholera, opium is employed to lessen the discharge, and is frequently the principal remedy in effecting the cure. In passive hæmorrhage, it is useful by its stimulant power. In retrocedent gout it is used as a powerful stimulant.

In convulsive and spasmodic diseases it is advantageously administered, with the view of relieving symptoms, or even of effecting a cure; and in several of them it requires to be given to a very great extent.

In lues venerea it promotes the action of mercury, and relieves the irritation arising either from that remedy or the disease.

In the year 1779, opium was introduced into practice as a specific against the lues venerea. It was employed in several of the military hospitals, where it acquired the reputation of a most efficacious remedy; and Dr. Michaelis, physician of the Hessian forces, published an account of a great number of successful experiments made with it, in the first volume of the Medical Communications, in the year 1784. Opium was afterwards given as an antivenereal remedy in some foreign hospitals. Many trials were also made of its virtues in several of the London hospitals, and in the Royal Infirmary at Edinburgh. Very favourable reports of its efficacy in removing venereal complaints were published by different practitioners; but, at the same time, so many deductions were to be made, and so many exceptions were to be admitted, that it required little sagacity to discover that most of the advocates for this medicine reposed but a slender and fluctuating confidence in its antivenereal powers. Mr. Pearson made several experiments on the virtues of opium in lues venerea, at the Lock Hospital, in the years 1784 and 1785; and published a narrative of its effects, in the second volume of the Medical Communications. "The result of my experiments," says he, "was very unfavourable to the credit of this new remedy; and I believe that no surgeon in this country relies on opium as a specific against the venereal virus. I have been long accustomed to administer opium with great freedom during the mercurial course; and the experience of nearly twenty years has taught me, that, when it is combined with mercury, the proper efficacy of the latter is not in any measure increased; that it would not be safe to rely upon a smaller quantity of the mineral specific, nor to contract the mercurial course within a shorter limit than where no opium has been employed. This representation will not, I presume, admit of controversy; yet we frequently hear people expressing themselves upon this head as if opium manifested some peculiar qualities in venereal complaints, of a distinct nature from its well-known narcotic properties, and thus afforded an important aid to mercury in the removal of lues venerea." Perhaps it may not be unuseful to disentangle this subject from the perplexity in which such indefinite language necessarily involves it. Opium, when given in conjunction with mercury, by diminishing the sensibility of the stomach and bowels, prevents many of those inconveniences which this mineral is apt to excite in the primæ viæ; and thus its admission into the general system is facilitated. Mercury will likewise often produce a morbid irritability, accompanied with restlessness and insomnolescence; and it sometimes renders venereal sores painful, and disposed to spread. These accidental evils, not necessarily connected with the venereal disease, may be commonly alleviated, and often entirely removed, by a judicious administration of opium; and the patient will consequently be enabled to persist in using the mineral specific. It, however, must be perfectly obvious that opium, in conferring this sort of relief, communicates no additional virtues to mercury; and that, in reality, it assists the constitution of the patient, not the operation of the medicine with which it is combined. The salutary effects of mercury as an antidote may be diminished or lost by the supervention of vomiting, dysentery, &c. Opium will often correct these morbid appearances, and so will spices, wine, and ap-

propriate diet, &c.; yet it would be a strange use of words to urge, wherever these articles of food were beneficial to a venereal patient, that they concurred in augmenting the medicinal virtues of mercury. It may be supposed that the majority of medical men would understand by the terms, "to assist a medicine in curing a contagious disease," that the drug conjoined with the specific actually increased its medicinal efficacy: whereas, in the instances before us, it is the human body only which has been aided to resist the operation of certain noxious powers, which would render a perseverance in the antidote prejudicial or impossible. The soothing qualities of this admirable medicine can scarcely be estimated too highly. Yet we must beware of ascribing effects to them which have no existence; since a confidence in the antivenereal virtue of opium would be a source of greater mischief than its most valuable properties would be able to compensate.

Opium is employed with laxatives in colic, and often prevents ileus and inflammation, by relieving the spasm.

It is given also to promote healthy suppuration, and is a principal remedy in arresting the progress of gangrene.

The sudorific property of opium is justly considered of considerable power, more especially in combination with ipecacuan or antimony. The compound powder of ipecacuan, consisting of one part of ipecacuan, one part of opium, and eight of sulphate of potash, is a very powerful sudorific, given in a dose of from 15 to 25 grains. The combination of opium with antimony is generally made by adding 30 to 40 drops of antimonial wine to 25 or 30 drops of tincture of opium, and forming them into a draught.

Opium, taken into the stomach in immoderate doses, proves a narcotic poison, producing vertigo, tremors, convulsions, delirium, stupor, stertor, and, finally, fatal apoplexy.

Where opium has been taken so as to produce these dangerous consequences, the contents of the stomach are first to be evacuated by a powerful emetic, as a solution of the sulphate of zinc. Large draughts of vinegar, or any of the native vegetable acids, are then to be swallowed. Moderate doses of brandy, or a strong infusion of coffee, have also been found useful.

Respecting the external application of opium, authors seem not sufficiently agreed. Some allege, that when applied to the skin, it allays pain and spasm, procures sleep, and produces all the salutary or dangerous effects which result from its internal use; while others say that, thus applied, it has little or no effect whatever. It has also been asserted, that when mixed with caustic, it diminishes the pain which would otherwise ensue; and, if this be true, it is probably by decreasing the sensibility of the part. Injected by the rectum, it has all the effect of opium taken into the stomach; but, to answer this purpose, double the quantity is to be employed. Applied to the naked nerves of animals, it produces immediate torpor and loss of power in all the muscles with which the nerves communicate.

The requisite dose of opium varies in different persons, and in different states of the same person. A quarter of a grain will in one adult produce effects which ten times the quantity will not do in another; and a dose that might prove fatal in cholera or colic, would not be perceptible in many cases of tetanus, or mania. The lowest fatal dose to those unaccustomed to take it, seems to be about four grains; but a dangerous dose is so apt to produce vomiting, that it has seldom time to occasion death. When given in too small a dose, it often produces disturbed sleep, and other disagreeable consequences; and, in some cases, it seems impossible to be made to agree in any dose or form. Often, on the other hand, from a small dose, sound sleep and alleviation of pain will be produced; while a larger one occasions vertigo and delirium. Some prefer the repetition of small doses; others the giving a full dose at once: its operation is supposed to last about eight hours. This, however, must depend upon circumstances. The usual dose is one grain.

The officinal preparations of this drug are numerous. The following are among the principal:—*Opium purificatum, pilula saponis cum opio, pulvis cornu usti cum opio, tinctura opii, tinctura camphoræ composita,* and *confectio opii:* it is also an ingredient in the *pulvis ipecacuanhæ compositus, electuarium japonicum, pulvis cretæ compositus cum opio,* &c. The capsules of the poppy are also directed for medicinal use in the form of fomentation; and in the *syrupus papaveris,* a useful anodyne, which often succeeds in procuring sleep where opium fails: it is, however, more especially adapted to children. The seeds of this species of poppy contain a bland oil, and in many places are eaten as food: as a medicine, they have been usually given in the form of emulsion in catarrhs, stranguries, &c.

Papaw. The fruit of a species of *carica.* See *Carica papaya.*

PAPILIONACEOUS. (From *papilio,* a butterfly, which it resembles.) *Papilionaceus.* Butterfly-like. Applied to the corolla of plants when they are irregular and spreading, and thus resemble somewhat the butterfly. The various petals which compose such a flower are distinguished by appropriate names: *vexillum,* the standard, the large one at the back; *alæ,* the two side petals; and *carina,* the heel, consisting of two petals united or separate, embracing the internal organs.

PAPI'LLA. (*a, æ.* f.; from *pappus,* down.) 1. The nipple of the breast. See *Mamma.*

2. The fine termination of a nerve, &c.; as the nervous papillæ of the tongue, skin, &c.

3. See *Uila.*

Papillæ medullares. Small eminences on the medulla oblongata.

Papilla'ris herba. See *Lapsana*.

PAPILLO'SUS. (From *papilla*.) Papillose: pimpled. Applied to stalks connected with soft tubercles; as the ice plant, *Mesembryanthemum crystallinum*.

PAPPO'SUS. Pappose: furnished with a pappus or seed-down; as the seeds of the *Leontodon taraxacum*.

PAPPUS. (*us, i.* m.; from παππος.) 1. In *Anatomy*, the hair on the middle of the chin. See *Capillus*.

2. In *Botany*, the *seed-down*. This is restrained by Gærtner to the chaffy, feathery, or bristly crown of many seeds that have no pericarpium, and which originates in a partial calyx crowning the summits of each of these seeds, and remaining after the flower is fallen; as in the seeds of dandelion, goatsbeard, &c.

The same term is used by the generality of botanists for the feathery crown of seeds furnished with a capsule, as well as for a similar appendage to the base or sides of any seeds, neither of which can originate from a calyx. For the former of these, Gærtner adopts the term *coma*; for the latter, *pubes*; which last also serves for any downiness or wool about the *testa* of a seed; as in the cotton-plant, and *Blandfordia nobilis*.

The varieties of the pappus are,

1. *Sessile*, on the apex of the seed, without any footstalk; as in *Asclepias Syriaca*, *Nerium oleander*, and *Epilobium*.

2. *Stipitate*, elevated on a footstalk; as in *Leontodon taraxacum*.

3. *Plumose*, when the radii of the footstalked pappus are hairy laterally; as in *Tragopogon pratense*.

The *lana pappiformis* of authors is not a pappus, but hairs which only surround the seed; as in *Eryophorum*.

PA'PULA. (*a, æ.* f.; diminutive of *pappa*, a dug or nipple. See *Ulla*.) A very small and acuminated elevation of the cuticle, with an inflamed base, not containing a fluid, nor tending to suppuration. The duration of papulæ is uncertain, but they terminate for the most part in scurf.

Papulæ. Pimples. The name of an order in Dr. Willan's arrangement of cutaneous diseases, characterised by very small and acuminated elevations of the cuticle, with an inflamed base, very seldom containing a fluid, or suppurating, and commonly terminating in scurf. They appear to originate in an inflammation of the papillæ of the skin, by which these are enlarged, elevated, and indurated, and made to assume more or less of a red colour. Sometimes even a slight effusion of lymph takes place, which gives a vesicular appearance to several of the papillæ; but the fluid is re-absorbed without breaking the cuticle, and they terminate, for the most part, in scurf. The order contains *strophulus*, *lichen*, and *prurigo*.

PA'R. (*ar, aris.* n.; a pair.) A pair.

Par cucullare. So Casserius calls the *Crico-arytænoid muscle*.

Par vagum. The eighth pair of nerves. They arise from the corpora olivaria of the medulla oblongata, and proceed into the neck, thorax, and abdomen. In the neck the par vagum gives off two branches, the lingual and superior laryngeal; and in the thorax, four branches, the recurrent laryngeal, the cardiac, the pulmonary, and the œsophageal plexuses. At length the trunks of the nervi vagi, adjacent to the mediastinum, run into the stomach, and there form the stomachic plexus, which branches to the abdominal plexuses.

PARABY'SMA. (*a, atis.* n.; from παραβυω, and therefore means congestion, infarction, coacervation.) Turgescence. Dr. Good has applied this term to a genus of diseases, comprehended by Cullen and others under that of physconia.

PARACELSUS, a native of Switzerland, born about the year 1493. He very early commenced a sort of rambling life, assuming the pompous names of *Philippus, Aureolus, Theophrastus, Paracelsus, Bombastus de Hohenheim*; and after visiting the schools of France, Italy, and Germany, he sought for information during several years among quacks of every description, pretending that he had found the principles of the medical art altogether erroneous. He appears to have possessed the talent of imposing upon mankind in an eminent degree. He died at Saltzburg in 1541. Paracelsus was of material service to medicine, by showing that many active medicines might be safely employed; and particularly as having been one of the first to exhibit mercury in the cure of syphilis, which had been in vain attempted by the Galenical remedies then in use. He published little during his life, but a great number of posthumous treatises appeared under his name, which are too replete with absurdities to deserve enumeration.

PARACENTE'SIS. (*is, is.* f.; from παρακεντεω, to pierce through.) Tapping. The operation of evacuating the water in ascites, dropsy of the ovarium, &c.

PARACHROSE. (*Parachrosus*; from παρα, and χρωμα, colour.) Altered colour. Applied to minerals.

Paracma'sticos. (From παρακμαζω, to decline.) *Paracme*. 1. The declension of any distemper.

2. That part of life where a person is said to grow old, from 35 to 49, when he is said to be old.—*Galen*.

PARA'COE. (From παρα, diminutive, and ακουω, to hear.) Dulness of hearing.

PARACOLLE'TICUS. (From παρακολλαομαι, to glue together.) Agglutinant, or that which unites parts preternaturally separated.

Para'cope. (From παρακοπτω, to be delirious.) A slight delirium.—*Hippocrates*.

Paracru'sis. (From παρακρουω, to deprecate.) A slight disarrangement of the faculties, where the patient is inattentive to what is said to him.

PARACU'SIS. (*is, is.* f.; from παρα, wrong, and ακουω, to hear.) Depraved hearing. This may be occasioned by any thing that proves injurious to the ear, as loud noises from the firing of cannon, violent colds, particularly affecting the head, inflammation or ulceration of the membrane, hard wax, or other substances interrupting sounds, too great a dryness, or too much moisture in the parts; or by atony, debility, or paralysis of the auditory nerves. In some instances it ensues in consequence of preceding diseases, such as fever, syphilis, &c., and in others it depends upon an original defect in the structure or formation of the ear. In the last instance, the person is usually not only deaf, but likewise dumb. There are two species:—

1. *Paracusis imperfecta*, or deafness; when existing sounds are not heard as usual.

2. *Paracusis imaginaria*; when imaginary sounds are heard, not from without, but excited within the ear. In attempting the removal of deafness, the first thing to be done is to remove from the auditory canal every thing that may obstruct the ingress of the air, as wax, tumours, &c., which will cause the person to hear. If the internal ear, or immediate organ of hearing, be the seat of the cause of deafness, little can be done, because the cause is not known; but blisters behind the ear, stimulating applications to the auditory canal, and around the ear, are often useful.

PARACYESIS. (*is, is.* f.; from παρα, *male*, and κυησις, *graviditas*.) Morbid pregnancy.

Paracyna'nche. (*e, es.* f.; from παρα, κυων, a dog, and αγχω, to strangle.) See *Cynanche*.

Paradise, grains of. See *Amomum granum paradisi*.

Paradisi grana. (Called grains of Paradise, from its virtues.) See *Amomum*.

PARAGEUSIS. (*is, is.* f.; from παρα, *male*, and γευω, *gustum præbeo*.) Morbid taste.

PARAGLO'SSA. (*a, æ.* f.; from παρα, and γλωσσα, the tongue.) A prolapsus of the tongue; a swelled tongue.

Parago'ge. (From παραγω, to adduce.) This term signifies that fitness of the bones to one another, which is discernible in their articulation; and bones which are thereby easier of reduction, when dislocated, are by Hippocrates called παραγωγοτερα.

Parala'mpsis. (From παραλαμπω, to shine a little.) Some writers use this word to express a cicatrix in the transparent part of the cornea of the eye.

Paralius. (*us, ii.* m.; from παραλιος, belonging to the sea.) The trivial name of a species of euphorbia, the juice of which is very acrid, and used to destroy warts.

Paralla'gma. (From παραλλαττω, to change.) *Parallaxis*. The transmutation of a solid part from its proper place; as where one part of a broken bone lies over another.

Paralla'xis. See *Parallagma*.

Paralle'la. (From παραλληλος, parallel.) A sort of scurf or leprosy, affecting only the palms of the hands, and running down them in parallel lines.

PARALO'GIA. (*a, æ.* f.; from παραλεγω, to talk absurdly.) A delirium in which the patient talks wildly.

Paralo'phia. (*a, æ.* f.; from παρα, near, and λοφια, the first vertebra of the back.) The lower and lateral part of the neck near the vertebræ, according to some anatomical writers, as Keil, &c.

PARA'LYSIS. (*is, is.* f.; from παραλυω, to loose, or weaken.) *Catalysis. Attonitus morbus.* The palsy. A disease known by a loss or diminution of the power of voluntary motion, affecting any part of the body. The most usual form of palsy is, when one side of the body is affected: it not uncommonly seizes the lower extremities, or all parts below the pelvis; sometimes the arms only; and ocasionally a part, as one side of the face, one eyelid, the tongue, or the muscles of deglutition; and hence the Cullenian arrangements into,—

1. *Paralysis partialis*, when partial, or palsy of some particular muscle.

2. *Paralysis hemiplegica*, when it affects one side longitudinally.

3. *Paralysis paraplegica*, palsy of one half of the body, taken transversely, as both legs and thighs.

4. *Paralysis venenata*, when it arises from the sedative effects of poison.

Paralysis is also symptomatic of several diseases; as worms, scrofula, syphilis, &c.

It may arise in consequence of an attack of apoplexy. It may likewise be occasioned by any thing that prevents the flow of the nervous power from the brain into the organs of motion: hence tumours, over-distension, and effusion, often give rise to it. It may also be occasioned by translations of morbid matter to the head, by the suppression of usual evacuations, and by the pressure made on the nerves by luxations, fractures, wounds, or other external injuries. The long-continued application of sedatives will likewise produce palsy, as we find those whose occupations subject them to the constant handling of white lead, and those who are much exposed to the poisonous fumes of metals or minerals, are very apt to be attacked with it. Whatever tends to relax and enervate the system, may likewise prove an occasional cause of this disease.

Palsy usually comes on with a sudden and immediate loss of the motion and sensibility of the parts; but, in a few instances, it is preceded by a numbness, coldness, and paleness, and sometimes by slight convulsive twitches. When the head is much affected, the eye and mouth are drawn on one side, the memory and judgment are much impaired, and the speech is indistinct and incoherent. If the disease affects the extremities, and has been of long duration, it not only produces a loss of motion and sensibility, but likewise a considerable flaccidity and wasting away in the muscles of the parts affected.

When palsy attacks any vital part, such as the brain, heart, or lungs, it soon terminates fatally. When it arises as a consequence of apoplexy, it generally proves very difficult to cure. Paralytic affections of the lower extremities, ensuing from any injury done to the spinal marrow, by blows and other accidents, usually prove incurable. Palsy, although a dangerous disease in every instance, particularly at an advanced period of life, is sometimes removed by the occurrence of a diarrhœa or fever.

The morbid appearances to be observed on dissections in palsy are pretty similar to those which are to be met with in apoplexy: hence collections of blood, and of serous fluids, are often found effused on the brain, but more frequently the latter; and in some instances the substance of this organ seems to have suffered an alteration. In palsy, as well as in apoplexy, the collection of extravasated fluid is generally on the opposite side of the brain to that which is affected.

The general indications are, to remove, as far as possible, any compressing cause, and to rouse gradually the torpid portion of the nervous system. It will sometimes be proper, where the attack is sudden, the disease originating in the head, with great determination of blood to that part, particularly in a plethoric habit, to open the temporal artery or jugular vein, or apply cupping-glasses to the neck, and exhibit active purges, with the other means pointed out under apoplexy. But where the patient is advanced in life, of a debilitated constitution, and not too full of blood, the object should rather be to procure regular and healthy discharges from the bowels, obviate irritation in the brain by blisters in the neighbourhood, and procure a steady determination to the skin by gently stimulant diaphoretics, as ammonia, guaiacum, &c. in moderate doses regularly persevered in. Emetics have been sometimes very useful under these circumstances, but would be dangerous where congestion in the brain existed. Certain narcotic substances have been found occasionally successful, as aconite, arnica, toxicodendron, nux vomica, and opium: but the tendency of the latter to produce fulness of the vessels of the head must greatly limit its use. Various local means of increasing the circulation and nervous energy in the affected parts are resorted to in this complaint, often with decided benefit. In all cases it is proper to keep up sufficient warmth in the limb, or the disease may be rendered incurable. But in addition to this, in tedious cases, fomentations, the vapour bath, friction, electricity, and a variety of stimulant, rubefacient, or even vesicatory, embrocations, liniments, and plasters, may assist materially in the recovery of the patient. In the use of some of these, it should be a rule to begin near the boundary of the disease, and carry them onward, as the amendment proceeds, not only as they will be more likely to answer a good purpose, but also because there would be some risk in stimulating too powerfully an extreme part. A suitable diet, according to the habit of the patient, warm clothing, the prudent use of the bath, and other means calculated to strengthen the system, must not be neglected.

Paralysis herba. So called from its use in paralytic disorders. The cowslip and primrose are sometimes so termed. See *Primula veris*, and *Primula vulgaris*.

PARAMENIA. (*a*, *æ*. f.; from παρα, wrong, and μην, the menses.) Mismenstruation.

Parame'ria. (From παρα, near, and μηρος, the thigh.) The inward parts of the thigh.

Para'mesus. (From παρα, near, and μεσος, the middle.) The ring-finger, or that which is between the middle and the little fingers.

PARAMO'RPHIA. (From παρα, wrong, and μορφη, form.) Morbid structure. Applied to organic diseases.

PARANEURI'SMUS. (From παρα, wrong, and νευρον, a nerve.) A nervous disease.

Paranœ'a. (*a*, *æ*. f.; from παρα, diminutive, and νοεω, to understand.) *Paranoia*. Alienation of mind; defect of judgment.

PARANTHINE. See *Scapolite*.

Parape'chyum. (*um*, *ii*. n.; from παρα, near, and πηχυς, the cubit.) That part of the arm from the elbow to the wrist.

PARAPHIMO'SIS. (*is*, *is*. f.; from παρα, about, and φιμοω, to bridle.) A disorder wherein the prepuce, being retracted towards the root of the penis, cannot be returned again over the glans, but makes a sort of ligature behind the corona. It is easily known: the glans is uncovered, the skin tumefied on the corona, and above it forms a circular collar or stricture, which, from the skin being unequally extended, becomes indented, and makes several rings round the part. This disease may proceed from three causes:—

1. From the imprudence of young people, and sometimes also of grown persons, who, having the end of their prepuce too straight, cannot uncover their glans without pain, and when they have done it, neglect returning it so soon as they ought; and thus the contracted part of the prepuce forms a constriction behind the glans. Soon after, the glans and penis swell, and the prepuce, being consequently very much distended, is affected in the same manner: an inflammation seizes upon both, and swellings quickly appear upon the stricture formed by the prepuce, so that the whole may be liable to a gangrene, if not speedily relieved.

2. It may arise from common inflammation of the prepuce, especially if there be a phymosis, in which state, if the foreskin be accidentally retracted, the glans penis swells, and cannot be drawn back, and a paraphymosis is the consequence.

3. It is often the result of the venereal virus. In adults, whose glans is uncovered,

there frequently arise venereal chancres in the prepuce after impure coition, which are attended with inflammation, more or less considerable. This inflammation is alone sufficient to render the prepuce too straight for the size of the penis, in consequence of which a swelling or inosculation may ensue like that before mentioned.

Cold lotions and leeches generally reduce the inflammation, and remove the constriction; but if it does not give way to these, and the glans is strangulated, it will be necessary to divide the prepuce, in order to set it at liberty. When the inflammation is very violent, it has been known to produce a gangrene of the glans which has sloughed away; but this rarely happens when early recourse is had to surgical aid. See *Phymosis*.

PARAPHO'NIA. (*a, æ.* f.; from παρα, wrong, and φωνη, sound.) Alteration of the voice. Dr. Cullen makes the following species:—

1. *Paraphonia puberum.* About the age of puberty the change of voice from an acute and soft to a grave and harsh tone.

2. *Paraphonia rauca.* The voice hoarse and rough, from dryness of flaccid tumour of the fauces.

3. *Paraphonia resonans.* Rough voice, from obstruction of the nares, with hissing sound in the nose.

4. *Paraphonia palatina.* From the uvula wanting, or divided, and commonly attended with hare-lip, the voice rough, obscure, and disagreeable.

5. *Paraphonia clangens.* An acute, shrill, and weak-toned voice.

6. *Paraphonia comatosa.* A sound emitted at inspiration, from relaxation of the velum palati, and of the glottis.

In all these instances the change of the voice is symptomatic, and the cure depends on the removal of the primary disease.

PARA'PHORA. (*a, æ.* f.; from παραφερω, to transfer.) A slight kind of delirium, or light-headedness in a fever. Some use this word for a delirium in general.

PARAPHRENE'SIS. (*is, is.* f.) A delirium; also a paraphrenitis.

PARAPHRENI'TIS. (*is, idis.* f.; from παρα, *male*, not rightly, and *phrenitis*, inflammation of the brain: so called because its symptoms resemble those of phrenitis, or inflammation of the brain, which it is not.) See *Diaphragmatitis.*

PARAPHRO'SYNE. (From παραφρονεω, to be estranged in mind.) Mental derangement: used in the same sense as mania.

PARAPHYMO'SIS. See *Paraphimosis.*

PARAPLE'GIA. (*a, æ.* f.; from παραπλησσω, to strike inharmoniously.) Palsy of one half of the body taken transversely. A species of paralysis. See *Paralysis.*

PARAPOPLE'XIA. (*a, æ.* f.; from παρα, diminutive, and αποπληξια, an apoplexy.) A slight apoplexy.

PARAPSIS. (*is, is.* f.; from παρα, and ἁπτομαι, *perperam tango.*) Morbid touch. See *Dysæsthæsia.*

PARARTHRE'MA. (*a, atis.* n.; from παρα, and αρθρον, a joint.) 1. A slight luxation. 2. A tumour from protrusion, as in hernia.

PARARY'THMOS. (From παρα, and ρυθμος, number.) A pulse not suitable to the age of the person.

PARASCEPA'STRA. (From παρα, and σκεπαζω, to cover.) A cap or bandage to go round the whole head.

PARA'SCHIDE. (From παρα, and σχιζω, to cleave.) A fragment or fissure in a broken bone.

PARASITÆ. The name of an order of plants in Linnæus's Fragments of a Natural Method.

PARASITIC. (*Parasiticus;* from παρασιτος, a parasite, or hanger on.) Parasitical. An animal is so termed that receives its nourishment in the bodies of others; as worms, polypi, hydatids, &c.

A plant is so called that does not take root in the earth, but sends its roots into other plants, from which its draws its nourishment; as the *Epidendrum vanilla.* See *Arrhizus.*

PARASITICUS. See *Parasitic.*

PARASITUS. (*us, i.* m.; παρασιτος, a parasite.) A parasite: applied to animals and vegetables which draw their nourishment from others of the same kingdom, living within the interior of animals, or having their roots fixed in the barks of vegetables.

PARA'SPHAGIS. (From παρα, near, and σφαγη, the throat.) The part of the neck contiguous to the clavicles.

PARA'STATUS. (From παριςημι, to stand near.) Any thing situated near another. Hippocrates so called the epididymis; as did also Herophilus and Galen, to distinguish it from the *glandulæ parastatæ.* Rufus Ephesius called the tubæ Fallopianæ by the name of *parastatæ varicosæ.*

PARASTRE'MMA. (From παραςρεφω, to distort, or pervert.) A perversion, or convulsive distortion of the mouth, or any part of the face.

PARASYNA'NCHE. See *Cynanche.*

PARA'THENAR. (*ar, aris.* n.; from παρα, near, and θεναρ, the sole of the foot.) A muscle situated near the sole of the foot.

PARATHENAR MINOR. See *Flexor brevis minimi digiti pedis.*

PARDA'LIUM. (*um, ii.* n.; from παρδος, the panther.) An ointment, smelling like the panther.

PARE', AMBROSE, a celebrated French surgeon, born at Lavel, in 1509. He was long esteemed as the first surgeon of his time, and was the author of some works, which were universally read, and translated into most of the languages of Europe, containing a body of surgical science. He was a man of original mind, and a real improver of his art, especially in the treatment of gun-shot wounds; adopting a lenient method, instead of the irritating and cauterising applications previously in use. He was a bold and successful operator; and displayed on many

occasions all the resources of an enlightened surgeon. He appears, however, to have borrowed freely from the Italian writers and practitioners, especially in anatomy.

PAREC'CRISES. (*es, is.* f.; from παρα, wrong, and εκκρινω, to secern or secrete.) Disordered secretion.

PAREGORIC. (*Paregoricus;* from παραγορεω, to mitigate, to assuage.) That which allays pain.

Paregoric Elixir. See *Tinctura camphoræ composita.*

PAREI'A. Παρεια. That part of the face which is between the eyes and chin.

PAREI'RA BRAVA. (From *Pareyra*, a Spanish word.) See *Cissampelos pareira.*

PARENCE'PHALIS. (From παρα, near, and εγκεφαλος, the brain.) See *Cerebellum.*

PARE'NCHYMA. (*a, atis.* n.; from παρεγχυω, to strain through: because the ancients believed the blood was strained through it.) 1. The spongy and cellular substance or tissue that connects parts together. It is applied to the connecting medium of the substance of the viscera.

2. The green juicy layer of barks, which lies immediately under the epidermis of trees.

PA'RESIS. (*is, is.* f.; from παριημι, to relax.) An imperfect palsy.

PARGASITE. Common actynolite.

PARHAEMA'SIA. (From παρα, wrong, and αιμα, blood.) A disease of the blood.

PARIETAL. (*Parietalis;* from *paries*, a wall.) Appertaining to a wall.

PARIETALE OS. (So called because they defend the brain like walls.) *Os vertisis. Os sincipitis. Os verticale vel bregmatis.* The parietal bones are two arched and somewhat quadrangular bones, situated one on each side of the superior part of the cranium. Each of these bones forms an irregular square. They are thicker above than below; but are somewhat thinner, and at the same time more equal and smooth, than the other bones of the cranium. The only foramen we observe in them, is a small one towards the upper and posterior part of each. It has been named the parietal foramen, and serves for the transmission of a small vein to the longitudinal sinus. In many subjects this foramen is wanting. On the inner surface of these bones are the marks of the vessels of the dura mater, and of the convoluted surface of the brain. On the inside of their upper edge we may likewise observe a considerable furrow, which corresponds with the longitudinal sinus of the dura mater; and lower down, towards their posterior and inferior angle, is a smaller one for part of the lateral sinuses. These bones are joined to each other by the sagittal suture; to the os sphenoides and ossa temporum by the squamous suture; to the os occipitis by the lambdoidal suture; and to the os frontis by the coronal suture. Their connection with this latter bone is well worthy our attention. We shall find that in the middle of the suture, where the os frontis from its size and flatness is the most in danger of being injured, it rests upon the arch formed by the parietal bones: whereas, at the sides, the parietal bones are found resting upon the os frontis, because this same arch is there in the greatest danger from pressure. In new-born infants, the ossa parietalia are separated from the middle of the divided os frontis by a portion of the cranium, then unossified. When the finger is applied to this part, the motion of the brain, and the pulsation of the arteries of the dura mater, may be easily distinguished. In general, the whole of this part is completely ossified before we are seven years of age.

PARIETA'RIA. (*a, æ.* f.; from *paries*, a wall: because it grows upon old walls, among rubbish.) 1. The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Monœcia.*

2. The pharmacopœial name of the wall pellitory. See *Parietaria officinalis.*

PARIETARIA OFFICINALIS. The systematic name of the wall pellitory; called also, *Perdicium*, and *Helxine.*

Parietaria—foliis lanceolato-ovatis, pedunculis, dichotomis, calycibus diphyllis, of Linnæus. This plant has no smell, and its taste is simply herbaceous. In the practice of the present day it is wholly laid aside, although it was formerly in high estimation as a diuretic.

PA'RIS. (Etymology uncertain; perhaps so called in reference to the youth of that name, who adjudged the golden apple to Venus, this herb bearing but one seed.) 1. The name of a genus of plants in the Linnæan system. Class, *Octandria;* Order, *Tetragynia.*

2. The pharmacopœial name of the herb Paris. See *Paris quadrifolia.*

PARIS QUADRIFOLIA. The systematic name of the herb Paris, or true love. The colour and smell of this plant indicate its possessing narcotic powers. The leaves and berries are said to be efficacious in the cure of hooping-cough, and to act like opium. Great caution is requisite in their exhibition, as convulsions and death are caused by an overdose. The root possesses emetic qualities.

PARI'STHMIA. (From παρα, and ισθμιον, the fauces.) 1. The parts constituting the fauces.

2. The term used by Hippocrates for inflammation of the fauces.

PARISTHMIO'TOMUS. (*us, i.* m.; from παρισθμια, the tonsils, and τεμνω, to cut.) An instrument with which the tonsils were formerly scarified.

PARISTHMITIS. (*is, idis.* f.; from παρισθμιον, the tonsil gland.) Inflammation of the fauces.

Park-leaves. See *Hypericum androsæmum.*

PARODO'NTIS. (From παρα, near, and οδους, a tooth.) A painful tubercle upon the gums. See *Epulis.*

PARODYNIA. (*a, æ.* f.; from παρα, *male*, and ωδιν, or ωδις, ινος, *dolor parturientis.*) Morbid labour.

PARONIRIA. (*a, æ.* f.; from παρα,

and ονειρον, a dream, i.e. depraved, disturbed, or morbid dreaming.) Sleep-disturbance.

PARONY'CHIA. (*a*, *æ*. f.; from παρα, about, and ονυξ, the nail.) A whitlow, or whitloe. Any collection of pus formed in the fingers is termed by authors *panaris*, or whitloe, and is an abscess of the same nature with those arising in other parts of the body. These abscesses are situated more or less deep, which has induced the writers upon the subject to divide them into several species: accordingly they have ranged them under four heads, agreeably to the places where they are formed. The first kind is formed under the cuticle, on one side of the nail, and sometimes all round it. The second is seated in the fat lying under the skin, between that and the sheath which involves the flexor tendons. The third is described by authors to be formed within the sheath; and they still add a fourth species, arising between the periosteum and the bone, which they call *feron*. Poultices are particularly useful in these several forms of whitloe, for their moisture is imbibed by the cuticle, which it softens, as it does also the skin, and even the nail, and thus lets out the pus from under the nail. When this does not result, and in all cases where the pus is deep seated, the abscess must be opened with the lancet.

PARO'PIÆ. (From παρα, near, and ωψ, the eye.) The external angles of the eyes.

PAROPSIS. (*is*, *is*. f.; from παρα, *male*, and οψις, *visus*, sight.) Morbid sight. See *Pseudoblepsis*, and *Metamorphopsia*.

PAROPTE'SIS. (From παρα, and οπταω, to roast.) A provocation of sweat, by making a patient approach the fire, or by placing him in a bagnio.

PARORA'SIS. (From παρα, diminutive, and οραω, to see.) An imbecility of sight.

PARORCHI'DIUM. (*um*, *ii*. n.; from παρα, and ορχις, a testicle.) A tumour in the groin, occasioned by the testicle, which is passing into the scrotum.

PAROSMIS. (*is*, *is*. f.; from παρα, *male*, bad; and οζω, *olfacio*, to smell.) Morbid smell.

PAROSTIA. (*a*, *æ*. f.; from παρα, and οστεον, a bone.) Misossification.

PAROTID. (*Parotideus*; from παρα, about, and ους, the ear.) Parotideal: appertaining to the gland so named. The trivial name of a species of sore throat, the *cynanche parotidea*.

PAROTID GLAND. *Glandula parotidea*. *Parotis*. A large conglomerate and salival gland, situated under the ear, between the mammillary process of the temple-bone and the angle of the lower jaw. The excretory duct of this gland opens in the mouth, and is called, from its discoverer, the *Stenonian* duct.

PARO'TIS. (*is*, *idis*. f.; from παρα, near, and ους, the ear.) See *Parotid gland*.

PAROTITIS. (*is*, *idis*. f.; from *parotis*, the parotid gland, the seat of the complaint, and *itis*, which imports inflammation.) The mumps. An inflammation of the parotid gland. As the inflammation takes place, the cheeks become swollen and painful, there is difficulty in opening the mouth, and in swallowing. Very little constitutional derangement attends this disease, which is mostly produced by a miasm in low and swampy situations. It is believed to be contagious; for when it makes its appearance in a school, and youths are the subjects of it, it generally goes through it. It seldom attacks the more aged and infants. It declines about the fourth or sixth day.

The disease is subject to a metastasis occasionally, in females to the mammæ, in males to the testes; and in a few instances, repelled from these parts, it has affected the brain, and even proved fatal. In general, however, the disease is without danger, and scarcely calls for medical aid. Keeping a flannel over the part, and the antiphlogistic regimen, with mild laxatives, will be sufficient. Should the mammæ or the testes be affected, more active evacuations may be necessary to prevent the destruction of those organs, bleeding general and topical, &c., but avoiding cold applications, lest it should be driven elsewhere.

PAROXYSM. (*Paroxysmus*, *i*. m.; from παροξυνω, to aggravate.) 1. An obvious increase of the symptoms of a disease which lasts a certain time and then declines.

2. A periodical attack or fit of a disease, as that of an ague.

PARSLEY. See *Apium petroselinum*.

Parsley, black mountain. See *Athamanta*.

Parsley, Macedonian. See *Bubon*.

Parsley, stone. See *Amomum verum*.

PARSNIP. See *Pastinaca sativa*.

Parsnip, water. See *Sium nodiflorum*.

PARTHENIA'STRUM. (Diminutive of *parthenium*, tansy.) See *Matricaria*.

PA'RTHENIS. The same as *parthenium*.

PARTHE'NIUM. (*um*, *ii*. n.; from παρθενος, a virgin: so called because of its uses in diseases of young women.) See *Matricaria parthenium*.

PARTHENIUM MAS. See *Tanacetum*.

PARTI'TUS. Partite: cut, as it were, almost to the base, and according to the number of incisions; *bipartite* when two, *tripartite*, when three, *quadripartite* when four, *quinquepartite* when five, &c.

PARTURITION. (*Parturitio*, *onis*. f.; from *pario*, to bring forth young.) The expulsion of the fœtus from the uterus.

After seven months of pregnancy, the fœtus has all the conditions for breathing, and exercising its digestion; it may then be separated from its mother, and change its mode of existence: childbirth rarely, however, happens at this period: most frequently the fœtus remains two months longer in the uterus, and it does not pass out of this organ till after the revolution of nine months.

Examples are related of children being born after ten full months of gestation, but these cases are very doubtful, for it is very difficult to know exactly the period of conception. The legislation, in France, however, has fixed the principle, that childbirth may take place the 299th day of pregnancy.

Nothing is more curious than the mechanism by which the fœtus is expelled: every thing happens with wonderful precision: all seems to have been foreseen, and calculated to favour its passage through the pelvis, and the genital parts.

The physical causes that determine the exit of the fœtus are the contraction of the uterus, and that of the abdominal muscles: by their force the liquor amnii flows out, the head of the fœtus is engaged in the pelvis, it goes through it, and soon passes out by the valve, the folds of which disappear. These different phænomena take place in succession, and continue a certain time: they are accompanied with pains more or less severe, with swelling and softening of the soft parts of the pelvis, and external genital parts, and with an abundant mucous secretion in the cavity of the vagina. All these circumstances, each in its own way, favour the passage of the fœtus.

To facilitate the study of this complicated action, it must be divided into several periods.

The first period of childbirth.—It is constituted by the precursory signs. Two or three days before childbirth, a flow of mucus takes place from the vagina, the external genital parts swell, and become softer: it is the same with the ligaments that unite the bones of the pelvis; the *cervix uteri* flattens, its opening is enlarged, its edges become thinner; slight pains, known under the name of *flying pains*, are felt in the loins and abdomen.

Second period.—Pains of a peculiar kind come on: they begin in the lumbar region, and seem to be propagated towards the *cervix uteri*, or the *rectum;* they are renewed only after considerable intervals, as a quarter, or half an hour. Each of them is accompanied with an evident contraction of the body of the uterus, with tension of its neck, and dilatation of the opening: the finger, directed into the vagina, discovers that the envelopes of the fœtus are pushed outward, and that there is a considerable tumour which is called *the waters:* the pains very soon become stronger, and the contractions of the uterus more powerful; the membranes break, and a part of the liquid escapes; the uterus contracts on itself, and is applied to the surface of the fœtus.

Third period.—The pains and contractions of the uterus increase considerably; they are instinctively accompanied by the contraction of the abdominal muscles. The woman who is aware of their effect is inclined to favour them, in making all the muscular efforts of which she is capable: her pulse then becomes stronger and more frequent, her face is animated, her eyes shine, her whole body is in extreme agitation, and perspiration flows in abundance. The head is then engaged in the pelvis; the occiput, placed at first above the left acetabulum, is directed inward and downward, and comes below and behind the arch of the pubis.

Fourth period.—After some instants of repose, the pains and expulsive contractions resume all their activity: the head presents itself at the vulva, makes an effort to pass, and succeeds when there happens to be a contraction sufficiently strong to produce this effect. The head being one disengaged, the remaining parts of the bod yeasily follow, on account of their smaller volume. The section of the umbilical cord is then made, and a ligature is put round it at a short distance from the umbilicus.

Fifth period.—If the accoucheur has not proceeded immediately to the extraction of the placenta after the birth of the child, slight pains are felt in a short time, the uterus contracts freely, but with force enough to throw off the placenta, and the membranes of the ovum: this expulsion bears the name of *delivery.* During the twelve or fifteen days that follow childbirth, the uterus contracts by degrees upon itself, the woman suffers abundant perspirations, her mammæ are extended by the milk that they secrete; a flow of matter, which takes place from the vagina, called *lochia*, first sanguiferous, then whitish, indicates that the organs of the woman resume, by degrees, the disposition that they had before conception.

PARTUS. (*us, ûs.* m.; from *pario*, to bring forth young.) Labour, or the act of bringing forth young. See *Parturition.*

PARU'LIS. (*is, idis.* f.; from παρα, near, and ουλον, the gum.) An inflammation, boil, or abscess in the gums. A gum-boil is often a primary disease, depending on an inflammation of the gums from accidental and common causes, in which case the lancet, or leaving it to nature, soon restores the gum to a healthy state. But sometimes it arises from a carious tooth, or from cutting the dentes sapientiæ. From the first of these, the gum-boil frequently returns, and requires the removal of the tooth: from the latter, much irritation is often produced, and the jaw and face swell considerably. If there be constitutional disturbance with it, leeches and purgatives are to be resorted to.

PARURIA. (*a, æ.* f.; from παρω, *perperam*, and ουρεω, to make water.) Mismicturition.

PARY'GRON. (From παρα, and υγρος, humid.) A liquid or moist preparation for allaying a topical inflammation.

PASI'PHILUS. (From πας, all, and φιλος, grateful; from its general usefulness.) A name given to a plaster.

PA'SMA. (From πασσω, to sprinkle over.) A dry powder to sprinkle over the body. See *Catapasma.*

PA'SSA. (*a, æ.* f.; from *pando*, to spread.)
1. A grape or raisin.
2. In Paracelsus it is a whitloe.

PASSA MINOR. See *Uva passa minor.*

PASSAVA'NTICUS. (From πας, all, and αναινω, to dry up.) A powder which dries up, and evacuates morbid humours.

PASSIFLO'RA. (*a, æ.* f.; altered by Linnæus, from *flos passionis* of preceding botanists: a term applied to the beautiful genus in question, because the instruments of Christ's

passion were thought to be represented in the parts of the fructification.) The name of a genus of plants in the Linnæan system. Class, *Gynandria*; Order, *Pentandria*.

Passiflora laurifolia. Bay-leaved passion-flower. A native of Surinam. The fruit of this tree grows to the size of a small lemon, which it great resembles. It has a delicious smell and flavour, and is excellent for quenching thirst, abating heat of the stomach, increasing the appetite, recruiting the spirits, and allaying the heat in fevers.

Passiflora maliformis. Apple-shaped granadilla. The fruit of this species of passion-flower is esteemed a delicacy in the West Indies, where it is served up at table in desserts. They are not unwholesome.

Passio ileaca. See *Ileac passion*.

PASSION. (Πάθημα. *Passio, onis.* f.; from *patior*, to suffer.) 1. By passion, is generally understood an instinctive feeling become extreme and exclusive. A man of strong passion neither hears, sees, nor exists, but through the feeling which agitates him; and as the violence of this feeling is such that it is extremely painful, it has been called *passion* or *suffering*. The passions have the same end as instinct; like them, they incline animals to act according to the general laws of animated nature. We see in man passions which he has in common with the animals, and which consist of animal wants become excessive; but he has others which are displayed only in the social state. These are *social* wants grown to excess.

The *animal passions* have a twofold design, the preservation of the individual, and of the species. To the preservation of the individual belong fear, anger, sorrow, hatred, excessive hunger, &c. To the preservation of the species, excessive venereal desires, jealousy, the fury which is felt when the young ones are in danger, &c.

Nature has made this sort of passions very powerful, and which are equally so in a state of civilisation.

The passions which belong to the social state are only the social wants carried to an excess. Ambition is the inordinate love of power; avarice, the love of riches become excessive; hatred and revenge, that natural and impetuous desire to injure whoever hurts us; the passion of gaming, and almost all the vices, which are also passions, are violent inclinations to increase the feeling of existence; violent love is an elevation of the venereal desires, &c.

Some of the passions are allayed or extinguished by gratification; others become more irritated by it. The first sort is, therefore, often the cause of happiness, as is seen in philanthropy and love; whilst the latter sort necessarily causes misery. Misers, ambitious and envious people, are examples of the last.

If our necessities develope the intellect, the passions are the principle or the cause of every thing *great* which man performs, whether good or bad. Great poets, heroes, great criminals, and conquerors, are men of strong passions. —*Magendie's Physiology*.

2. The name of two diseases, because of the great suffering under them; as *passio ileaca* or *cæliaca*, and hysterical passion.

3. See *Pathemata animi*.

Passion, cæliac. See *Diarrhœa cæliaca*.

Passion, hair-brained. See *Pathemata animi*.

Passion, hysteric. See *Hysteria*.

Passion, ileac. See *Ileac passion*.

PASSU'LA. (*a, æ.* f.) A small raisin.

Passula major. See *Vitis vinifera*.

Passula'tus. (From *passula*, a fig, or raisin.) This is a term given by Dispensatory writers to some medicines where raisins are the chief ingredient; as the *Electuarium passulatum*, &c.

PA'SSUM. (*um, i.* n.; from *passa*, a grape, or raisin.) Raisin wine.

PA'STA. (*a, æ.* f.) A cake or lozenge.

Pasta regia. (From πασσω, to sprinkle.) A lozenge, or small cake, sprinkled over with some dry powdered substance.

PASTI'LLUM. (*um, i.* n.; diminutive of *pasta*, a lozenge.) *Pastillus*. A troch or pastil. A little lump of paste, or ball, made to take like a lozenge.

PASTINA'CA. (*a, æ.* f.; *à pastu*, from its usefulness as a food.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*. Parsnip.

2. The pharmacopœial name of the parsnip. See *Pastinaca sativa*.

Pastinaca opopanax. The systematic name of the plant which yields opopanax. The plant from whence this gum resin is produced is known by the names of *Opoponacum*, *Panax heracleum*, *Panax costinum*, *Panax pastinacea*, and *Kyna*. Hercules' all-heal, and Opopanax-wort. *Pastinaca—foliis pinnatis, foliolis basi antica excisis*, of Linnæus. Opopanax is the gummi-resinous juice obtained by means of incisions made at the bottom of the stalk of the plant, from which it gradually exudes, and, by undergoing spontaneous concretion, assumes the appearance under which we have it imported from Turkey and the East Indies, viz. sometimes in little drops or tears, more commonly in irregular lumps of a reddish yellow colour on the outside, with specks of white; internally of a paler colour, and frequently variegated with large white pieces. Opopanax has a strong, disagreeable smell, and a bitter, acrid, somewhat nauseous taste. It is only employed in the present practice as an antispasmodic, in combination with other medicines, although it was formerly in high estimation as an attenuant, deobstruent, and aperient. Its antispasmodic virtues are less powerful than galbanum, and more so than ammoniacum. It has no place in the Edinburgh Pharmacopœia, but is directed by the London College.

Pastinaca sativa. The systematic name of the parsnip; called also, *Banica*, and *Elaphoboscum*. The cultivated or garden parsnip is the *Pastinaca—foliolis simpliciter pinnatis*, of Linnæus. Its roots are sweet and nutri-

tious, and in high esteem as an article of food. They possess an aromatic flavour, more especially those of the wild plant, and are exhibited in calculous complaints for their diuretic and sheathing qualities.

PATE'LLA. (*a, æ.* f.; diminutive of *patina*, a dish: so named from its shape.) *Rotula.* The knee-pan. A small flat bone, which, in some measure, resembles the common figure of the heart, with its point downwards, and is placed at the fore-part of the joint of the knee. It is thicker in its middle part than at its edge. Anteriorly it is a little convex, and rough for the insertion of muscles and ligaments; posteriorly it is smooth, covered with cartilage, and divided by a middle longitudinal ridge, into two slightly concave surfaces, of which the external one is the largest and deepest. They are both exactly adapted to the pulley of the os femoris. The edges of this posterior surface are rough and prominent where the capsular ligament is attached, and below is a roughness at the point of the bone, where the upper extremity of a strong tendinous ligament is fixed, which joins this bone to the tuberosity at the upper end of the tibia. This ligament is of considerable thickness, about an inch in breadth, and upwards of two inches in length. The patella is composed internally of a cellular substance, covered by a thin bony plate; but its cells are so extremely minute, that the strength of the bone is, upon the whole, very considerable. In new-born children it is entirely cartilaginous. The use of this bone seems to be, to defend the articulation of the joint of the knee from external injury. It likewise tends to increase the power of the muscles which act in the extension of the leg, by removing their direction farther from the centre of motion, in the manner of a pulley. When we consider the manner in which it is connected with the tibia, we find that it may very properly be considered as an appendix to the latter, which it follows in all its motions, so as to be to the tibia what the olecranon is to the ulna; with this difference, however, that the patella is moveable, whereas the olecranon is a fixed process. Without this mobility, the rotatory motion of the leg would have been prevented.

PATENS. See *Expanding.*

PATHEMA. (*a, atis.* n.) Passion; emotion. See *Passion.*

Pathemata animi. Passions of the mind. These are divided into the exciting and depressing; and each of these again, in a medical view, into such as excite suddenly and with temporary violence, or more slowly and permanently. The following imperfect and short sketch may be useful:—

Passions are either,

1. *Exciting.*

a. In a violent degree; as *anger, passion, ecstasy.*

b. More moderately; as *joy, emulation, desire, hope, benevolence, love.*

2. *Depressing.*

a. In a violent degree; as *terror, grief.*

b. More moderately; as *fear, jealousy, envy, resentment.*

3. *Calming;* as *veneration, admiration, contemplation.*

Persons of strong, active imaginations, sanguine in the temperaments, and eager in their pursuits and expectations, are most liable to, and suffer most from, the violently exciting passions. The effects are often apoplexy, palsy, hæmorrhage, jaundice. The depressing passions are, in different degrees, sedative. The more violent ones are sometimes fatal in a moment. The others slowly undermine the constitution, weaken every function, and produce indigestion and dropsy.

PATHETIC. (*Patheticus;* from παθος, an affection.) Appertaining to the passions.

Pathetic nerve. (*Nervus patheticus;* so called, because these nerves direct the eyes to express the passions of the mind.) The *Nervi pathetici*, or *trochleatores*, are the fourth pair of nerves. They arise from the crura of the cerebellum laterally, and are distributed in the musculus obliquus superior, *seu* trochlearis.

PATHOGNOMONIC. (*Pathognomonicus;* from παθος, a disease, and γινωσκω, to know.) A term given to those symptoms which are peculiar to a disease. They are also termed proper or characteristic symptoms.

PATHOLOGY. (*Pathologia, æ.* f.; from παθος, a disease, and λογος, a discourse.) The doctrine of diseases. Pathology is a branch of natural philosophy: it embraces the consideration of every thing connected with diseases.

It is divided into the following departments:—

1. The practice of physic.
2. The practice of surgery.
3. The practice of midwifery.
4. Pharmacy.
5. Pharmaceutical chemistry.
6. Forensic medicine.

In these several departments are considered what constitutes disease; what changes from health are produced by disease; how the different changes are known; by what circumstances diseases are produced; how it is to be obviated; and by what appropriate name diseases should be called. Hence a further division of pathology into,

1. Nosology.
2. Symptomatology.
3. Semiotics.
4. Ætiology; and,
5. Therapeutics.

Health is indicated by that appearance of the body which is natural to it; and it is maintained by a certain action of the vital principle, under which the functions of the body are performed in a natural and proper manner. Every deviation from this appearance, or action, is disease. See *Disease.*

PATIE'NTIA. (*a, æ.* f.; from *patior*, to bear, or suffer.) The name of the herb monk's rhubarb, from its gentle purging qualities. See *Rumex patientia.*

PATIENCE. See *Rumex patientia*.

PA'TOR NARIUM. (From *pateo*, to be opened.) The sinus, cavity, or chasm of the nose.

PATRUM CORTEX. (So called from the Jesuits, termed fathers in the church of Rome, who first spread its use in Europe.) See *Cinchona*.

PATULUS. Open: frequently used in botanical descriptions.

PATU'RSA. The venereal disease.

Paul's betony. See *Veronica*.

PAULI'NA CONFECTIO (From *παυω*, to rest.) A warm opiate, similar to the *confectio opii*; so called by Aristarchus, which is the same with the *confectio archigenis*.

PAULITE. See *Hypersthene*.

PAU'LUS. See *Ægineta*.

PAVA'NA. See *Croton tiglium*.

PAVO. (*o, onis*. m. and f) The name of a genus of birds, of the order *Gallinæ*. The peacock.

PAVO CRISTATUS. The pea-fowl. The flesh of this bird is delicate when young; but it is more esteemed for its beauty, as an ornament in the country, than for an aliment.

PA'VOR. (*or, oris*. m.; from *paveo*, to fear: so called, from the dread there is of approaching or touching a person affected with it.) The itch.

PEA. See *Pisum sativum*.

PEA-FOWL. See *Pavo cristatus*.

PEA-STONE. A variety of limestone.

PEACH. See *Amygdalus persica*.

PEAGLE. See *Primula veris*.

PEAR. See *Pyrus communis*.

PEARL. See *Margarita*.

Pearl-ash. An impure potash, obtained by lixiviation from the ashes of plants. See *Potassa*.

Pearl barley. See *Hordeum*.

PEARL SINTER. Fiorite. A variety of silicious sinter, of a white and grey colour, and found on volcanic tuff on the Vicentine.

PEARLSTONE. A subspecies of indivisible quartz of Jameson and Mohs. It is generally of a grey colour, and occurs in great beds in clay porphyry, near Tokay in Hungary, and in Ireland.

PECHBLENDE. An ore of uranium.

PECHE'DION. Πηχεδιον. The perinæum.

PECHU'RIM CORTEX. An highly aromatic bark, the produce of a species of *Laurus*. The odour is extremely fragrant, like unto that of cinnamon, which it greatly resembles in its properties. In Lisbon it is much esteemed in the cure of dysenteries, and for allaying obstinate vomitings.

PECHU'RIM FABA. See *Faba pechurim*.

PECHU'RIS. See *Faba pechurim*.

PECHYA'GRA. (From *πηχυς*, the cubit, and *αγρα*, a seizure.) The gout in the elbow.

PE'CHYS Πηχυς. The cubit, or elbow.

PECHYTY'RBE. An epithet for the scurvy.

PECQUET, JOHN, was a native of Dieppe. He discovered the thoracic duct, and the receptaculum chyli, while yet a student, in 1647. He published an account of this discovery, with a Dissertation on the Circulation of the Blood, and Motion of the Chyle, in 1651. He died in 1674.

Pecquet's duct. See *Thoracic duct*.

PE'CTEN. (*en, inis*. m.) The pubes.

PECTIC ACID. *Acidum pecticum*. The name given by Braconnot to an acid, which he conceives to be universally diffused through vegetables, and analogous to, if not identical with, jelly. Eighty-five of this acid seem to neutralise 15 of potash, and afford a compound like gum arabic.

PECTINA'LIS. (So named from its arising at the *pecten*, or pubes.) *Pectinæus*, of authors. A small flat muscle, situated obliquely between the pubes and the little trochanter, at the upper and anterior part of the thigh. It arises broad and fleshy from the anterior edge of the os pectinis, or pubis, as it is more commonly called, as far as its spine; and, descending obliquely backwards and outwards, is inserted by a short and broad tendon, into the upper and anterior part of the linea aspera of the os femoris, a little below the lesser trochanter. This muscle serves to bend the thigh, by drawing it upwards and inwards, and likewise assists in rolling it outwards.

PECTINATUS. (From *pecten*, a comb.) Pectinate: comb-like. 1. A term applied to a pennatifid leaf, the segments of which are remarkably narrow and parallel, like the teeth of a comb; as the lower leaves of the *Hottonia palustris*, and *Meriophyllum verticillatum*.

2. The fasciculated muscular fibres of the right auricle of the heart are called *musculi pectinati*.

PECTINÆ'US. See *Pectinalis*.

PECTORAL. (*Pectoralis*; from *pectus*, the breast.) Of or belonging to, or that which relieves disorders of the chest.

Pectoral moss. See *Lichen pulmonarius*.

PECTORALIS MAJOR. A broad, thick, fleshy, and radiated muscle, situated immediately under the integuments, and covering almost the whole anterior part of of the breast. *Pectoralis*, of authors. Winslow calls it *pectoralis major*, to distinguish it from the serratus anticus, which he has named *pectoralis minor*. It arises from the cartilaginous extremities of the fifth and sixth ribs, from the last of which its tendinous fibres descend over the upper part of the obliquus externus and rectus abdominis, helping to form a part of the sheath in which the latter is included. It likewise springs from almost the whole length of the sternum by short tendinous fibres, which evidently decussate those on the other side; and tendinous and fleshy from more than a third of the anterior part of the clavicle. From these origins the fibres run in a folding manner towards the axilla, and are inserted by a broad tendon into the os humeri, above the insertion of the deltoid muscle, and at the outer side of the groove which lodges the tendon of the long head of the biceps. Some of its fibres likewise extend into that groove; and, from the lower part of this tendon, which is spread

near two inches along the os humeri, we find it sending off other fibres, which help to form the fascia that covers the muscles of the arm. It often happens that that part of the pectoralis, which arises from the clavicle, is separated from the inferior portion, so as to appear like a distinct muscle. This has induced Winslow to divide it into parts, one of which he calls the *clavicular*, and the other the *thoracic* portion. Sometimes these two portions are inserted by separate tendons, which cross one another at the upper and inner part of the os humeri, the tendon of the thoracic portion being inserted at the outer edge of the bicipital groove, immediately behind the other. This muscle, and the latissimus dorsi, form the cavity of the axilla, or arm-pit. The use of the pectoralis is to move the arm forwards, or to raise it obliquely towards the sternum. It likewise occasionally assists in moving the trunk upon the arm; thus, when we exert any efforts with the hand, as in raising ourselves from off an arm-chair, or in sealing a letter, the contraction of this muscle is particularly observable. To these uses Haller adds that of assisting in respiration, by raising the sternum and ribs. He tells us he well remembers, that when this muscle was affected by rheumatism, his breathing was incommoded; and that, when troubled with difficulty of respiration, he had often found himself greatly relieved by raising and drawing back his shoulders, keeping his arms at the same time firmly fixed. Winslow, however, has denied this use, and Albinus has omitted it, probably because it does not take place in a natural state.

Pectoralis minor. *Serratus anticus*, of Albinus. A fleshy and pretty considerable muscle, situated at the anterior and lateral part of the thorax, immediately under the pectoralis major. Douglas and Cowper call this muscle *Serratus minor anticus;* and Winslow gives it the name of *Pectoralis minor.* It arises from the upper edges of the third, fourth, and fifth ribs, near where they join with their cartilages, by an equal number of tendinous and fleshy digitations, which have been compared to the teeth of a saw, whence this and some other muscles, from their having a similar origin, or insertion, have got the name of *serrati.* From these origins it becomes thicker and narrower as it ascends, and is inserted by a flat tendon into the upper part of the coracoid process of the scapula. The principal use of this muscle is to draw the scapula forwards and downwards; and when that is fixed, it may likewise serve to elevate the ribs.

PECTORILOQUISM. (*Pectoriloquismus, i.* m.; from *pectus*, the chest, and *loquor*, to speak: so called because the person speaks as it were in the chest.) The sound of the voice within the chest.

PECTORIS OS. See *Sternum.*

PE'CTUS. (*us, oris.* n.) The breast.

Pectu'sculum. (Diminutive of *pectus*, the breast: so named from its shape.) The metatarsus.

PEDATUS. (From *pes*, a foot.) Pedate: bird-foot-like. Applied to a particular kind of leaf, which is ternate, with its lateral leaflets compounded in their fore-part; as in *Helleborus niger* and *fœtidus*, and *Arum dracunculus.*

PEDE'THMUS. (*us, i.* m.; from πηδαω, to leap.) The motion of the arteries from the impulse of the blood. The pulse.

Pedia'smus. (From πεδιον, a field.) An epithet of a species of wild myrrh.

PEDICELLATE. *Pedicellatus.* Having a pedicellus, or partial flower.

PEDICELLATUS. (From *pedicellus*, a partial flower-stalk.) Having a small stalk: applied to the nectary which rests on a stalk; as in *Aconitum napellus.*

PEDICELLUS. A partial flower-stalk. See *Pedunculus.*

PEDICULA'RIA. (*a, æ.* f.; from *pediculus*, a louse: so called from its use in destroying lice.) See *Delphinium staphis graia.*

PEDICULA'TIO. *Morbus pedicularis.* That disease of the body in which lice are continually bred on the skin.

PEDI'CULUS. (*us, i.* m.; diminutive of *pes*, a foot: so named from its many small feet.) 1. A louse. The name of a genus of insects, of the order *Aptera.* Two species are found on the human body, the *pediculus humanus*, the common louse; and the *P. pubis*, or crab-louse.

2. A pedicle or footstalk of a flower, or leaf. See *Pedunculus.*

Pedicus. See *Extensor brevis digitorum pedis.*

PEDILU'VIUM. (From *pes*, the foot, and *lavo*, to wash.) A bath for the feet.

Pe'dion. (From πους, the foot.) The sole of the foot.

Pe'dora. (From *pes*, a foot.) The sordes of the eyes, ears, and feet.

PEDUNCULATUS. Pedunculate: growing on a fruit-stalk: opposed to sitting.

PEDUNCULUS. A peduncle, or a flower-stalk, or that which springs from the stem, and bears the flowers and fruit, and not the leaves.

Pedicellus, is a partial flower-stalk, the ultimate subdivision of a general one; as in the cowslip.

The pedunculus is,

1. *Cauline*, when it grows immediately out of the main stem, especially of a tree; as in *Averrhoa bilimbi.*

2. *Rameus*, growing out of the main branch; as in *Eugenia malaccensis.*

3. *Axillary*, growing either from the bosom of a leaf, that is, between it and the stem, as in *Anchusa sempervirens;* or between a branch and a stem, as in *Ruppia maritima.*

4. *Oppositifolius*, opposite to a leaf; as in *Geranium pyrenaicum.*

5. *Internodis*, proceeding from the intermediate part of a branch between two leaves; as in *Ehretia internodis.*

6. *Gemmaceous*, growing out of a leaf-bud; as in *Berberis vulgaris.*

7. *Terminal*, when it terminates a stem or branch; as in *Centaurea scabiosa*.

8. *Lateral*, when situated on the side of a term or branch; as in *Erica vagans*.

9. *Solitary*, either single on a plant, as in *Rubus chamæmorus;* or only one in the same place, as in *Antirrhinum spurium*.

10. *Aggregate*, clustered, when several grow together; as in *Verbascum nigrum*.

11. *Sparsus*, dispersed irregularly over the plant or branches; as in *Ranunculus seleratus*.

12. *Uniflorus*, *biflori*, *triflori*, &c. bearing one, two, three, or more flowers.

13. *Multiflori*, many-flowered; as *Daphne laureola*.

When there is no flower-stalk, the flowers are said to be *sessile;* as in *Centaurea calcitrapa*, and the dodders.

PEGANELÆ'UM. (*um, i.* n.; from πηγανον, rue, and ελαιον, oil.) Oil of rue.

PEGANE'RUM. (*um, i.* n.; from πηγανον, rue.) A plaster composed of rue.

PE'GANUM. (*um, i.* n.; from πηγνυω, to compress: so called, because, by its dryness, it condenses the seed.) The name of a genus of plants. Class, *Dodecandria;* Order, *Monogynia*.

Peganum harmala. The Assyrian wild rue: much the same in its properties with the common rue, and as generally used in that part of the world as the latter with us.

PE'GE. (Πηγη, a fountain.) The internal angles of the eyes are called *pegæ*.

Pelada. A species of baldness; a shedding of the hair from venereal cause.

PELA'GRA. (*a, æ.* f.) *Pellagra*. *Elephantiasis italica*. This disease does not appear to have been noticed by any of our nosologists, except Dr. Good. Indeed, few accounts of it have hitherto been published, although the peculiar symptoms with which it is attended, and the fatal consequences which generally ensue from it, render it equally curious and important. In certain districts, as Milan and Padua, in Italy, where it is peculiarly prevalent, it is computed to attack five inhabitants out of every hundred.

About the month of March or April, when the season invites the farmers to cultivate their fields, a shining red spot suddenly arises on the back of the hand, or some part of the body, resembling the common erysipelas, but without much itching or pain, or indeed any other particular inconvenience. Both men and women, girls and boys, are equally subject to it. This red spot elevates the skin a little, producing numerous small tubercles of different colours; the skin becomes dry and cracks, and the epidermis sometimes assumes a fibrous appearance. At length it falls off in white furfuraceous scales; but the shining redness underneath still continues, and, in some instances, remains through the following winter. In the mean time, excepting this mere local affection, the health is not the least impaired, the patient performs all his rural labours, as before, enjoys a good appetite, eats heartily, and digests well. And what is most surprising is, that in the month of September, when the heat of the summer is over, in some cases sooner, in others later, the disorder generally altogether disappears, and the skin resumes its natural healthy appearance. The patients, however, are not now to be considered as well: the disease hides itself, but is not eradicated: for no sooner does the following spring return, but it quickly re-appears, and generally is accompanied with severer symptoms. The spot grows larger, the skin becomes more unequal, and hard, with deeper cracks. The patient now begins to feel uneasiness in the head, becomes fearful, dull, and less capable of labour; and when the pelagra has even arrived at this stage, the returning winter, nevertheless, commonly restores the patient to apparent health: but the more severe the symptoms have been, and the deeper root the disease has taken, the more certainly does the return of spring produce it with additional violence. Sometimes the disease in the skin disappears, but the other symptoms remain notwithstanding. The powers both of the mind and body now become daily more enfeebled; peevishness, watchings, vertigo, and, at length, complete melancholy, supervene. Nor is there a more distressing kind of melancholy any where to be seen, than takes place in this disease. The patients now begin to grow emaciated, and delirious. A colliquative diarrhœa comes on, which no remedy can stop. Sometimes, in the pelagra, the diarrhœa comes on before the delirium, and the delirium and stupor mutually interchange with each other. The appetite often suddenly fails, so that the sick will sometimes go for near a week without tasting food. Not uncommonly it returns as suddenly, so that they eagerly devour whatever is offered them, and this even at times when they are horribly convulsed. The convulsions with which they are attacked are most shocking to see, and are of almost every kind, catalepsy excepted, which has been described by writers. The first stage of the pelagra, in which the local affection only takes place, continues in some instances for a great length of time; persons being occasionally met with in whom it has lasted six or eight, or even fifteen years, disappearing regularly every winter, and returning again in the spring. This occasions some of the inhabitants to pay little attention to it; although, in other cases, it reaches its greatest height after the second or third attack. It appears that this disease is not infectious, and that the causes producing it are yet unascertained. It has been supposed, by some, to arise from the heat of the sun's rays; and hence it is now and then called *mal de sol;* but this does not produce any similar disease in other parts of world, where it is in an equal or even much greater degree than at Milan; no disease in any respect resembling it having hitherto been noticed in such regions, except the lepra asturiensis described by Thiery, and after him by Sauvages. Pure air, habitual cleanliness, warm bathing, and a nutritious

diet, with such tonics as best agree with the constitution, have proved most useful in removing this disease, when not advanced beyond the reach of recovery.

PELA'RIUM. (From πηλος, mud: so called from its muddy consistence.) A collyrium.

PELECA'NUS. (*us, i.* m.; from πελεκαω, to perforate.) 1. The bird called the pelican.

2. An instrument to draw teeth: so named from its curvature at the end resembling the beak of a pelican.

PELECI'NUM. (From πελεκυς, a hatchet: so called because its seeds are shaped like a two-edged hatchet.) The hatchet-vetch.

PELIOM. A blue-coloured mineral, very similar to iolite, found in Bodenmais, in Bohemia.

PELIO'MA. (From πελος, black.) An extravasation of blood of a livid colour.

PELLICULA. (*a, æ.* f.; from *pellis,* the skin.) A pellicle, or slender skin. In *Medicine,* it is applied to such an appearance of the surface of urine, and to very delicate membraneous productions. In *Botany,* to the delicate skin which covers some seeds and other parts.

PELLITORY. See *Parietaria.*

Pellitory, bastard. See *Achillea ptarmica.*

Pellitory of Spain. See *Anthemis.*

PE'LMA. (From πελω, to move forwards.) The sole of the foot, or a sock adapted to the sole of the foot.

PELTA. (*a, æ.* f.; a shield, buckler, or target.) A variety of the calyculus, called the shield, which is the fruit, of an oblong, flat, and obtuse form, observed in the lichen tribe.

PELTA'LIS CARTILAGO. (From *pelta,* a buckler: so called from its shape.) The scutiform cartilage of the larnyx.

PELTA'TUS. (From *pelta,* a shield.) Peltate, or target-shaped: applied to leaves which have the stalk inserted into their middle, like the arm of a man holding a shield; as in *Tropæolum majus,* and *Hydrocotule vulgaris.*

PELVIC. (*Pelvicus;* from *pelvis,* the lower part of the trunk of the body.) Pertaining to the pelvis.

PE'LVIS. (*is, is.* f.; from πελυς, a basin: because it is shaped like a basin used in former times.) The cavity below the belly. It is composed of the two ossa innominata, the os sacrum, and os coccygis. It contains the rectum and urinary bladder, the internal organs of generation, and is lined and covered by muscles and common integuments.

It is wide and expanded at its upper part, and contracted at its inferior aperture. The upper part of the pelvis, properly so called, is bounded by an oval ring, which parts the cavity of the pelvis from the cavity of the abdomen. This circle is denominated the brim of the pelvis: it is formed by a continued and prominent line along the upper part of the sacrum, the middle of the ilium, and the upper part, or crest, of the os pubis. The circle of the brim supports the intestines and impregnated womb. The lower part of the pelvis is denominated the outlet. It is composed by the arch of the ossa pubis, and by the sciatic ligaments.

The office of the pelvis is to give a steady bearing to the trunk, and to connect it with the lower extremities, by a sure and firm joining, to form the centre of all the great motions of the body, to contain the internal organs of generation, the urinary bladder, the rectum, and occasionally part of the small intestines, and to give support to the gravid uterus.

PELVIS AURIUM. The cochlea of the ear.

PELVIS CEREBRI. The infundibulum.

PEMPHIGOID. (*Pemphigoides;* from πεμφιξ, a blast of wind.) 1. Like unto pemphigus.

2. A fever distinguished by flatulencies and inflations, in which a sort of aërial vapour was said to pass through the skin.

PE'MPHIGUS. (*us, i.* m.; from πεμφιξ, a bubble, or vesicle.) An eruption like vesicles of various sizes, from a pea to a walnut, and mostly attended by fever. The disease has been described as *Febris bullosa, Exanthemata serosa, Morta, Pemphigus helveticus, Pemphigus major,* and *Pemphigus minor.* The eruption is transparent, like a small bladder filled with a pellucid or slightly coloured fluid. The vesicle is mostly almond-shaped, and has an inflamed base, and when it breaks the part is disposed to ulcerate. The fever may be either synocha or typhus. The latest writers on this disease contend, that it is sometimes acute, and sometimes a chronic affection; that the former is constantly attended with fever, the latter is constantly without; that in neither case is it an acrimonious or contagious matter thrown out by the constitution, but pure serum, secreted by the cutaneous exhalent arteries. So rare was the disease when Dr. Cullen wrote, that he never saw it but once, in a case which was shown to him by Dr. Home. Dr. David Stuart, then physician to the hospital of Aberdeen, published an account of it in the Edinburgh Medical Commentaries. It is ushered in by sickness at stomach, great oppression about the præcordia, headache, lassitude, and weariness on the least exertion, with stiffness and rigidity of the joints. The eruption comes out as very small, distinct red spots, a little elevated above the surface of the skin, and much resembling the first appearance of the small-pox. The eruption gradually spreads itself over the whole body, and the pustules daily increase in size. The patient complains of headache, sickness, oppression about the præcordia, thirst, sore throat, with difficulty of swallowing; the tongue is foul; the skin hot and feverish; the pulse from 100 to 120, rather depressed; the belly costive; the eyes dull and languid, but without delirium. The whole surface of the skin is now interspersed with vesicles of various sizes, many of them large, especially on the arms and breast. In the interstices, between the vesicles, the appearance of the skin is natural, nor is there any redness round their base; the distance

from one to another is from half an inch to a handbreadth, or more. In some places two or three are joined together, like the pustules in the confluent small-pox. If the vesicles burst of themselves, they form a whitish scab or crust. They are mostly on the neck and face; by far the greatest number are perfectly entire, turgid, and of a bluish colour. Upon opening them it is evident that the cuticle elevated above the cutis, and distended with a thin, yellowish, semipellucid serum, forms this appearance. Nor is the surface of the cutis ulcerated, or livid; but of a red florid colour, as when the cuticle is separated by a blister, or superficial burning.

Since the publication of this disease, by Dr. Stuart, observations on it have been published by Dr. Dickson of Dublin, by Mr. Gaitskell and Mr. Upton, in the Memoirs of the Medical Society of London. Some subsequent observations on pemphigus were published in the London Medical Journal, by Mr. Thomas Christie. From a case which Mr. Christie describes, he is disposed to agree with Dr. Dickson, in thinking that sometimes, at least, pemphigus is not contagious. He remarks, however, that the pemphigus described by some foreign writers was extremely infectious; circumstances which, he thinks, may lead to a division of the disease into two species, the pemphigus simplex, and complicatus, both of which, but especially the last, seem to vary much with respect to mildness and malignity. The fever in pemphigus is mostly a mild or malignant typhus, and requires the same remedies—port wine and bark, with mineral acids. The best application to the eruption, when the vesicles break, is finely powdered starch.

Pemphigus major. See *Pemphigus.*

Pemphigus minor. See *Pemphigus.*

Pe'mphis. A species of *Lythrum.*

PEMPHIX. (*ix, igis.* f.; a vesicle, or bubble.) See *Pemphigus.*

Pemptæ'us. (From πεμπτος, the fifth.) An ague, the paroxysm of which returns every fifth day.

PENÆ'A. (*a, æ.* f.; a name given by Linnæus in memory of the learned Peter Pena, a native of France, and an excellent scientific botanist.) 1. A genus of plants in the Class *Tetrandria*; Order, *Monogynia.*

2. The name of a species of polygala.

Penæa mucronata. The systematic name of the plant which is said to afford the sarcocolla. This is brought from Persia and Arabia in small grains of a pale yellow colour, having also sometimes mixed with them a few of a deep red colour. Its taste is bitter, but followed with some degree of sweetness. It has been chiefly used for external purposes, and, as its name imports, has been thought to agglutinate wounds and ulcers; but this opinion now no longer exists.

PENDULUS. Pendant; pendulous; hanging: applied to roots, leaves, flowers, seeds, &c.; as the root of the *Spiræa filipendula*, and *Pæonia officinalis*, which consists of knobs connected by filaments; and the seeds of the *Magnolia grandiflora*, which are suspended by their filaments.

PENETRANS. (From *penetro*, to pierce through.) Penetrating. A medicine which passes through the pores and stimulates.

PENICILLIFORM. (*Penicilliformis*; from *penicillus*, a pencil-brush, and *forma*, likeness.) Pencil-shaped: applied to the stigma of the *Milium paspalium*, and to the extremities of the arteries which secrete the bile.

PENICI'LLUS. (*us, i.* m.; diminutive of *peniculum*, a brush.) *Penicillum.* 1. A tent, or pledget.

2. The secreting extremities of the vena portæ are called *penicilli.* See *Liver.*

Peni'dium. A kind of clarified sugar, with a mixture of starch, made up into small rolls. The confectioners call it barley-sugar.

PE'NIS. (*is, is.* m.; *à pendendo*, from its hanging down.) *Membrum virile.* The cylindrical part that hangs down, under the mons veneris, before the scrotum of males. It is divided by anatomists into the root, body, and head called the *glans penis.* It is composed of common integuments, two corpora cavernosa, and one corpus spongiosum, which surrounds a canal, the *urethra*, that proceeds from the bladder to the apex of the penis, where it opens by the *meatus urinarius.* See *Urethra.* The fold of the skin that covers the glans penis is termed the prepuce. The arteries of the penis are from the hypogastric and ischiatic. The vein of the penis, *vena magna ipsius penis*, empties itself into the hypogastric vein. The absorbents of this organ are very numerous, and run under the common integuments to the inguinal glands: absorbents also are found in great plenty in the urethra. The glands of the penis are, Cowper's glands, the prostate, muciparous, and odoriferous glands. The nerves of the penis are branches of the sacral and ischiatic.

Penis cerebri. The pineal gland.

Penis erector. See *Erector penis.*

Penis muliebris. See *Clitoris.*

PENNYROYAL. See *Mentha.*

Pennyroyal, hart's. See *Mentha cervina.*

PENTADA'CTYLON. (*um*, i. n.; from πεντε, five, and δακτυλος, a finger: so called because it has five leaves upon each stalk, like the fingers upon the hand.) 1. The herb cinquefoil.

2. A name for the ricinus, the leaf of which resembles a hand.

PENTAGONUS. (From πεντε, five, and γωνια, an angle.) Pentagonal: five-sided. Applied to leaves synonymously with quinqueangular; as in *Geranium peltatum.*

Pentamy'rum. (From πεντε, five, and μυρον, ointment.) An ointment composed of five ingredients.

PENTA'NDRIA. (*a, æ.* f.; from πεντε, five, and ανηρ, a husband.) The name of a class of plants in the sexual system of Linnæus, embracing those which have hermaphrodite flowers, and five stamens.

PENTANEU'RON. (From πεντε, five, and νευρον, a string: so called because it has five-ribbed leaves.) Having five nerves or ribs. See *Plantago lanceolata.*

PENTAPHA'RMACON. (From πεντε, five, and φαρμακον, *remedium*, remedy.) Any medicine consisting of five ingredients.

PENTAPHYLLOID. (*Pentaphylloides*; from πενταφυλλον, cinquefoil, and ειδος, likeness: so called from its resemblance to cinquefoil.) Resembling the cinquefoil, or five-leaved plant. See *Fragaria sterilis.*

PENTAPHY'LLUM. (*um*, *i.* n.; from πεντε, five, and φυλλον, a leaf: so named because it has five leaves on each stalk.) Five-leaved. See *Potentilla reptans.*

PENTAPHYLLUS. (From πεντε, five, and φυλλον, a leaf.) Pentaphyllous, or five-leaved: applied to leaves, calyces, &c.; as the flower-cup of the *Ranunculus bulbosus.*

PENTAPLEU'RUM. Five-ribbed wort. See *Plantago lanceolata.*

PENTA'TOMUM. (From πεντε, five, and τεμνω, to cut: so called because its leaves are divided into five segments.) Cinquefoil. The *Potentilla reptans.*

PENTO'ROBUS. (From πεντε, five, and οροβος, the wood-pea: so called because it has five seeds resembling the wood-pea.) The herb peony. See *Pæonia officinalis.*

PEONY. See *Pæonia.*

PEPA'NSIS. (From πεπαινω, to concoct.) *Pepasmus.* The maturation or concoction of humours.

PEPA'SMUS. The same as *pepansis.*

PEPA'STICUS. (From πεπαινω, to concoct.) Digestive: applied formerly to medicines which assisted the digestion.

PEPERINE. A fatty resinous matter, obtained by Pelletier from black pepper, by digesting it in alkohol, and evaporating the solution.

PE'PITA NUX. St. Ignatius's bean.

PE'PLION. The same as *peplus.*

PE'PLOS. See *Peplus.*

PE'PLUS. (From πεπλος, the herb devil's-milk.) See *Euphorbia peplus.*

PE'PO. (From πεπτο, to ripen.) I. In botanical definitions, a fleshy succulent seed-vessel, or pericarpium, the seeds of which are inserted into the sides of the fruit. — *Gærtner* and *Willdenow.*

From its figure, the pepo is said to be,—

1. *Globose*; as in *Cucumis colocynthis.*
2. *Oblong*; as in *Cucumis sativus.*
3. *Lagenæform*; as in *Cucurbita lagenaria.*
4. *Curvate*; as in *Cucumis flexuosus.*
5. *Nodose*; as in *Cucumis melopepo.*
6. *Fusiform*; as in *Cucumis chate.*
7. *Echinate*; as in *Cucumis anguria.*
8. *Verrucose*; as in *Cucurbita verrucosa.*
9. *Scabious*; as in *Cucumis sativus.*

II. See *Cucurbita.*

PEPPER. See *Piper.*

Pepper, black. See *Piper nigrum.*

Pepper, dulce. See *Fucus pinnatifidus.*

Pepper, Guinea. See *Capsicum annuum.*

Pepper, Jamaica. See *Myrtus pimenta.*

Pepper, long. See *Piper longum.*

Pepper, poor man's. See *Polygonum.*

Pepper, wall. See *Sedum acre.*

Pepper, water. See *Polygonum.*

Pepperidge bush. See *Berberis.*

PEPPERMINT. See *Mentha piperita.*

PEPPERWORT. See *Lepidium iberis.*

PE'PTIC. (*Pepticus*; from πεπτω, to ripen.) Digestive.

PERACUTE. *Peracutus.* Very sharp: applied to diseases when very severe, or aggravated beyond measure; as subacute is applied to such as are not very acute, or so severe as they generally are.

PERCHLORIC. (*Perchloricus*: so called because it is a chloric acid, with excess of oxygene.) The name of an acid.

PERCHLORIC ACID. *Acidum perchloricum.* Oxychloric acid. A neutral salt, with a taste somewhat similar to the common muriate of potash.

PERCIVAL, THOMAS, was born at Warrington, in 1740. He possessed, in an eminent degree, those moral and intellectual endowments which are calculated to form a distinguished physician. His papers were published collectively, under the title of *Essays, Medical and Experimental,* in three volumes; which have passed through many editions, and obtained him considerable reputation. His subsequent publications were of a moral nature, and originally conceived for the improvement of his children. But his last work, entitled *Medical Ethics,* which appeared in 1803, is adapted for the use of the profession, and will form a lasting monument of his integrity and wisdom. He contributed also numerous papers on various subjects to the Memoirs of the Literary and Philosophical Society of Manchester.

PERCOLATION. (*Percolatio, onis. f.*; strained through: from *per*, through, and *colo*, to strain.) A term generally applied to animal secretion, from the office of the glands being thought to resemble that of a strainer in transmitting the liquors that pass through them.

PERCUSSION. The striking with the fingers, or an instrument, any part of the body, with a view to ascertain the diseased condition of the part struck: thus, by striking the belly, we know whether a gas or a fluid is within; by striking the chest, we know whether the lung is distended with air, or whether it is solidified. Percussion is chiefly practised on the chest in pulmonic diseases.

The chest of a healthy person, when slightly struck, ought to yield over its whole extent, more particularly in its anterior and lateral parts, a clear and distinct sound, owing to the pressure of the air which constantly fills the lungs. The knowledge of this fact, also, that the same sound does not exist when the lung is obstructed, or the cavity of the pleura filled with a fluid or solid substance, have induced physicians to have recourse to percussion, not merely to detect whether there was disease within the chest,

but in what particular part, as well as the better to ascertain the nature of the disease. Avenbrugger, about the middle of the last century, published on this subject; and Corvisart next directed the attention of the French physicians to it; and Dr. Laennec, after a great and attentive consideration, and ample experience in a great hospital, has given the world a most scientific and valuable work on this subject.

PERDE'TUM. In Paracelsus it is the root of skirret, or *Sium sisarum*.

PERDI'CIUM. (From περδιξ, a partridge: so called because partridges were said to feed upon it.) See *Parietaria officinalis*.

PERENNIAL. *Perennis*. Lasting naturally more than two years. Applied to plants, in opposition to those which live only one or two years; thus the elm, oak, fir, &c. are perennial.

Perennial worm-grass. See *Spigelia*.

PERETE'RION. (From περαω, to dig through.) The perforating part of the trepan.

PERFECT. A flower is said to be perfect or complete that has both calyx and corols, and one or more stamens and pistils.

PERFOLIA'TA. (*a, æ*. f.; from *per*, and *folium*: so called because the leaves surround the stem, like those of a cabbage.) See *Bupleurum perfoliatum*.

PERFOLIATE. (*Perfoliatus*; from *per*, through, and *folium*, a leaf.) Applied to leaves when the stem runs through them; as in *Bupleurum rotundifolium*, and *Chlora perfoliata*.

PE'RFORANS. See *Flexor profundus forans*.

PERFORANS, SEU FLEXOR PROFUNDUS. See *Flexor longus digitorum pedis profundus perforans*.

PERFORANS, SEU FLEXOR TERTII INTERNODII DIGITORUM PEDIS. See *Flexor longus digitorum pedis profundus perforans*.

PERFORANS, VULGO PROFUNDUS. See *Flexor profundus perforans*.

PERFORA'TA. (*a, æ*. f.; from *perforo*, to pierce through: so called because its leaves are full of holes.) See *Hypericum*.

PE'RFORATE. 1. In *Anatomy*, applied to muscles. See *Flexor brevis digitorum pedis*, and *Flexor sublimis perforatus*.

2. In *Botany*, applied to leaves and stems, which go through the leaves (see *Perforata*), and to small spots or perforations; as in *Hypericum perforatum*.

PERFORATUS, SEU FLEXOR SECUNDI INTERNODII DIGITORUM PEDIS. See *Flexor brevis digitorum pedis perforatus sublimis*.

PERIA'MMA. (From περιαπτω, to hang round.) An amulet, or charm, which was hung round the neck to prevent infection.

PERIA'NTHIUM. (*um, ii*. n.; from περι, and ανθος, a flower.) The calyx properly and commonly so called, when it is contiguous to, and makes a part of, the flower; as the five green leaves which encompass a rose, including their urn-shaped base; the tubular part comprehending the scales in the pinks, or the globular scaly cup in *Centaurea*. The tulip is a naked flower, having no calyx at all. The perianth is of infinite variety of forms.

From its number of leaves, it is,—

1. *Monophyllous*, formed of one only; as in *Datura stramonium*.
2. *Diphyllous*; as in *Papaver rhœas*.
3. *Triphyllous*; as in *Canna indica*.
4. *Tetraphyllous*; as *Lunaria annua*.
5. *Pentaphyllous*; as *Ranunculus*.

From the division of its edge,—

1. *Undivided*, without any irregularity; as in the female of the *Quercus robur*.
2. *Partite*, or divided almost to the base: hence *binartite*, or *bilabeate*, in *Salvia officinalis*; *tripartite*, in *Stratiotes aloides*; *quadripartite*, in *Œnothera biennis*; *quinquepartite*, in *Nereum oleander*; *duodecempartite*, in *Sempervivum tectorum*.
3. *Cloven*, cut as it were to the middle only; hence *bifid*, in *Adoxa moschatellina*; *trifid*, in *Asarum canadense*; *quinquefid*, in *Æsculus hippocastanum*.
4. *Dentate*, in *Marrubium vulgare*; *quinque dentate*, in *Cucumis* and *Cucurbita*, the female flowers.
5. *Serrate*, in *Centauria cyanus*.

From its *figure*,—

1. *Tubulosum*; as in *Datura stramonium*.
2. *Patens*, with spreading leaflets; as in *Borago officinalis*.
3. *Reflexum*, its laciniated portions turned backward; as in *Œnothera biennis*.
4. *Inflatum*, pouched and hollow; as in *Cucubalus behen*, and *Physalis alkekengi*, in fruit.

From its colour,—

Coloratum, when of any other than green; as in *Gomphrena globosa*.

From the disposition of the germen,—

1. *Superum*, when the perianth and corols are above. Hence the remains are visible on the fruit; as in roses, pears, &c.
2. *Inferum*, when below the germen; as in the poppy and water-lily.

From the number on each flower,—

1. *Simplex*, when one; as in *Nicotiana tabacum*.
2. *Duplex*, double; as in *Malva*, *Althæa*, *Hibiscus*, &c.
3. *Calyculatum*, or *acutum*, having a lesser one, or scales down to the base; as in *Dianthus caryophyllus*.

Nullum, when wanting; as in tulips.

From its situation with respect to the fructification,—

1. *Perianthium floris*, when belonging to the male.
2. *P. fructus*, when with the pistils.
3. *P. fructificationis*, containing both stamina and pistils in the flower.

From its duration,—

1. *Caducous*, falling off early; as in *Papaver*.
2. *Deciduous*, very late; as in *Tilia europæa*.
3. *Peristent*; as in *Hyosciamus*.

4. *Marescent*, withered, but yet conspicuous on the fruit; as in *Pyrus*, *Mespilus*, &c.

PERIBLE'PSIS. (*is, is.* f.; from περιϐλεπω, to stare about.) That kind of wild look which is observed in delirious persons.

PERI'BOLE. (From περιϐαλλω, to surround.) A word used frequently by Hippocrates in different senses. Sometimes it signifies the dress of a person; at others a translation of the morbific humours from the centre to the surface of the body.

PERIBRO'SIS. An ulceration or erosion at the corners or uniting parts of the eyelids. It most frequently affects the internal commissure. It arises from the acrimony of the tears, or from an ægylops, which sometimes extends to the corners of the eyelids.

PERICARDI'TIS. (*is, idis.* f.; from περικαρδιον, the pericardium.) Inflammation of the pericardium. The symptoms of this disease, when confined to the bag or pericardium, are, fixed pain in the region of the heart, with symptomatic fever; and, when the inflammation is in the membrane that is reflected over the surface of the heart also, which is mostly the case, they are similar to those of carditis. The causes and treatment are the same. See *Carditis*.

PERICA'RDIUM. (*um, ii.* n.; from περι, about, and καρδια, the heart.) The membraneous bag that surrounds the heart. Its use is to secrete and contain the vapour of the pericardium, which lubricates the heart, and thus preserves it from concreting with the pericardium.

PERICARPIALIS. Belonging to the pericarpium of plants: thus the spines of the *Datura stramonium* on the fruit, are called pericarpial.

PERICARPIUM. (From περι, about, and *carpus*, the wrist.) I. In *Anatomy*, about the wrists: formerly used to designate medicines and plasters which were applied to the wrist.

II. In *Botany*, (from περι, about, and καρπος, a seed,) the seed-vessel or covering of the seed of plants, which is mostly membraneous, leathery, woody, pulpy, or succulent. The membraneous are,—

1. *Capsula*. 5. *Lomentum*.
2. *Siliqua*. 6. *Folliculus*.
3. *Silicula*. 7. *Samara*.
4. *Legumen*.

The woody seed-vessels are,—

8. *Strobulus*. 9. *Nux*.

The fleshy ones,—

10. *Pomum*. 12. *Drupa*.
11. *Pepo*.

The succulent,—

13. *Bacca*.

The seed-vessel is extremely various in different plants, and is formed of the germen enlarged. It is not an essential part of a plant, the seeds being frequently naked, and guarded only by the calyx, as is the case with the plants of the order *Gymnospermia*, also in the great class of compound flowers, *Syngenesia*.

The use of the seed-vessel is to protect the seeds till ripe, and then in some way or other to promote their dispersion, either scattering them by its elastic power, or serving for the food of animals, in the dung of which the seeds vegetate, or promoting the same end by various other means. The same organ which remains closed so long as it is juicy or moist, splits or flies asunder when dry, thus scattering the seeds in weather most favourable for their success. By an extraordinary provision of nature, however, in some annual species of Mesembryanthemum, natives of sandy deserts in Africa, the seed-vessel opens only in rainy weather; otherwise the seeds might, in that country, lie long exposed before they met with sufficient moisture to vegetate.

PERICHÆ'TIUM. (*um, ii.* n.; from περι, about, and χαιτη, a hair, or bristle.) A scaly sheath, investing the fertile flower, and consequently the base of the fruit-stalk, of some mosses. In the genus *Hypnum* it is of great consequence, not only by its presence, constituting a part of the generic character, but by its differences in shape, proportion, and structure, serving frequently to discriminate species. Linnæus appears by his manuscripts, Sir James Smith informs us, to have intended adding this to the different kinds of calyx, though it is not one of the seven enumerated in his printed works.

PERICHO'NDRIUM. (*um, ii.* n.; from περι, about, and χονδρος, a cartilage.) The membrane that covers a cartilage.

PERICHRI'SIS. (From περι, about, and χριω, to anoint.) A liniment.

Perichri'stus. (From περι, around, and χριω, to anoint.) Any medicine with which the eyelids are anointed, in an ophthalmia.

Pericla'sis. (From περι, about, and κλαω, to break.) It is a term used by Galen for such a fracture of the bone as quite divides it, and forces it through the flesh into sight. Or a fracture with a great wound, wherein the bone is laid bare.

PERICLY'MENUM. (*um, i.* n.; from περικλυζω, to roll round: so called because it twists itself round whatever is near it.) See *Lonicera periclimenum*.

PERICNE'MIA. (*a, æ.* f.; from περι, about, and κνημη, the tibia.) The parts about the tibia.

PERICRA'NIUM. (*um, ii.* n.; from περι, about, and κρανιον, the cranium.) The membrane that is closely connected to the bones of the head or cranium.

Peride'smicus. (From περι, about, and δεσμος, a ligature.) 1. About a ligament.

2. A suppression of urine, from stricture in the urethra.

PERIDIUM. (*um, ii.* n.) The name given by Persoon to the round membraneous dry case of the seeds of some of the angiosperm mushrooms.

PERIDOT. See *Chrysolite*.

Peri'dromos. (From περι, about, and δρομος, a course.) The extreme circumference of the hairs of the head.

PERIE'RGIA. Περιεργια. Any needless

caution or trouble in an operation, as περιεργος is one who dispatches it with unnecessary circumstances: both the terms are met with in Hippocrates, and others of the Greek writers.

Perieste'cos. (From περιςημι, to surround, or to guard.) An epithet for diseases, signs, or symptoms, importing their being salutary, and that they prognosticate the recovery of the patient.

Peri'graphe. (From περιγραφω, to circumscribe.) 1. An inaccurate description, or delineation.

2. In Vesalius, *perigraphe* signifies certain white lines and impressions, observable in the musculus rectus of the abdomen.

Pe'rin. (From πηρα, a bag.) A testicle. Some explain it the *perinæum;* others say it is the *anus.*

PERINÆOCE'LE. (*e, es.* f.; from περιναιον, the perinæum, and κηλη, a rupture.) A rupture in the perinæum.

PERINÆ'UM. (*um, i.* n.; from περινεω, to flow round, because that part is generally moist.) The space between the anus and organs of generation.

Perinæus transversus. See *Transversus perinæi.*

PERINYCTIS. (*is, idis.* f.; from περι, and νυξ, the night.) A little swelling, like a nipple; or, as others relate, a pustule, or pimple, which breaks out in the night.

PERIO'STEUM. (*um, i.* n.; from περι, about, and οςεον, a bone.) The membrane which invests the external surface of all the bones, except the crowns of the teeth. It is of a fibrous texture, and well supplied with arteries, veins, nerves, and absorbents. It is called *pericranium,* on the cranium; *periorbita,* on the orbits; *perichondrium,* when it covers cartilage; and *peridesmium,* when it covers ligament. Its use appears to be to distribute the vessels on the external surfaces of bones.

Periphimo'sis. See *Phimosis.*

Peripleumo'nia. See *Pneumonia.*

PERIPNEUMO'NIA. (*a, æ.* f.; from περι, and πνευμων, the lung.) Peripneumony, or inflammation of the lungs. See *Pneumonitis.*

Peripneumonia notha. Bastard or spurious peripneumony. Practitioners, it would appear, do not all affix this name to the same disease; some affirming it to be a rheumatic affection of the respiratory muscles, while others consider it as a mild peripneumony. It is characterised by difficulty of breathing, great oppression at the chest, with obscure pains, coughs, and occasionally an expectoration. Spurious peripneumony is sometimes so slight as to resemble only a violent catarrh; and, after the employment of a few proper remedies, goes off by a free and copious expectoration; but sometimes the symptoms run high, and an effusion of serum into the bronchia takes place, which destroys the patient.

PERIPYE'MA. (*a, atis.* n.; from περι, about, and πυον, pus.) A collection of matter about any part, as round a tooth, in the gums.

Perirrhe'xis. (From περι, about, and ρηγνυμι, to break.) A breaking off, or a separation round about, either of corrupted bones, or of dead flesh.

Perirrhœ'a. (From περιρρεω, to flow about.) A reflux of humours in a dropsical case to any of the larger emunctories for its excretion.

Periscyphi'smus. (From περι, about, and κυφος, gibbous.) An incision made across the forehead, or from one temple to another, over the upper part of the os frontis. It was formerly made to cover a considerable inflammation or defluxion from the eyes.

PERISTALTIC. (*Peristalticus;* from περιςελλω, to contract.) The vermicular motion of the intestines, by which they contract and propel their contents, is called peristaltic. A similar motion takes place in the Fallopian tubes, after conception, by means of which the ovum is translated from the ovarium into the uterus.

Peristaphyli'nus. (From περι, about, and ςαφυλη, the uvula.) A muscle which is connected with the uvula.

Periste'rium. (From περιςερος, a pigeon: so called because pigeons covet it.) See *Verbena officinalis.*

Peristoma. See *Peristomium.*

PERISTOMIUM. (*um, ii.* n.; from περι, around, and ςομα, the mouth or opening of the capsule.) *Peristoma.* The fringe-like membraneous margin which, in many mosses, borders the orifice of the theca or capsule. It is either simple or double, and consists either of separate teeth, or of a plated or jagged membrane. The external fringe is mostly of the former kind; the inner, when present, of the latter. The number of teeth remarkably constant in each genus and species is either four, eight, sixteen, thirty-two, or sixty-four. On these, Hedwig and his followers have placed great dependance.

Peristro'ma. (From περιςρεννυω, to strew about.) Properly signifies any covering.

PERISY'STOLE. (*e, es.* f.; from περιςελλω, to compress.) The pause or time between a contraction and dilatation of the heart.

Peritr'rion. (From περι, and τηρεω, to preserve.) The perforating part of the trepan.

Peritonæorr'xis. (From περιτοναιον, the peritonæum, and ρησσω, to break.) A bursting of the peritonæum.

PERITONÆ'UM. (*um, i.* n.; from περιτεινω, to extend round.) A strong simple membrane, by which all the viscera of the abdomen are surrounded. It has an exceedingly smooth, exhaling, and moist internal surface. Outwardly, it is every where surrounded by cellular substance, which, towards the kidneys, is very loose and very fat, but is very short at the lower tendon of the transverse muscles. It begins from the diaphragm, which it completely lines, and at the last fleshy fibres of the ribs, and the external lumbar fibres, it completes the septum, in conjunction with the pleura, with which it is continuous through the various intervals of the diaphragm. Pos-

teriorly, it descends before the kidneys; anteriorly, behind the abdominal muscles. It dips into the pelvis from the bones of the pubes, passes over the bladder, and descends behind; and being again carried backwards at the entrance of the ureters, in two lunar folds, it rejoins upon the intestinum rectum that part of itself which invests the loins, and in this situation lies before the rectum. The cellular texture, which covers the peritonæum on the outside, is continued into sheaths in very many places; of which, one receives the testicle on each side, another the iliac vessels of the pelvis, viz. the obturatoria, those of the penis and bladder, and the aorta, and, ascending to the breast, accompanies the œsophagus and vertebræ; by means of which there is a communication between the whole body and the peritonæum, well known in dropsical people. It has various prolongations for covering the viscera. The shorter productions of this membrane are called ligaments, and are formed by a continuous reduplication of the peritonæum, receding from its inner surface, enclosing cellular substance, and extending to some viscus, where its plates separate, and, having diverged, embrace the viscus; but the intermediate cellular substance always accompanies this membranaceous coat, and joins it with the true substance of the viscus. Of this short kind of production, three belong to the liver, one or two to the spleen, and others to the kidneys, and to the sides of the uterus and vagina. By these means, the tender substance of the viscera is defended from injury by any motion or concussion, and their whole mass is prevented from being misplaced by their own weight, and from injuring themselves, being securely connected with the firm sides of the peritonæum.

PERITONI'TIS. (*is, idis.* f.; from *περιτοναι*, the peritonæum.) This term is applied to inflammation of the peritonæum, which covers the parietes of the abdomen. When inflammation takes place in the peritoneal covering of the viscera, the symptoms are similar to those which inflammation of the viscera produce; and the disease takes the name of the viscus in which the disease is: thus, inflammation of the peritoneal covering of the liver produces symptoms of hepatitis; that of the stomach, symptoms of gastritis; and so on. The symptoms of peritonitis, when the viscera are not affected, are, tenderness in the part when pressed, and fixed pain, accompanied by fever, and, generally, considerable disturbance of the system. It may be produced by any of the causes of inflammation, and requires the free use of leeches, blisters, the warm bath, and fomentations, and the same internal remedies as reduce inflammatory fever, and inflammation in other parts.

PERIZO'MA. (From *περιζωννυμι*, to gird round.) 1. This term strictly signifies a girdle.

2. Hildanus, and some other chirurgical writers, applied it to those instruments for supporting ruptures which we commonly call trusses.

3. Some express by it the diaphragm.

PE'RLA. (Ital. and Span.; *perl*, Welch; *perlen*, Germ.) See *Margarita*.

Perlate acid. A name given by Bergman to the acidulous phosphate of soda.

PERMANENT. See *Persistens*.

PE'RNIO. (*o, onis.* m.) A kibe or chilblain. A chilblain is a painful inflammatory swelling, of a deep purple or leaden colour, to which the fingers, toes, heels, and other extreme parts of the body are subject, on being exposed to a severe degree of cold. The pain is not constant, but rather pungent and shooting at particular times, and an insupportable itching attends. In some instances, the skin remains entire, but in others it breaks and discharges a thin fluid. When the degree of cold has been very great, or the application long continued, the parts affected are apt to mortify and slough off, leaving a foul ill-conditioned ulcer behind. Children and old people are more apt to be troubled with chilblains than those of a middle age; and such as are of a scrofulous habit are remarked to suffer severely from them. Local stimulants are the best applications against chilblains, and particularly those which serve at the same time to defend the weakened parts from the severity of the external air: hence, warm socks and gloves, worn day and night, are useful, and warm diachylon and burgundy pitch plaster, spread upon leather, still more so. For the same reason, embrocations of oil of turpentine, opodeldoc, equal parts of vinegar and spirits of wine, the liquor ammoniæ acetatis, with dilute spirit, will be found serviceable. Linnæus recommends bathing the part with very dilute muriatic acid: it should be so proportioned as just to be felt. The weakened vessels should never be too much distended; and hence, though gentle warmth and stimulants are indispensable, great heat, and especially a near approach to the fire, and more particularly still when very cold, will always be found very injurious. When the inflammation becomes ulcerated, it is called a *kibe*. Warm and stimulating dressings will alone succeed in effecting a cure, as the unguentum resinæ, elemi, and the like, so reduced with simple cerate as not to irritate; and, if fungous granulations should appear, which they are very apt to do, they must be removed by some mild escharotic, as a solution of nitrate of silver, or of sulphate of copper.

PE'RONE. (From *πειρω*, to fasten: so called because it fastens together the tibia and the muscles.) The fibula.

PERONE'US. (*Περοναιος*; from *perone*, the fibula.) Belonging to the fibula.

Peroneus anticus. See *Peroneus brevis*.

Peroneus brevis. This muscle is the *peroneus secundus, seu anticus*, of Douglas; the *peroneus medius, seu anticus*, of Winslow; and the *peronæus secundus*, of Cowper. It arises, by an acute, thin, and fleshy origin, from the anterior and outer part of the fibula, its fibres continuing to adhere to the lower half of that bone. Its round tendon passes

through the groove in the malleolus externus, along with that of the peroneus longus, after which it runs in a separate groove to be inserted into the upper and posterior part of the tubercle at the basis of the metatarsal bone that supports the little toe. Its use is to assist the peroneus longus.

Peroneus longus. This muscle, which is the *peroneus primus, seu posticus,* of Douglas; *peroneus maximus, seu posterior,* of Winslow; and *peronæus primus,* of Cowper; is situated somewhat anteriorly along the outer side of the leg. It arises tendinous and fleshy from the external lateral part of the head of the tibia, and likewise from the upper anterior surface, and outer side of the *perone* or fibula, its fibres continuing to adhere to the outer surface of the latter, to within three or four inches of the malleolus externus. It terminates in a long round tendon, which runs obliquely behind the malleolus internus, where it passes through a cartilaginous groove in common with the peroneus brevis, being bound down by an annular ligament. When it has reached the os calcis, it quits the tendon of the peroneus brevis, and runs obliquely inwards along a groove in the os cuboides, under the muscles on the sole of the foot, to be inserted into the outside of the posterior extremity of the metatarsal bone that supports the great toe. Near the insertion of this muscle we find a small *bursa mucosa.* This muscle draws the foot outwards, and likewise assists in extending it.

Peroneus maximus. See *Peroneus longus.*

Peroneus medius. See *Peroneus brevis.*

Peroneus posticus. See *Peroneus longus.*

Peroneus primus. See *Peroneus longus.*

Peroneus secundus. See *Peroneus brevis.*

Peroneus tertius. This is the name given by Albinus to a muscle, which by some writers is called *nonus Vesalii,* or Vesalius's ninth muscle of the foot; but by most considered in the present day as a portion of the extensor longus digitorum pedis. It is situated at the anterior, inferior, and outer part of the leg, along the outer edge of the last described muscle, to which it is intimately united. It arises fleshy from the anterior surface of the lower half of the fibula, and from the adjacent part of the interosseous ligament. Its fibres run obliquely downwards, towards a tendon which passes under the annular ligament, and then running obliquely outwards, it is inserted into the root of the metatarsal bone that supports the little toe. This muscle assists in bending the foot.

PERPENDICULAR. *Perpendicularis.* Applied to parts of plants; as the root of the *Daucus carota,* which goes straight down into the earth.

PE'RSICA. (*a, æ.* f.; from *Persia,* its native soil.) The peach. See *Amygdalus.*

PERSICA'RIA. (*a, æ.* f.; from *Persica,* the peach-tree: so called, because its blossoms are like those of the peach.) See *Polygonum.*

Persicaria mitis. See *Polygonum.*

Persicaria urens. See *Polygonum.*

PERSI'STENS. Permanent: applied to flower-cups remaining a long time after the flower; as that of the *Hyosciamus niger.*

Persistens febris. A regular intermitting fever, the paroxysms of which return at constant and stated hours.

Persona'ta. (*a, æ.* f.; from *persona,* a mask: because, says Pliny, the ancient actors used to mask themselves with the leaves of this plant.) See *Arctium lappa.*

PERSONATUS. Personate. A term applied to a gaping blossom, or monopetalous corolla, when irregular, and closed by a kind of palate; as in *Antirrhinum.*

PERSPIRATION. (*Perspiratio, onis.* f.) The vapour that is secreted by the extremities of the cutaneous arteries from the external surface of the body. It is distinguished into *sensible* and *insensible.* The former is separated in the form of an invisible vapour, the latter so as to be visible in the form of very little drops adhering to the epidermis. The *secretory organ* is composed of the extremities of the cutaneous arteries. The *smell* of the perspirable fluid in an healthy man, is fatuous and animal; its *taste* manifestly salt and ammoniacal. In *consistence* it is vaporous or aqueous; and its *specific gravity* in the latter state is greater than that of water. For the most part it is yellowish, from the passage of the subcutaneous oil, and sebaceous matter of the subcutaneous glands.

Whatever form it takes, the liquid that escapes from the skin is composed, according to Thénard, of a great deal of water, a small quantity of acetic acid, of muriate of soda and potash, a small quantity of earthy phosphate, an atom of oxide of iron, and a trace of animal matter. Berzelius considers the acid of sweat not the same as acetic acid, but like the lactic acid of Scheele. The skin exhales, besides, an oily matter, and some carbonic acid.

Many experiments have been made to determine the quantity of transpiration which is formed in a given time, and the variations that this quantity undergoes according to circumstances. The first attempts are due to Sanctorius, who, during thirty years, weighed every day, with extreme care and indefatigable patience, his food and his drink, his solid and liquid excretions, and even himself. Sanctorius, in spite of his zeal and perseverance, arrived at results that were not very exact. Since his time, several philosophers and physicians have been employed on the same subject, with more success; but the most remarkable labour in this way is that of Lavoisier and Seguin. These philosophers were the first who distinguished the loss that takes place by pulmonary transpiration from that of the skin. Seguin shut himself up in a bag of *gummed silk,* tied above his head, and presenting an opening, the edges of which were fixed round his mouth by a mixture of turpentine and pitch. In this manner only, the humour of the pulmonary transpiration passed into the air. In order to know the quantity, it was sufficient to weigh himself, with the bag, at

the beginning and end of the experiment, in a very fine balance. By repeating the experiment out of the bag, he determined the whole quantity of humour transpired; so that by deducting from this the quantity that he knew had passed out from the lungs, he had the quantity of humour exhaled by the skin. Besides, he took into account the food that he had used, his excretions solid and liquid, and generally all the causes that could have any influence upon the transpiration. By following this plan, the results of Lavoisier and Seguin are these: —

1st, The greatest quantity of insensible transpiration (the pulmonary included) is 25·6 grains troy per minute; consequently, 3 ounces, 1 drachm, 36 grains per hour; and 6 pounds, 4 ounces, 6 drachms, 24 grains, in 24 hours.

2d, The least considerable loss is 8·8 grains per minute; consequently, 2 pounds, 2 ounces, 3 drachms, in 24 hours.

3d, It is during the digestion that the loss of weight occasioned by insensible transpiration is at its minimum.

4th, The transpiration is at its maximum immediately after dinner.

5th, The mean of the insensible transpiration is 14·4 grains per minute; in the mean 14·4 grains, 8·8 depend on cutaneous transpiration, and 5·6 upon the pulmonary.

6th, The cutaneous transpiration alone varies during and after repasts.

7th, Whatever quantity of food is taken, or whatever are the variations of the atmosphere, the same individual, after having augmented in weight by all the food that he has taken, returns, in 24 hours, to the same weight nearly that he was the day before, provided he is not growing, or has not eaten to excess.

It is much to be wished that this interesting labour had been continued, and that authors had not limited their studies to insensible transpiration, but had extended their observations to the sweat.

Whenever the humour of transpiration is not evaporated, as soon as it is in contact with the air, it appears at the surface of the skin in the form of a layer of liquid, of variable thickness. Now, this effect may happen because the transpiration is too copious, or because of the diminution of the dissolvent force of the air. We perspire in an air hot and humid, by the influence of the two causes joined: we should perspire with more difficulty in an air of the same heat, but dry. Certain parts of the body transpire more copiously, and sweat with more facility than others; such are the hands and the feet, the arm-pits, the groins, the brow, &c. Generally the skin of these parts receives a greater proportional quantity of blood; and in some people, the arm-pit, the sole of the foot, and the intervals between the toes, do not come so easily in contact with the air.

The sweat does not appear to have every where the same composition; every one knows that its odour is variable, according to the different parts of the body. It is the same with its acidity, which appears much stronger in the arm-pits and feet than elsewhere.

The cutaneous transpiration has numerous uses in the animal economy, keeps up the suppleness of the epidermis, and thus favours the exercise of the tact and the touch. It is by evaporation along with that of the lungs, the principal means of cooling, by which the body maintains itself within certain limits of temperature; also its expulsion from the economy appears very important, for every time that it is diminished or suspended, derangements of more or less consequence follow, and many diseases are not arrested until a considerable quantity of sweat is expelled.

Besides water, it cannot be doubted that *carbon* is also emitted from the skin; but in what state, the experiments hitherto made do not enable us to decide. Cruickshanks found, that the air of the glass vessel in which his hand and foot had been confined for an hour, contained carbonic acid gas; for a candle burned dimly in it, and it rendered lime-water turbid. And Jurine found, that air which had remained for some time in contact with the skin, consisted almost entirely of carbonic acid gas. The same conclusion may be drawn from the experiments of Ingenhousz and Milly. Trousset has lately observed, that air was separated copiously from a patient of his, while bathing.

Besides water and carbon, or carbonic acid gas, the skin emits also a particular odorous substance. That every animal has a peculiar smell, is well known: the dog can discover his master, and even trace him to a distance, by the scent. A dog, chained up several hours after his master had set out on a journey of some hundred miles, followed his footsteps by the smell. But it is needless to multiply instances of this fact; they are too well known to every one. Now, this smell must be owing to some peculiar matter which is constantly emitted; and this matter must differ somewhat, either in quantity or some other property, as we see that the dog easily distinguishes the individual by means of it. Cruickshanks has made it probable, that this matter is an oily substance, or at least that there is an oily substance emitted by the skin. He wore repeatedly, night and day, for a month, the same under waistcoat of fleecy hosiery, during the hottest part of the summer. At the end of this time he always found an oily substance accumulated in considerable masses on the nap of the inner surface of the waistcoat, in the form of black tears. When rubbed on paper, it rendered it transparent, and hardened on it like grease. It burned with a white flame, and left behind it a charry residuum.

Berthollet has observed the perspiration acid; and he has concluded that the acid which is present is the phosphoric: but this has not been proved. Fourcroy and Vauquelin have ascertained, that the scurf which collects

upon the skins of horses consists chiefly of phosphate of lime, and urea is even sometimes mixed with it.

According to Thénard, however, who has lately endeavoured more particularly to ascertain this point, the acid contained in sweat is the acetous; which, he likewise observes, is the only free acid contained in urine and in milk, this acid existing in both of them when quite fresh. His account of his examination of it is as follows:—

The sweat is more or less copious in different individuals; and its quantity is perceptibly in the inverse ratio of that of the urine. All other circumstances being similar, much more is produced during digestion, than during repose. The maximum of its production appears to be twenty-six grains and two thirds in a minute; the minimum nine grains, troy weight. It is much inferior, however, to the pulmonary transpiration; and there is likewise a great difference between their nature and manner of formation. The one is a product of a particular secretion, similar in some sort to that of the urine; the other, composed of a great deal of water and carbonic acid, is the product of a combustion gradually effected by the atmospheric air.

The sweat, in a healthy state, very sensibly reddens litmus paper or infusion. In certain diseases, and particularly in putrid fevers, it is alkaline; yet its taste is always rather saline, and more similar to that of salt, than acid. Though colourless, it stains linen. Its smell is peculiar, and insupportable when it is concentrated, which is the case in particular during distillation. But before he speaks of the trials to which he subjected it, and of which he had occasion for a great quantity, he describes the method he adopted for procuring it, which was similar to that of Cruickshanks.

Human sweat, according to Thénard, is formed of a great deal of water, free acetous acid, muriate of soda, an atom of phosphate of lime and oxide of iron, and an inappreciable quantity of animal matter, which approaches much nearer to gelatine than to any other substance.

Perspiration varies in respect to, 1. The *temperature of the atmosphere.* Thus men have a more copious, viscid, and higher-coloured sweat in summer than in winter, and in warm countries than in colder regions. 2. *Sex.* The sweat of a man is said to smell more acrid than that of a woman. 3. *Age.* The young are more subject to sweat than the aged, who, during the excessive heat of the summer, scarcely sweat at all. 4. *Ingesta.* An alliacious sweat is perceived from eating garlick; a leguminous, from peas; an acid, from acids; a fœtid, from animal food only; and a rancid sweat from fat foods, as is observed in Greenland. A long abstinence from drink causes a more acrid and coloured sweat; and the drinking a great quantity of cold water in summer, a limpid and thin sweat. 5. *Medicines.* The sweat of those who have taken musk, even moderately, and assafœtida, or sulphur, smells of their respective natures. 6. *Region of the body.* The sweat of the head is greasy; on the forehead it is more aqueous; under the axillæ, very unguinous; and in the interstices of the toes, it is very fœtid, forming in the most healthy man blackish sordes. 7. *Diseases.* In this respect it varies very much in regard to quantity, smell, and colour; for the sweat of gouty persons is said to turn blue vegetable juices to a red colour. Some men also have a lucid sweat, others a sweat tinging their linen of a cærulean colour.

The uses of the insensible perspiration are, 1. To *liberate* the blood from superfluous animal gas, azote, and water. 2. To eliminate the noxious and heterogeneous excrements: hence the acrid, rancid, leguminous, or putrid perspiration of some men. 3. To *moisten* the external surface of the body, lest the epidermis, cutis, and its nervous papillæ, be dried up by the atmospheric air. 4. To *counterbalance* the suppressed pulmonary transpiration of the lungs; for when it is suppressed, the cutaneous is increased: hence the nature of both appears to be the same.

The use of the sensible perspiration, or sweat, in a healthy man, is scarcely observable, unless from an error of the non-naturals. Its first effect on the body is always prejudicial, by exhausting and drying it, although it is sometimes of advantage. 1. By supplying a watery excretion: thus, when the urine is deficient, the sweat is often more abundant. In this manner an aqueous diarrhœa is frequently cured by sweating. 2. By eliminating, at the same time, any morbid matter. Thus various miasmata are critically expelled, in acute and chronic diseases, with the sweat.

PERTU'SSIS. (*is, is.* f.; from *per*, much, and *tussis*, cough.) The hooping-cough. A disease, known by a convulsive strangulating cough, with hooping, returning by fits, that are usually terminated by a vomiting; and by its being contagious.

Children are most commonly the subjects of this disease, and it seems to depend on a specific contagion, which affects them but once in their life. The disease being once produced, the fits of coughing are often repeated without any evident cause; but, in many cases, the contagion may be considered as only giving the predisposition, and the frequency of the fits may depend upon various exciting causes, such as violent exercise, a full meal, the having taken food of difficult digestion, and irritation of the lungs by dust, smoke, or disagreeable odours. Emotions of the mind may likewise prove an exciting cause.

Its proximate or immediate cause seems to be a viscid matter or phlegm lodged about the bronchia, trachea, and fauces, which sticks so close as to be expectorated with the greatest difficulty. Some have supposed it to be a morbid irritability of the stomach, with increased action of its mucous glands; but the affection of the stomach which takes place in the disease, is clearly only of a secon-

dary nature, so that this opinion must be erroneous.

The hooping-cough usually comes on with a difficulty of breathing, some degree of thirst, a quick pulse, and other slight febrile symptoms, which are succeeded by a hoarseness, cough, and difficulty of expectoration. These symptoms continue perhaps for a fortnight or more, at the end of which time the disease puts on its peculiar and characteristic form, and is now evident, as the cough becomes convulsive, and is attended with a sound which has been called a hoop.

When the sonorous inspiration has happened, the coughing is again renewed, and continues in the same manner as before, till either a quantity of mucus is thrown up from the lungs, or the contents of the stomach are evacuated by vomiting. The fit is then terminated, and the patient remains free from any other for some time, and shortly afterwards returns to the amusements he was employed in before the fit, expresses a desire for food, and when it is given to him takes it greedily. In those cases, however, where the attack has been severe, he often seems much fatigued, makes quick inspirations, and falls into a faint.

On the first coming on of the disease, there is little or no expectoration; or, if any, it consists only of thin mucus; and as long as this is the case the fits of coughing are frequent, and of considerable duration; but on the expectoration becoming free and copious, the fits of coughing are less frequent, as well as of shorter duration.

By the violence of coughing, the free transmission of blood through the lungs is somewhat interrupted, as likewise the free return of the blood from the head, which produces that turgescence and suffusion of the face which commonly attend the attack, and in some cases brings on a bleeding either from the nose or ears.

The disease having arrived at its height, usually continues for some weeks longer, and at length goes off gradually. In some cases it is, however, protracted for several months, or even a year.

Although the hooping-cough often proves tedious, and is liable to return with violence on any fresh exposure to cold, when not entirely removed, it nevertheless is seldom fatal, except to very young children, who are always likely to suffer more from it than those of a more advanced age. The danger seems, indeed, always to be in proportion to the youth of the person, and the degree of fever and difficulty of breathing which accompany the disease, as likewise the state of debility which prevails.

It has been known, in some instances, to terminate in apoplexy and suffocation. If the fits are put an end to by vomiting, it may be regarded as a favourable symptom, as may likewise the taking place of a moderate and free expectoration, or a slight hæmorrhage from the nose or ears.

Dissections of those who die of the hooping-cough usually show the consequence of the organs of respiration being affected, and particularly those parts which are the seat of catarrh. When the disease has been long protracted, it is apt to degenerate into pulmonary consumption, asthma, or visceral obstructions, in which last case the glands of the mesentery are found in a hard and enlarged state.

In the treatment of this disease it must be borne in mind that, in the early period, palliative measures can only be employed; but when it continues merely from habit, a variety of means will often at once put a stop to it. In the first stage, in mild cases, very little is required, except obviating occasional irritation, keeping the bowels regular, &c. But where it puts on a more serious character, the plan will differ accordingly as it is attended with inflammatory symptoms, or exhibits a purely spasmodic form. In the former case, it may be sometimes proper, in plethoric habits, to begin by a full bleeding, or leeches to the chest, if the patient be very young, then clear the bowels effectually, apply a blister, and exhibit antimonials, or squill, in nauseating doses, assisted perhaps by opium, to promote diaphoresis and expectoration. An occasional emetic, where the breathing is much oppressed with wheezing, in young children particularly, may afford material relief. When the disorder is more of the spasmodic character, some of these means may still be useful, as blisters, and nauseating medicines, so far as the strength will admit; but the remedies of greatest efficacy are the narcotics, as opium, conium, &c. exhibited in adequate doses. In the chronic or habitual stage of the disease, almost any thing which produces a considerable impression on the constitution, will occasionally succeed; but we chiefly rely on sedative and antispasmodic, or on tonic remedies, according as there are marks of irritability, or of mere debility in the system. Of the former description opium is perhaps the best, especially in conjunction with squill, given in a full dose at night, and in small quantities swallowed slowly from time to time during the day. Conium, assafœtida, &c. may, however, occasionally answer better in particular constitutions. Among the tonics the cinchona is often highly efficacious, where no appearances of local disease attend: some of the metallic preparations also, particularly sulphate of zinc, may be much relied upon. Sometimes stimulant applications to the chest, but still more certainly opiate frictions, will be found to cure this disorder. The same is very often accomplished by a change of air, indeed occasionally after the failure of most remedies. The cold bath also, where there is no local disease, may have an excellent effect; assisted by warm clothing, especially wearing some kind of fur over the chest. Fear and other emotions of the mind, strangury induced by the use of the lytta, &c. &c. rank also among the remedies of pertussis.

Peruvian balsam. See *Myroxylon.*

Peruvian bark. See *Cinchona.*

PERUVIA'NUS CORTEX. See *Cinchona.*

PERUVIANUS CORTEX FLAVUS. See *Cinchona cordifolia.*

PERUVIANUS CORTEX RUBER. See *Cinchona oblongifolia.*

PERVIGI'LIUM. (*um, ii.* n.; from *per*, much, and *vigilo*, to watch.) Watching, or a want of sleep. See *Vigilance.*

PERVI'NCA. (*a, æ.* f.; from *pervincio*, to tie together.) So called because its stringy roots were used for binding substances together. See *Vinca minor.*

PES. (*es, edis.* m.; a foot.) The foot. It consists of the tarsus, metatarsus, and toes. It has its proper muscles and tendons, arteries, veins, and nerves.

PES ALEXANDRINUS. See *Anthemis.*

PES CAPRÆ. Goat's-foot, a species of *Oxalis*; also a species of *Convolvulus.*

PES CATI. See *Gnaphalium dioicum.*

PES COLOMBINUS. See *Geranium.*

PES HIPPOCAMPI. The name of two columns at the end of the fornix of the brain, which diverge posteriorly.

PES LEONIS. See *Alchemilla.*

PES TIGRIDIS. A species of *Ipomœa.*

PESSARY. (*Pessarium, ii.* n.; from πεσσω, to soften.) An instrument that is introduced into the vagina to support the uterus.

PESTILENCE. A plague.

PESTILENTIAL. (*Pestilentialis*; from *pestes*, the plague.) An epidemic, malignant, and contagious disease, approaching to the nature of the plague.

PESTILENTWORT. See *Tussilago.*

PESTILOCHIA. See *Aristolochia virginiana.*

PE'STIS. The plague: a disease characterised by typhus fever, which is contagious in the extreme; prostration of strength, buboes, and carbuncles; petechiæ, hæmorrhage, and colliquative diarrhœa.

By some writers the disease has been divided into three species: that attended with buboes; that attended with carbuncles; and that accompanied with petechiæ. This division appears wholly superfluous. Dr. Russel, in his elaborate treatise on the plague, makes mention of many varieties; but, when these have arisen, they seem to have depended in a great measure on the temperament and constitution of the air at the time the disease became epidemical, as likewise on the patient's habit of body at the time of his being attacked.

The plague is by most writers considered as the consequence of a pestilential contagion, which is propagated from one person to another by association, or by coming near infected materials.

It has been observed that it generally appears as early as the fourth or fifth day after infection; but it has not yet been ascertained how long a person who has laboured under the disease is capable of infecting others, nor how long the contagion may lurk in an unfavourable habit without producing the disease, and may yet be communicated, and the disease excited, in habits more susceptible of the infection. It has generally been supposed, however, that a quarantine of 40 days is much longer than is necessary for persons, and probably for goods also. Experience has not yet determined how much of this term may be abated.

It sometimes happens that, after the application of the putrid vapour, the patient experiences only a considerable degree of languor and slight headache for many days previous to a perfect attack of the disease: but it more usually comes to pass, that he is very soon seized with great depression of strength, anxiety, palpitations, syncope, stupor, giddiness, violent headache, and delirium, the pulse becoming at the same time very weak and irregular.

These symptoms are shortly succeeded by nausea, and a vomiting of a dark bilious matter; and, in the further progress of the disease, carbuncles make their appearance; buboes arise in different glands, such as the parotid, maxillary, cervical, axillary, and inguinal; or petechiæ, hæmorrhages, and a colliquative diarrhœa, ensue, which denote a putrid tendency prevailing to a great degree in the mass of the blood.

Such are the characteristic symptoms of this malignant disease, but it seldom happens that they are all to be met with in the same person. Some, in the advanced state of the disease, labour under buboes, others under carbuncles, and others again are covered with petechiæ.

The plague is always to be considered as attended with imminent danger, and when it prevailed in this country about 200 years ago, proved fatal to most of those who were attacked with it. It is probable, however, that many of them died from want of care and proper nourishment, as the infected were forsaken by their nearest friends; because in Turkey and other countries, where attention is paid to the sick, a great many recover.

When the disease is unattended by buboes, it runs its course more rapidly, and is more generally fatal, than when accompanied by such inflammations. The earlier they appear, the milder usually is the disease. When they proceed kindly to suppuration, they always prove critical, and ensure the patient's recovery. A gentle diaphoresis, arising spontaneously, has been known in many instances likewise to prove critical. When carbuncles show a disposition to gangrene, the event will be fatal. Petechiæ, hæmorrhages, and colliquative diarrhœa, denote the same termination.

Dissections of the plague have discovered the gall bladder full of black bile, the liver very considerably enlarged, the heart much increased in size, and the lungs, kidneys, and intestines beset with carbuncles. They have likewise discovered all the other appearances of putrid fever.

PETAL. (*Petalum, i.* n.) The name of the coloured leaflets of the corolla of a flower. The great variety of form, duration, &c. of the petals, give rise to the following names:—

From their duration,—

1. *Patent*; as in *Rosa canina*.
2. *Patentissima*, very spreading.
3. *Erect*; as in *Allium nigrum*.
4. *Connivent*; as in *Rumex*.
5. *Distant*; as in *Cucubalus bacciferus*.

From the figure of the border,—

6. *Acuminate*; as in *Saxifraga stellaris*.
7. *Setaceous*; as in *Tropæolum minus*.
8. *Apice cohærentia*; as in *Vitis*.
9. *Apice reflexa*; as in *Anemone*.
10. *Aristate*; as in *Galium aristatum*.
11. *Bifid*; as in *Silene nocturna*.
12. *Bipartite*; as in *Alsine media*.
13. *Bilobe*; as in *Geranium striatum*.
14. *Carinate*; as in *Carum carui*.
15. *Concave*; as in *Ruta graveolens*.
16. *Cordate*; as in *Sium selinum*.
17. *Hirsute*; as in *Menyanthes*.
18. *Ciliate*; as in *Asclepias undulata*.
19. *Crenate*; as in *Linum usitatissimum*.
20. *Dentate*; as in *Silene lucitanica*.
21. *Serrate*; as in *Dianthus arboreus*.
22. *Cuneiform*; as in *Epidendrum cordatum*.
23. *Emarginate*; as in *Allium roseum*.
24. *Inflex*; as in *Pimpinella*.
25. *Reflex*; as in *Pancratium zelanicum*.
26. *Involute*; as in *Anethum*.
27. *Integer*; as in *Nigella arvensis*.
28. *Laciniate*; as in *Reseda*.
29. *Lanceolate*; as in *Narcissus minor*.
30. *Linear*; as in *Tussilago farfara*.
31. *Lineate*; as in *Scilla lucitanica*.
32. *Punctate*; as in *Melanthium*.
33. *Maculate*; as in *Digitalis*.
34. *Oblong*; as in *Citrus* and *Hedera*.
35. *Obtuse*; as in *Tropæolum majus*.
36. *Ovate*; as in *Allium flavum*.
37. *Plane*; as in *Pancratium*.
38. *Subrotund*; as in *Rosa centifolia*.
39. *Truncate*; as in *Hura crepitans*.
40. *Coronate*; as in *Nerium oleander*.

The claw of the petal is very long in *Dianthus* and *Saponaria*; and *connate*, in *Malva sylvestris* and *Oxalis*.

PETALIFORM. *Petaliformis*. Like a petal: applied to the stigma of the *Iris germanica*.

PETALITE. A mineral found in the mine of Uts, in Sweden, interesting from its analysis having led to the knowledge of a new alkali.

PETALO'DES. (From πεταλον, a leaf, or thin scale.) This term is by Hippocrates applied to an urine which hath in it flaky substances resembling leaves.

PETASI'TES. (*es, is.* f.; from πετασος, a hat: so named because its leaves are large, and spread like a hat.) See *Tussilago petasites*.

PETE'CHIA. (*a, æ.* f.; from the Italian *petechio*, a flea-bite, because they resemble the bites of fleas.) A red or purple spot, which resembles a flea-bite.

PETIOLAR. *Petiolaris*. Fixed to the petiol or leafstalk.

PETIOLATE. *Petiolatus*. Applied to leaves which are formed with a stalk, whether long or short, simple or compound, as most leaves are; as in *Verbascum nigrum*, &c.

PETI'OLUS. (*us, i.* m.; from *pes*, a foot.) A petiole. The footstalk or leaf-stalk of a plant. The term is applied exclusively to the stalk of the leaf.

It is distinguished into the *apex*, which is inserted into the leaf, and the *base*, which comes from the stem.

From its figure it is called,—

1. *Linear*, equal in breadth throughout; as in *Citrus medica*.
2. *Alate*; as in *Citrus aurantium*.
3. *Appendiculate*, when furnished with leaflets at its base; as in *Dipsacus pilosus*.
4. *Round*, throughout; as in *Pisum sativum*.
5. *Half-round*, round on one side, and flat on the other.
6. *Triquetral*, three-sided.
7. *Angulate*, having angles.
8. *Canaliculate*, channelled to its very base, where it is sometimes greatly dilated and concave; as in *Angelica sylvestris*.
9. *Compressed*, compressed towards its base; as in *Populus tremula*.
10. *Clavate*, thicker towards the apex; as in *Cacalia suaveolens*.
11. *Spinescent*, becoming a spine after the fall of the leaf; as in *Rhamnus catharticus*.

From its insertion the petiolus is said to be,

12. *Insertus*; as in most trees, and the *Pirus communis*.
13. *Articulate*; as in *Oxalis acetosella*.
14. *Adnate*, adhering so to the stem, that it cannot be displaced without injuring the bark.
15. *Decurrent*, adhering at its base, and going some little way down the stem; as in *Pisum ochrus*.
16. *Amplexicaulis*, surrounding the stem at its base; as in *Senecio hastatus*.
17. *Vaginans*, surrounding the stem with a perfect tube; as in *Canna indica*.

From its length with respect to the leaf, it is said to be *brevissimus* when much shorter, and *longissimus*, when longer; as in *Anemone hepatica*, and *Geranium terebinthinatum*.

It is distinguished also into *simple*, when not divided; as in most leaves: and *compound*, when divided into lateral branches; as in all compound leaves.

PETIT, John Lewis, was born at Paris in 1674. Many memoirs were communicated by him to the French academies. His only separate publication was a Treatise on the *Diseases of the Bones*, which passed through several editions, but involved him in much controversy.

Petra'pium. (From *petra*, a rock, and *apium*, parsley: so called because it grows in stony places.) See *Bubon macedonicum*.

Petrelæ'um. (From πετρα, a rock, and ελαιον, oil.) An oil or liquid bitumen which distils from rocks.

PETRIFACTION. (*Petrifactio, onis.* f.; from *petra*, a stone, and *facio*, to make.) Stone-like matters, deposited either in the way of incrustation, or within the cavities of organised substances, are called petrifactions.

PETRO'LEUM. (*um, i.* n.; from *petra*, a rock, and *oleum*, oil.) A liquid, bituminous substance which flows between rocks, or in different places at the surface of the earth. See *Bitumen*.

PETROLEUM BARBADENSE. Barbadoes tar. See *Bitumen*.

PETROLEUM RUBRUM. A species of rock-oil which abounds about the village of Gabian in Languedoc. See *Bitumen*.

PETROLEUM SULPHURATUM. A stimulating balsamic remedy, given in coughs, asthmas, and other affections of the chest.

PETROMIZON. (*um, i.* n.; from πετρον, a stone, and μυζαω, to suck: so called from being found adhering to the stones by sucking, and so keeping its place.) The name of a genus of fishes of the chondropterigious order. The lamprey.

PETROMIZON FLUVIATILIS. The lesser lamprey. This and the *branchialis*, or lampern, are of easy digestion, equally well flavoured with the larger, but are seldom eaten.

PETROMIZON MARINUS. The true lamprey. This is an exquisite dainty when in season and well dressed. The death of King Henry I. was attributed to a too luxurious indulgence in this his favourite dish.

PETROPHARYNGÆ'US. See *Constrictor pharyngis superior*.

PETRO-SALPINGO STAPHYLINUS. See *Levator palati*.

PETROSELI'NUM. (*um, i.* n.; from πετρα, a rock, and σελινον, parsley.) See *Apium petroselinum*.

PETROSELINUM MACEDONICUM. See *Bubon*.

PETROSELINUM VULGARE. See *Apium*.

PETRO'SILEX. (*ex, icis.* m.; from πετρον, and *silex*, a flint-stone.) Compact felspar. A species of coarse flint, of a deep blue or yellowish green colour. It is interspersed in veins through rocks, and from this circumstance derives its name.

PEUCE'DANUM. (*um, i.* n.; from πευκη, the pine-tree: so called from its leaves resembling those of the pine-tree.) 1. The name of a genus of plants. Class, *Pentandria*; Order, *Digynia*.

2. The pharmacopœial name of the hog's fennel. See *Peucedanum officinale*.

PEUCEDANUM OFFICINALE. The systematic name of the hog's fennel; called also, *Marathrum sylvestre, Marathrophyllum, Pinastellum*, and *Fœniculum porcinum*. The plant which bears these names in the pharmacopœias is the *Peucedanum—foliis quinquepartitis, filiformibus linearibus*, of Linnæus. The root is the officinal part: it has a strong fœtid smell, somewhat resembling that of sulphureous solutions, and an acrid, unctuous, bitterish taste. Wounded when fresh, in the spring or autumn, particularly in the former season, in which the root is most vigorous, it yields a considerable quantity of yellow juice, which soon dries into a solid gummy resin, which retains the taste and strong smell of the root. This, as well as the root, is recommended as a nervine and anti-hysteric remedy.

PEUCEDANUM SILAUS. The systematic name of the English meadow saxifrage: called also, *Agrion, Agriophyllon, Saxifraga vulgaris, Saxifraga anglica, Hippomarathrum, Fœniculum erraticum*, and *Pinastellum*. The roots, leaves, and seeds of this plant have been commended as aperients, diuretics, and carminatives; and appear, from their aromatic smell, and moderately warm, pungent, bitterish taste, to have some claim to these virtues. They are rarely used.

PEWTER. A compound metal, the basis of which is tin. The best sort consists of tin alloyed with about a twentieth or less of copper or other metallic bodies, as the experience of the workmen has shown to be the most conducive to the improvement of its hardness and colour, such as lead, zinc, bismuth, and antimony. There are three sorts of pewter, distinguished by the names of plate, trifle, and ley pewter. The first was formerly much used for plates and dishes; of the second are made the pints, quarts, and other measures of beer; and of the ley-pewter, wine measures and large vessels.

The best sort of pewter consists of 17 parts of antimony to 100 parts of tin; but the French add a little copper to this kind of pewter. A very fine silver-looking metal is composed of 100 pounds of tin, eight of antimony, one of bismuth, and four of copper. On the contrary, the ley-pewter, by comparing its specific gravity with those of the mixtures of tin and lead, must contain more than a fifth part of its weight of lead.

PEYE'RI GLANDULÆ. Peyer's glands. The small glands situated under the villous coat of the intestines.

PEZIZA. (*a, æ.* f.; somewhat altered from the Greek πεζικη, which is derived from πεζα, the sole of the foot. Pliny speaks of the *pezizæ*, as the Greek appellation of such fungi as grow without any stalk or apparent root.) The name of a genus of plants. Class, *Cryptogamia*; Order, *Fungi*.

PEZIZA AURICULA. Jew's ears. Called also, *Auricula Judæ, Fungus sambucinus*, and *Agaricus auriculæ forma*. A membranaceous fungus, *Peziza—concava rugosa auriformis*, of Linnæus, which resembles the human ear. Its virtues are astringent, and when employed (by some its internal use is not thought safe), it is made into a decoction, as a gargle for relaxed sore throats.

PHACIA. (Φακια, a lentil.) A cutaneous spot or blemish, called by the Latins *lentigo*, and *lenticula*.

PHÆNO'MENON. (*on, i.* n.; from φαινω, to make appear.) An appearance which is contrary to the usual process of nature.

PHAGEDÆ'NA. (*a, æ.* f.; from φαγω,

to eat.) A species of ulcer that spreads very rapidly.

PHAGEDÆNIC. (*Phagedænicus*; from φαγω, to eat.) 1. An ulceration which spreads very rapidly.

2. An application that destroys flesh.

PHALACROTIS. (From φαλακρος, bald.) Baldness.

PHA'LACRUM. (From φαλακρος, bald.) A surgical instrument, with a blunt, smooth top; as a probe.

PHALA'NGES. The plural of *phalanx*.

PHALANGO'SIS. (From φαλαγξ, a row of soldiers.) 1. An affection of the eyelids, where there are two or more rows of hairs upon them.

2. A morbid inversion of the eyelids.

PHA'LANX. (*x*, *gis*. f.; from φαλαγξ, a battalion.) The small bones of the fingers and toes, which are distinguished into the first, second, and third phalanx.

PHA'LARIS. (*is*, *idis*. f.; from φαλος, white, shining: so named from its white shining seed, supposed to be the φαλαρος of Dioscorides.) The name of a genus of plants. Class, *Triandria*; Order, *Digynia*. Canary grass.

PHALARIS CANARIENSIS. Canary grass. The seed of this plant is well known to be the common food of canary-birds. In the Canary islands, the inhabitants grind it into meal, and make a coarse sort of bread with it.

PHA'LLUS. (*us*, *i*. m.; after the φαλλος of the Greeks, to which it bears a great resemblance.) The name of a genus, of the Order, *Fungi*; Class, *Cryptogamia*.

PHALLUS ESCULENTUS. The systematic name of the morel fungus. It grows on moist banks and wet pastures, and springs up in May. It is used in the same manner as the truffle, for gravies and stewed dishes, but gives an inferior flavour.

PHALLUS IMPUDICUS. The stinkhorns. *Fungus phalloides*. A fungus which is, at a distance, intolerable fœtid, so that it is oftener smelt than seen, being supposed to be some carrion, and therefore avoided: when near, it has only the pungency of volatile alkali. It is applied to allay pain in the limbs.

PHANTA'SMA. (*a*, *atis*. n.; from φανταζω, to make appear.) 1. Imagination.

2. A disease of the sight, in which objects are seen which do not exist. See *Pseudoblepsis*.

PHA'RICUM. (From *Pharos*, the island from whence it was brought.) A violent kind of poison.

PHARMACEUTIC. (*Pharmaceuticus*; from φαρμακευω, to exhibit medicines.) Belonging to pharmacy. See *Pharmacy*.

PHARMACOCHY'MIA. (*a*, *æ*. f.; from φαρμακον, a medicine, and χυμια, chemistry.) Pharmaceutic chemistry, or that part of chemistry which respects the preparation of medicines.

PHARMACOLITE. Native arseniate of lime.

PHARMACOPŒ'IA. (*a*, *æ*. f.; from φαρμακον, a medicine, and ποιεω, to make.) A dispensatory, or book of directions for the composition of medicines approved of by medical practitioners, or published by authority. The following are the most noted; viz.—

Pharmacopœia Amstelodamensis.
———— *Argentoratensis.*
———— *Augetoratensis.*
———— *Bateana.*
———— *Brandenburgensis.*
———— *Brandenburgica.*
———— *Bruxellensis.*
———— *Edinburgensis.*
———— *Hafniensis.*
———— *Londinensis.*
———— *Norimbergensis.*
———— *Parisiensis.*
———— *Ratisbonensis.*
———— *Regia.*

PHARMACOPO'LA. (*a*, *æ*. f.; from φαρμακον, a medicine, and πωλεω, to sell.) An apothecary, or vender of medicines.

PHARMACOPO'LIUM. (*um*, *ii*. n.; from φαρμακον, a medicine, and πωλεω, to sell.) A druggist's or apothecary's shop.

PHARMACOPO'SIA. (From φαρμακον, a medicine, and ποσις, a potion.) A liquid medicine.

PHARMACOTHE'CA. (*a*, *æ*. f.; from φαρμακον, a medicine, and τιθημι, to place.) A medicine chest.

PHARMACY. (*Pharmacia*, *æ*. f.; from φαρμακον, a medicine.) The art of preparing remedies for the treatment of diseases.

The articles of the Materia Medica, being generally unfit for administration in their original state, are subjected to various operations, mechanical or chemical, by which they become adapted to this purpose. Herein consists the practice of pharmacy, which therefore requires a previous knowledge of the sensible and chemical properties of the substances operated on. The qualities of many bodies are materially changed by heat, especially in conjunction with air and other chemical agents; the virtues of others reside chiefly in certain parts, which may be separated by the action of various menstrua, particularly with the assistance of heat; and the joint operation of remedies on the human body is often very different from what would be anticipated, from that which they exert separately: hence, in the preparations and compositions of the pharmacopœias, we are furnished with many powerful as well as elegant forms of medicine.

PHARYNGE'THRON. Φαρυγγεθρον. The pharynx, or fauces.

PHARYNGEAL. (*Pharyngeus*; from φαρυγξ, the pharynx.) Belonging to, or affecting, the pharynx; thus, cynanche pharyngea, &c.

PHARYNGITIS. (*is*, *idis*. f.; from *pharynx*, the seat of the disease, and *itis*, which imports inflammation.) An inflammation of the membrane which forms the pharynx: it is usually described under the genus cynanche, and is the cynanche pharyngea of Cullen's arrangement. It is known

by the unnatural florid colour of the pharynx, especially about the lower part of the fauces; and this is accompanied by feverishness of the inflammatory kind, which is seldom considerable. In most cases of phlegmon tonsillitis the pharynx is also affected; and so when phlegmonoid inflammation of the pharynx takes place, the disease mostly extends to the tonsils; so that what has been said of tonsillitis, of both its species, the malignant as well as the phlegmonoid, will apply to pharyngitis, the pharynx being as often the seat of the malignant disease as the tonsils. Dr. Cullen declares, indeed, that he never saw a case of true cynanche pharyngea; that is, a case in which the inflammation was confined to the pharynx: it constantly spread in a greater or less degree to the tonsils and neighbouring parts. Besides, the mode of treatment is, in almost every instance, the same in both.

Pharyngostaphyli'nus. A muscle originating in the pharynx, and terminating in the uvula.

PHARYNGOTO'MIA. (*a, æ.* f.; from φαρυγξ, the pharynx, and τεμνω, to cut.) The operation of cutting the pharynx.

PHA'RYNX. (*x, gis,* f. Απο του φερω, because it conveys the food into the stomach.) The muscular bag at the back part of the mouth. It is shaped like a funnel, adheres to the fauces behind the larynx, and terminates in the œsophagus. Its use is to receive the masticated food, and to convey it into the œsophagus.

PHASE'OLUS. (*us, i.* m.; from φασηλος, a little ship, or galliot, which its pods were supposed to resemble.) The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

Phaseolus creticus. A decoction of the leaves of this plant, called by the Americans Cajan, and Cayan, is said to restrain the bleeding from piles when excessive.

Phaseolus vulgaris. The systematic name of the kidney-bean. This is often called the *French* bean: when young and well boiled it is easy of digestion, and delicately flavoured, and less liable to produce flatulency than the pea.

PHASGA'NIUM. (From φασγανον, a knife: so called because its leaves are shaped like a knife, or sword.) The herb sword-grass.

PHASIAN'US. (*us, i.* m.) 1. The name of a genus of birds, of the order *Gallinæ.*

2. The pheasant.

Phasianus colchicus. The common pheasant. The flesh of this bird is easy of digestion, and a great delicacy.

Phasianus gallus. The common or domestic cock or fowl.

Pha'tnium. (From φατνη, a stall.) The socket of a tooth.

PHELLA'NDRIUM. (*um, ii.* n.; from φελλος, the cork-tree, and ανδριος, male: so called because it floats upon the water like cork.) The name of a genus of plants. Class, *Pentandria;* Order, *Digynia.*

Phellandrium aquaticum. The systematic name of the water-fennel, or fine-leaved water-hemlock. *Fœniculum aquaticum. Cicutaria aquatica.* The plant which bears this name in the pharmacopœias is the *Phellandrium—foliorum ramificationibus divaricatis,* of Linnæus. It possesses vertiginous and poisonous qualities, which are best counteracted by acids, after clearing the primæ viæ. The seeds are recommended by some, in conjunction with Peruvian bark, in the cure of pulmonary phthisis.

Phe'mos. (From φιμοω, to shut up.) A medicine against a dysentery.

PHILADE'LPHUS. (*us, i.* m.; from φιλεω, to love, and αδελφος, a brother: so called because, by its roughness, it attaches itself to whatever is near it.) See *Galium aparine.*

PHILANTHRO'PUS. (*us, i.* m.; from φιλεω, to love, and ανθρωπος, a man: so called from its uses.) 1. A medicine which relieves the pain of the stone.

2. (*os, i.* f.) The herb goose-grass, because it sticks to the garments of those who touch it. See *Galium aparine.*

PHILO'NIUM. (*um, i.* n.; from *Philo,* its inventor.) A warm opiate.

Philonium londinense. An old name of the *Confectio opii.*

PHILOSOPHER'S STONE. The alchemists say that it is an animal, and that it has carried its invisible *Eve* in its body from the moment they were first united by the Creator. This stone, the greatest object of alchemy, is a long-sought-for preparation, which, *when found,* is to transmute or exalt impurer metals, as tin, lead, and copper, into gold and silver. Authors who have written on this stone call *sulphur* the husband or *maritus,* and mercury the *uxor* or wife.

PHILLY'RIA. (*a, æ.* f. Φιλλυρια, of Dioscorides: supposed to be so called from *Phillyria,* the mother of Chiron, who first applied it medicinally.) The name of a genus of plants. Class, *Diandria;* Order, *Monogynia.* Mock privet.

PHI'LTRUM. (*um, i.* n.; from φιλεω, to love.) 1. A philtre, or imaginary medicine, to excite love.

2. The depression on the upper lip, where lovers salute.

PHIMO'SIS. (*is, is.* f.; from φιμοω, to tie or bind up.) A constriction or straitness of the extremity of the prepuce, which, preventing the glans from being uncovered, is often the occasion of many troublesome complaints. It may arise from different causes, both in children and grown persons. Children have naturally the prepuce very long; and as it exceeds the extremity of the glans, and is not liable to be distended, it is apt to contract its orifice. This often occasions a lodgment of a small quantity of urine between that and the glans, which, if it grows corrosive, may irritate the parts so as to produce an inflammation. In this case, the extremity of the prepuce becomes more con-

tracted, and consequently the urine more confined. Hence the whole inside of the prepuce excoriates and suppurates; the end of it grows thick and swells, and in some months becomes callous. At other times it does not grow thick, but becomes so strait and contracted as hardly to allow the introduction of a probe. The only way to remove this disorder is by the operation of slitting it open. A phimosis may affect grown persons from the same cause as little children: though there are some grown persons who cannot uncover their glans, or at least not without pain, and yet have not the extremity of the prepuce so contracted as to confine the urine from passing, we notwithstanding find them sometimes troubled with a phimosis, which might be suspected to arise from a venereal taint, but has, in reality, a much more innocent cause. There are, we know, sebaceous glands situated in the prepuce, round the corona, which secrete an unctuous humour, which sometimes becomes acrimonious, irritates the skin that covers the glans, and the irritation extending to the internal membrane of the prepuce, they both become inflamed, and yield a purulent serum, which cannot be discharged, because the glans is swelled, and the orifice of the prepuce contracted. We find also some grown persons, who, though they never uncovered the glans, have been subject to phimosis from a venereal cause. In some, it is owing to gonorrhœa, where the matter lodged between the prepuce and the glans occasioned the same excoriation as the discharge before mentioned from the sebaceous glans. In others, it proceeds from venereal chancres on the prepuce, the glans, or the frænum; which producing an inflammation either on the prepuce or glans, or both, the extremity of the foreskin contracts, and prevents the discharge of the matter. The parts, in a very little time, are greatly tumefied, and sometimes a gangrene comes on in less than two days. Lastly, it occasionally is produced by common inflammation, which causes a swelling and an imprisonment of the glans.

The cure of the primary disease requires leeches, cold lotions, and cataplasms. If the prepuce continues contracted, after the inflammation is subdued, it should be slit open with a knife. And so, also, if after the removal of the disease which may have given rise to the phimosis, it still remains, recourse must be had to the same operation.

Phlebes ætioi. The eagle veins. The veins of the temples.—*Rufus Ephesius.*

PHLEBORRHA'GIA. (*a, æ.* f.; from φλεψ, a vein, and ρηγνυμι, to break out.) A rupture of a vein.

PHLEBOTOMY. (*Phlebotomia, æ.* f.; from φλεψ, a vein, and τεμνω, to cut.) The opening of a vein.

PHLEGM. (*Phlegma, atis.* n.; from φλεγω, to burn, or to excite.) 1. In the common acceptation of the word, it is a thick and tenacious mucus secreted in the lungs.

2. In *Chemistry*, it means water from distillation.

Phlegmago'gus. (From φλεγμα, phlegm, and αγω, to drive out.) A medicine which promotes the discharge of phlegm.

PHLEGMA'SIA. (*a, æ.* f.; from φλεγω, to burn.) Inflammation. See *Inflammation.*

Phlegmasia dolens. See *White-leg.*

Phlegmasiæ. Inflammations. The name of the second order in the class *Pyrexiæ* of Cullen's nosological arrangement, characterised by pyrexia, with topical pain and inflammation, the blood, after venesection, exhibiting a buffy coat.

PHLEGMATORRHA'GIA. (*a, æ.* f.; from φλεγμα, mucus, and ρηγνυμι, to break out.) A discharge of thin mucus phlegm, mostly from the nose, through cold.

PHLE'GMON. (*on, onis.* m.; from φλεγω, to burn.) *Phlegmone.* An inflammation of a bright red colour, with a throbbing and pointed tumour, tending to suppuration.

PHLOGISTON. (From φλογιζω, to burn.) The supposed general inflammable principle of Stahl, who imagined it was pure fire, or the matter of fire fixed in combustible bodies, in order to distinguish it from fire in action, or in a state of liberty.

Phlogisticated air. See *Nitrogene.*

Phlogisticated alkali. See *Alkali, phlogisticated.*

Phlogisticated gas. See *Nitrogene.*

PHLOGO'SIS. (From φλογοω, to inflame.) Inflammation. See *Inflammation.*

PHLOGOTIC. (*Phlogoticus;* from φλεγω, to burn.) Inflammatory: relating to inflammation.

PHLYCTÆ'NA. (*a, æ.* f. Φλυκταιναι, small bladders; from φλυζω, to burn.) A small pellucid vesicle, that contains a serous fluid.

PHLYCTIS. (*is, idis.* f.; from φλυζω, to burn.) A tumour with great heat.

PHLYSIS. (*is, is.* f.; from φλυζω, to burn.) A whitlow.—*Good.*

PHLYZA'CIUM. (*um, ii.* n.; from φλυζω, to be hot.) A pustule on the skin. See *Pustule.*

PHOBODI'PSIA. (*a, æ.* f.; from φοβεω, to fear, and διψη, thirst.) Fear of drinking. This accompanies many diseases of the throat and stomach. It is used by some synonymously with hydrophobia.

PHOCENIC. (*Phocenicus;* from *phoca*, or *phocena*, the dolphin.) Appertaining to the dolphin.

Phocenic acid. *Acidum phocenicum.* The odorous principle of the soap of the dolphin oils, according to Chevreuil.

PHŒNI'CEUS. (From φοινιξ, red.) Phœniceal or crimson: applied to designate colour. See *Colour.*

PHŒNI'GMUS. (From φοινιξ, red.) 1. A redness of the skin, such as is produced by stimulating substances.

2. That which reddens the skin when applied to it.

PHŒ'NIX. (*ix, icis.* f. Φοινιξ of the

ancient Greeks, the date palm-tree; from which, as a *primitive* word, *Phœnicia*, the land of palm-trees, seems to have derived its name, as likewise *the red colour* phœniceus.) The name of a genus of plants. Class, *Diœcia*; Order, *Triandria*. The date palm-tree.

PHŒNIX DACTYLIFERA. The systematic name of the date-tree. *Phœnix—frondibus pinnatis; foliolis ensiformibus complicatis*, of Linnæus. The fruit is called dactylus or date. It is fleshy, of an oblong round form; about an inch and a half long, and one in diameter, and has in its centre a hard stone. Dates, before they are ripe, are rather rough and astringent; but when perfectly matured, they are much of the nature of the fig. See *Ficus carica*. Senegal dates are much esteemed, they having a more sugary agreeable flavour than those of Egypt and other places.

PHONICUS. (From φωνη, the voice.) Relating to the voice.

PHOSGENE GAS. (So called by its discoverer, Dr. John Davy, from its mode of production, by the agency of the sun beam.) See *Chloro-carbonic acid*.

PHOSPHATE. (*Phosphas, atis*. f.; from *phosphorus*.) A salt formed by the union of phosphoric acid with salifiable bases; thus, *phosphate of ammonia, phosphate of lime*, &c.

PHOSPHATIC. *Phosphaticus*. Appertaining to phosphorus.

PHOSPHATIC ACID. *Acidum phosphaticum*. This acid is obtained by the slow combustion of cylinders of phosphorus in the air, for which purpose it is necessary that the air be renewed to support the combustion; that it be humid, otherwise the dry coat of phosphatic acid would screen the phosphorus from farther action of the oxygene; and that the different cylinders of phosphorus be insulated, to prevent the heat from becoming too high, which would melt or inflame them, so as to produce phosphoric acid. The acid, as it is formed, must be collected in a vessel, so as to lose as little of it as possible. All these conditions may be thus fulfilled:—We take a parcel of glass tubes, which are drawn out to a point at one end; we introduce into each a cylinder of phosphorus a little shorter than the tube; we dispose of these tubes alongside of one another, to the amount of 30 or 40, in a glass funnel, the beak of which passes into a bottle placed on a plate, covered with water. We then cover the bottle and its funnel with a large bell-glass, having a small hole in its top, and another in its side.

A film of phosphorus first evaporates, then combines with the oxygene and the water of the air, giving birth to phosphatic acid, which collects in small drops at the end of the glass tubes, and falls through the funnel into the bottle. A little phosphatic acid is also found on the sides of the bell-glass, and in the water of the plate. The process is a very slow one.

The phosphatic acid thus collected is very dilute. We reduce it to a viscid consistence, by heating it gently; and better still, by putting it, at the ordinary temperature, into a capsule over another capsule full of concentrated sulphuric acid, under the receiver of an air-pump, from which we exhaust the air.

The acid thus formed is a viscid liquid without colour, having a faint smell of phosphorus, a strong taste, reddening strongly the tincture of litmus, and denser than water in a proportion not well determined. Every thing leads to the belief that this acid would be solid, could we deprive it of water. When it is heated in a retort, phosphuretted hydrogene gas is evolved, and phosphoric acid remains. The oxygene and hydrogene of the water concur to this transformation. Phosphatic acid has no action, either on oxygene gas, or on the atmospheric air at ordinary temperatures. In combining with water, a slight degree of heat is occasioned. The phosphatic acid, in its action on the salifiable bases, is transformed into phosphorous and phosphoric acids, whence proceed phosphites and phosphates.—*Ure*.

PHOSPHITE. *Phosphis*. A salt formed by the combination of phosphorous acid with salifiable bases; thus, *ammoniacal phosphite*, &c.

Phosphorated hydrogene. See *Phosphorus*.

PHOSPHORESCENCE. *Phosphorescentia*. The luminous appearance which is given off by phosphorescent bodies.

PHOSPHORIC. (*Phosphoricus*; from *phosphorus*.) Appertaining to phosphorus.

PHOSPHORIC ACID. *Acidum phosphoricum*. The base of this acid, or the acid itself, abounds in the mineral, vegetable, and animal kingdoms. In the mineral kingdom it is found in combination with lead, in the green lead ore; with iron, in the bog ores which afford cold short iron; and more especially with calcareous earth in several kinds of stone. Whole mountains in the province of Estremadura, in Spain, are composed of this combination of phosphoric acid and lime.

The vegetable kingdom abounds with phosphorus, or its acid. It is principally found in plants that grow in marshy places, in turf, and several species of the white woods. Various seeds, potatoes, agaric, soot, and charcoal afford phosphoric acid, by abstracting the nitric acid from them, and lixiviating the residue. The lixivium contains the phosphoric acid.

In the animal kingdom it is found in almost every part of the bodies of animals which are not considerably volatile. There is not, in all probability, any part of these organised beings which is free from it. It has been obtained from blood, flesh, both of land and water animals; from cheese; and it exists in large quantities in bones, combined with calcareous earth. Urine contains it, not only in a disengaged state, but also combined with ammonia, soda, and lime. It was by the evaporation and distillation of this excrementitious fluid with charcoal that phosphorus was first made; the charcoal decomposing the disengaged acid and the ammoniacal salt. But it is more cheaply obtained by the process of

Scheele, from bones, by the application of an acid to their earthy residue after calcination.

In this process the sulphuric acid appears to be the most convenient, because it forms a nearly insoluble compound with the lime of the bones. Bones of beef, mutton, or veal, being calcined to whiteness in an open fire, lose almost half of their weight. This must be pounded and sifted; or the trouble may be spared by buying the powder that is sold to make cupels for the assayers, and is, in fact, the powder of burned bones ready sifted. To three pounds of the powder there may be added about two pounds of concentrated sulphuric acid. Four or five pounds of water must be afterwards added to assist the action of the acid; and during the whole process the operator must remember to place himself and his vessels so that the fumes may be blown from him. The whole may be then left on a gentle sand-bath for twelve hours or more, taking care to supply the loss of water which happens by evaporation. The next day a large quantity of water must be added, the whole strained through a sieve, and the residual matter, which is sulphate of lime, must be edulcorated by repeated affusions of hot water, till it passes tasteless. The waters contain phosphoric acid nearly free from lime; and by evaporation, first in glazed earthen, and then in glass vessels, or rather in vessels of platina or silver, for the hot acid acts upon glass, afford the acid in a concentrated state, which, by the force of a strong heat in a crucible, may be made to acquire the form of a transparent consistent glass, though indeed it is usually of a milky opake appearance.

For making phosphorus, it is not necessary to evaporate the water further than to bring it to the consistence of syrup; and the small portion of lime it contains is not an impediment worth the trouble of removing, as it affects the produce very little. But when the acid is required in a purer state, it is proper to add a quantity of carbonate of ammonia, which, by double elective attraction, precipitates the lime that was held in solution by the phosphoric acid. The fluid, being then evaporated, affords a crystallised ammoniacal salt, which may be melted in a silver vessel, as the acid acts upon glass or earthen vessels. The ammonia is driven off by the heat, and the acid acquires the form of a compact glass, as transparent as rock crystal, acid to the taste, soluble in water, and deliquescent in the air.

This acid is commonly pure, but nevertheless may contain a small quantity of soda, originally existing in the bones, and not capable of being taken away by this process, ingenious as it is. The only unequivocal method of obtaining a pure acid appears to consist in first converting it into phosphorus by distillation of the materials with charcoal, and then converting it again into acid by rapid combustion, at a high temperature, either in oxygene or atmospheric air, or some other equivalent process.

Phosphorus may also be converted into the acid state by treating it with nitric acid. In this operation, a tubulated retort with a ground stopper must be half filled with nitric acid, and a gentle heat applied. A small piece of phosphorus being then introduced through the tube, will be dissolved with effervescence, produced by the escape of a large quantity of nitric oxide. The addition of phosphorus must be continued until the last piece remains undissolved. The fire being then raised to drive over the remainder of the nitric acid, the phosphoric acid will be found in the retort, partly in the concrete and partly in the liquid form.

Sulphuric acid produces nearly the same effect as the nitric; a large quantity of sulphurous acid flying off. But as it requires a stronger heat to drive off the last portions of this acid, it is not so well adapted to the purpose. The liquid chlorine likewise acidifies it.

When phosphorus is burned by a strong heat, sufficient to cause it to flame rapidly, it is almost perfectly converted into dry acid, some of which is thrown up by the force of the combustion, and the rest remains upon the supporter.

This substance has also been acidified by the direct application of oxygene gas passed through hot water, in which the phosphorus was liquefied or fused.

The general characters of phosphoric acid are: 1. It is soluble in water in all proportions, producing a specific gravity, which increases as the quantity of acid is greater, but does not exceed 2·687, which is that of the glacial acid. 2. It produces heat when mixed with water, though not very considerable. 3. It has no smell when pure, and its taste is sour, but not corrosive. 4. When perfectly dry, it sublimes in close vessels; but loses this property by the addition of water; in which circumstance it greatly differs from the boracic acid, which is fixed when dry, but rises by the help of water. 5. When considerably diluted with water, and evaporated, the aqueous vapour carries up a small portion of the acid. 6. With charcoal or inflammable matter, in a strong heat, it loses its oxygene, and becomes converted into phosphorus.

Phosphoric acid is difficult of crystallising.

Though the phosphoric acid is scarcely corrosive, yet, when concentrated, it acts upon oils, which it discolours, and at length blackens, producing heat, and a strong smell like that of æther and oil of turpentine; but does not form a true acid soap. It has most effect on essential oils, less on drying oils, and least of all on fat oils. Spirit of wine and phosphoric acid have a weak action on each other. Some heat is excited by this mixture, and the product which comes over in distillation of the mixture is strongly acid, of a pungent arsenical smell, inflammable with smoke, miscible in all proportions with water, precipitating silver and mercury from their solutions, but not

gold; and although not an æther, yet it seems to be an approximation to that kind of combination.

Combinations.—Phosphoric acid unites with alkaline, earthy, and metallic bases, and forms phosphates. With *barytes* it produces an insoluble salt, in the form of a heavy white powder.

The *phosphate of strontian* is soluble in an excess of its acid.

Phosphate of lime is very abundant in the native state. It is very difficult to fuse, but in a glasshouse furnace it softens, and acquires the semi-transparency and grain of porcelain. It is insoluble in water, but when well calcined, forms a kind of paste with it, as in making cupels. Besides this use of it, it is employed for polishing gems and metals, for absorbing grease from cloth, linen, or paper, and for preparing phosphorus. It is often used in the cure of disease. See *Calcis phosphas.*

The *burnt hartshorn* of the shops is a phosphate of lime.

An *acidulous phosphate of lime* is found in human urine, and may be crystallised in small silky filaments, or shining scales.

The *phosphate of potash* is very deliquescent. It has a sweetish saline taste.

The *phosphate of soda* was first discovered combined with ammonia in urine, and was called *fusible* or *microcosmic salt, sal mirabile perlatum*, and *perlate* and *ouretic* acid.

The *phosphate of ammonia* crystallises in prisms with four regular sides, terminating in pyramids, and sometimes in bundles of small needles. Its taste is cool, saline, pungent, and urinous. It is pretty abundant in human urine, particularly after it is become putrid.

Phosphate of magnesia is commonly pulverulent, as it effloresces very quickly. It requires fifty parts of water to dissolve it. Its taste is cool and sweetish. This salt, too, is found in urine.

An *ammoniaco-magnesian phosphate* has been discovered in an intestinal and human urinary calculi. — *Ure.*

PHOSPHORITE. This mineral is a subspecies of apatite, and is found in two states: — 1. *Common phosphorite.* It emits a green-coloured phosphoric light. It is found in Estremadura in Spain.

2. *Earthy phosphorite.* Of a greyish white colour, and consists of dull dusty particles, which phosphoresce on glowing coals. It is found in Hungary.

PHOSPHOROUS. (*Phosphorosus;* from *phosphorus.*) Appertaining to phosphorus.

Phosphorous acid. *Acidum phosphorosum.* When phosphorus and corrosive sublimate act on each other at an elevated temperature, a liquid called *protochloride of phosphorus* is formed. Water added to this, resolves it into muriatic and phosphorous acids. A moderate heat suffices to expel the former, and the latter remains associated with water. It has a very sour taste, reddens vegetable blues, and neutralises bases.

PHOSPHORUS. (*us, i.* m.; from φως, light, and φερω, to carry.) A simpl substance, which has never been found pure in nature. It is always met with united to oxygene, or in the state of phosphoric acid. See *Phosphoric acid.*

If phosphoric acid be mixed with 1-5th of its weight of powdered charcoal, and the mixture distilled at a moderate red heat, in a coated earthen retort, the beak of which is partially immersed in a basin of water, drops of a waxy-looking substance will pass over, which is phosphorus. It must be purified, by straining it through a piece of chamois leather, under warm water. It is yellow and semitransparent; as soft as wax, but fully more cohesive and ductile. Its sp. gr. is 1·77. It melts at 90° F. and boils at 550°. In the atmosphere, at common temperatures, it emits a white smoke, which, in the dark, appears luminous. This smoke is acidulous, and results from the slow oxygenation of the phosphorus. In air perfectly dry, however, phosphorus does not smoke, because the acid which is formed is solid, and, closely incasing the combustible, screens it from the atmospherical oxygene.

When phosphorus is heated in the air to about 148°, it *takes fire*, and burns with a splendid white light, and a copious dense smoke. If the combustion take place within a large glass receiver, the smoke becomes condensed into snowy-looking particles, which fall in a successive shower, coating the bottom plate with a spongy white efflorescence of *phosphoric acid.* This acid snow soon liquefies by the absorption of aqueous vapour from the air.

When phosphorus is inflamed in oxygene, the light and heat are incomparably more intense; the former dazzling the eye, and the latter cracking the glass vessel. *Solid phosphoric acid* results, consisting of 1·5 phosphorous + 2·0 oxygene. See *Phosphoric acid.*

When phosphorus is heated in highly rarefied air, three products are formed from it: one is phosphoric acid; one is a volatile white powder; and the third is a red solid of comparative fixity, requiring a heat above that of boiling water for its fusion. The volatile substance is soluble in water, imparting acid properties to it. It seems to be phosphorous acid. The red substance is probably an oxide of phosphorus, since for its conversion into phosphoric acid it requires less oxygene than phosphorus does. See *Phosphoric, Phosphorous,* and *Hypophosphorous acids.*

Phosphorus and *chlorine* combine with great facility, when brought in contact with each other at common temperatures.

From the combination of different proportions result, —

1. The proto-chlori
2. The bichloride.

The compounds of iodine and phosphorus have been examined by Sir H. Davy and Gay Lussac.

Phosphorus unites to *iodine* with the disengagement of heat, but no light, and with proportions forms three different substances.

With *hydrogene* phosphorus combines. Of this compound there are two varieties, — one consisting of a prime of each constituent, and therefore to be called *phosphuretted hydrogene;* another, in which the relation of phosphorus is one half less, to be called therefore *subphosphuretted hydrogene.*

Phosphorus and *sulphur* are capable of combining. They may be united by melting them together in a tube exhausted of air, or under water. In this last case, they must be used in small quantities; as at the moment of their action, water is decomposed, sometimes with explosions. They unite in many proportions.

Phosphorus is soluble in *oils*, and communicates to them the property of appearing luminous in the dark. Alkohol and æther also dissolve it, but more sparingly. — *Ure.*

The earliest account we have concerning the medicinal use of phosphorus, is in the seventh volume of Haller's Collection of Theses relating to the history and cure of diseases. The original dissertation is entitled, *De Phosphori Loco Medicamenti adsumpti virtute medica, aliquot casibus singularibus confirmata, Auctore J. Gabi Mentz.* There are three cases of singular cures performed by means of phosphorus, narrated in this thesis. The first instance is of a man who laboured under a putrid fever. The second is that of a man who laboured under a bilious fever. The third case is entitled a malignant catarrhal fever, with petechiæ.

The dangerous consequences which are likely to follow the injudicious administration of phosphorus cannot be impresssed on the mind more strongly than by reading the cases and experiments which are mentioned by Weickard, in the fourth part of his *Vermischte Medicinche Schrifften.*

PHOSPHURET. *Phosphoretum.* A combination of phosphorus, with a combustible or metallic oxide.

Phosphuretted hydrogene. See *Phosphorus.*

PHOTICITE. A mixture of the silicate and carbo-silicate of manganese.

PHOTOPHO'BIA. (*a, æ.* f.; from φως, light, and φοβεω, to dread.) Such an intolerance of light, that the eye, or rather the retina, can scarcely bear its irritating rays. Such patients generally wink or close their eyes in light, which they cannot bear without exquisite pain, or confused vision. The proximate cause is too great a sensibility in the retina. It is a particular symptom of the internal ophthalmia. It is caused also from the disuse of light, which happens to persons long confined in dark places or prisons, — on the coming out of which into light the pupil contracts, and the persons cannot bear light. The depression of the cataract occasions this symptom, which appears as though fire and lightning entered the eye, not being able to bear the strong rays of light.

An increased sensibility of the nervous expansion and optic nerve also produces it; as does likewise too great light, as looking at the sun, or at the strong light of modern lamps. When a symptom of any disease, it requires the treatment of that disease; and when a mere nervous affection, cold bathing, cold applications to the eyes, and tonics are proper.

PHOTO'PSIA. (*a, æ.* f.; from φως, light, and οψις, vision.) Lucid vision. An affection of the eye, in which the patient perceives luminous rays, ignited lines, or coruscations.

PHRAGMITES. (*es, æ.* m.; from φρασσω, to enclose.) The specific name of a species of reed, the *Arundo phragmites.*

PHRA'GMUS. (From φρασσω, to enclose, or fence: so called from their being set round like a fence of stakes.) The rows of teeth.

PHRE'NES. (*Phren;* from φρην, the mind: because the ancients imagined it was the seat of the mind.) 1. The diaphragm.

2. The *præcordia* of some writers.

PHRENE'SIS. See *Cephalitis.*

PHRENETI'ASIS. See *Cephalitis.*

PHRENIC. (*Phrenicus;* from φρενες, the diaphragm.). 1. Belonging to the diaphragm.

2. Belonging to the mind.

PHRENIC ARTERY. The arteries going to the diaphragm.

PHRENIC NERVE. Diaphragmatic nerve. It arises from an union of the branches of the third, fourth, and fifth cervical pairs, on each side, passes between the clavicle and subclavian artery, and descends from thence by the pericardium to the diaphragm.

PHRENIC VEIN. The veins coming from the diaphragm.

PHRENI'TIS. (*is, idis.* f. Φρενιτις; from φρην, the mind.) See *Cephalitis.*

PHRENSY. See *Cephalitis.*

PHTHEIRI'ASIS. See *Phthiriasis.*

PHTHEI'RIUM. See *Delphinium.*

PHTHEIRO'CTONUM. (From φθειρ, a louse, and κτεινω, to kill: because it destroys lice.) See *Delphinium staphisagria.*

PHTHIRI'ASIS. (*is, is.* vel *eos.* f.; from φθειρ, a louse.) *Morbus pediculosus. Pediculatio. Phtheiriasis.* A disease in which several parts of the body generate lice, which often puncture the skin, and produce little sordid ulcers.

PHTHISIS. (*is, is.* vel *eos.* f.; from φθιω, to consume.) Pulmonary consumption: a disease known by emaciation, debility, cough, hectic fever, and purulent expectoration. Its species are, —

1. *Phthisis incipiens,* when without an expectoration of pus.

2. *Phthisis humida,* with an expectoration of pus.

3. *Phthisis scrofulosa* or *tuberculosa,* from scrofulous tubercles in the lungs.

4. *Phthisis hæmoptoica,* from hæmoptysis.

5. *Phthisis exanthematica,* from an exanthematous disease.

6. *Phthisis chlorotica,* from chlorosis.

7. *Phthisis syphilitica*, from a venereal taint.

The causes which predispose to this disease are very numerous. The following are, however, the most general: — Hereditary disposition; particular formation of body, obvious by a long neck, prominent shoulders, and narrow chest; scrofulous diathesis, indicated by a fine clear skin, fair hair, delicate rosy complexion, large veins, thick upper lip, a weak voice, and great sensibility; certain diseases, such as syphilis, scrofula, the small-pox, and measles; particular employments exposing artificers to dust, such as needle-pointers, stone-cutters, millers, &c., or to the fumes of metals or minerals under a confined and unwholesome air; violent passions, exertions, or affections of the mind, as grief, disappointment, anxiety, or close application to study, without using proper exercise; frequent and excessive debaucheries, late watching, and drinking freely of strong liquors; great evacuations, as diarrhœa, diabetes, excessive venery, fluor albus, immoderate discharge of the menstrual flux, and the continuing to suckle too long under a debilitated state; and, lastly, the application of cold, either by too sudden a change of apparel, keeping on wet clothes, lying in damp beds, or exposing the body too suddenly to cool air, when heated by exercise; in short, by any thing that gives a considerable check to the perspiration. The more immediate or occasional causes of phthisis are, hæmoptysis, pneumonic inflammation proceeding to suppuration, catarrh, asthma, and tubercles, the last of which is by far the most general. The incipient symptoms usually vary with the cause of the disease; but when it arises from tubercles, it is usually thus marked: it begins with a short dry cough, that at length becomes habitual, but from which nothing is spit up for some time, except a frothy mucus, that seems to proceed from the fauces. The breathing is at the same time somewhat impeded, and upon the least bodily motion is much hurried; a sense of straitness, with oppression at the chest, is experienced; the body becomes gradually leaner; and great languor, with indolence, dejection of spirits, and loss of appetite, prevail. In this state the patient frequently continues a considerable length of time, during which he is, however, more readily affected than usual by slight colds, and upon one or other of these occasions the cough becomes more troublesome and severe, particularly by night, and it is at length attended with an expectoration, which towards morning is more free and copious. By degrees the matter which is expectorated becomes more viscid and opake, and now assumes a greenish colour and purulent appearance, being on many occasions streaked with blood. In some cases, a more severe degree of hæmoptysis attends, and the patient spits up a considerable quantity of florid, frothy blood. The breathing at length becomes more difficult, and the emaciation and weakness go on increasing. With these, the person begins to be sensible of pain in some part of the thorax, which, however, is usually felt at first under the sternum, particularly on coughing. At a more advanced period of the disease, a pain is sometimes felt on one side, and at times prevails in so high a degree as to prevent the person from lying easily on that side; but it more frequently happens, that it is felt only on making a full inspiration, or coughing. Even where no pain is felt, it often happens that those who labour under phthisis cannot lie easily on one or other of their sides, without a fit of coughing being excited, or the difficulty of breathing being much increased. At the first commencement of the disease, the pulse is often natural, or perhaps is soft, small, and a little quicker than usual; but when the symptoms which have been enumerated have subsisted for any length of time, it then becomes full, hard, and frequent. At the same time the face flushes, particularly after eating; the palms of the hands and soles of the feet are affected with burning heat; the respiration is difficult and laborious; evening exacerbations become obvious, and, by degrees, the fever assumes the hectic form. This species of fever is evidently of the remittent kind, and has exacerbations twice every day. The first occurs usually about noon, and a slight remission ensues about five in the afternoon. This last is, however, soon succeeded by another exacerbation, which increases gradually until after midnight; but about two o'clock in the morning a remission takes place, and this becomes more apparent as the morning advances. During the exacerbations the patient is very sensible to any coolness of the air, and often complains of a sense of cold when his skin is, at the same time, preternaturally warm. Of these exacerbations, that of the evening is by far the most considerable. From the first appearance of the hectic symptoms, the urine is high coloured, and deposits a copious branny red sediment. The appetite, however, is not greatly impaired, the tongue appears clean, the mouth is usually moist, and the thirst is inconsiderable. As the disease advances, the fauces put on rather an inflamed appearance, and are beset with aphthæ, and the red vessels of the tunica adnata become of a pearly white. During the exacerbations, a florid circumscribed redness appears on each cheek; but at other times the face is pale, and the countenance somewhat dejected. At the commencement of hectic fever, the belly is usually costive; but in the more advanced stages of it, a diarrhœa often comes on, and this continues to recur frequently during the remainder of the disease; colliquative sweats likewise break out, and these alternate with each other, and induce vast debility. In the last stage of the disease, the emaciation is so great, that the patient has the appearance of a walking skeleton: his countenance is altered, his cheeks are prominent, his eyes look hollow and languid, his hair falls off, his nails are of a livid colour and much incurvated, and his feet are affected with œdematous swellings. To the

end of the disease the senses remain entire, and the mind is confident and full of hope. It is, indeed, a happy circumstance attendant on phthisis, that those who labour under it are seldom apprehensive or aware of any danger; and it is no uncommon occurrence to meet with persons labouring under its most advanced stage, flattering themselves with a speedy recovery, and forming distant projects under that vain hope. Some days before death the extremities become cold. In some cases a delirium precedes that event, and continues until life is extinguished.

As an expectoration of mucus from the lungs may possibly be mistaken for purulent matter, and may thereby give us reason to suspect that the patient labours under a confirmed phthisis, it is a very desirable thing to ascertain which is expectorated. See *Pus*.

Pulmonary consumption is in every case to be considered as attended with much danger; but it is more so when it proceeds from tubercles, than when it arises in consequence either of hæmoptysis, or pneumonic suppuration. In the last instance, the risk will be greater where the abscess breaks inwardly, and gives rise to empyema, than when its contents are discharged by the mouth. Even cases of this nature have, however, been known to terminate in immediate death. The impending danger is generally to be judged of by the hectic symptoms; but more particularly by the fœtor of the expectoration, the degree of emaciation and debility, the colliquative sweats, and the diarrhœa. The disease has, in many cases, been found to be considerably retarded in its progress by pregnancy; and in a few has been alleviated by an attack of mania.

The morbid appearance most frequently to be met with on the dissection of those who die of phthisis, is the existence of tubercles in the cellular substance of the lungs. These are small tumours which have the appearance of indurated glands, are of different sizes, and are often found in clusters. Their firmness is usually in proportion to their size, and when laid open in this state they are of a white colour, and of a consistence nearly approaching to cartilage. Although indolent at first, they at length become inflamed, and lastly form little abscesses or vomicæ, which breaking and pouring their contents into the bronchia, give rise to a purulent expectoration, and thus lay the foundation of phthisis. Such tubercles or vomicæ are most usually situated at the upper and back part of the lungs; but in some instances they occupy the outer part, and then adhesions to the pleura are often formed.

When the disease is partial, only about a fourth of the upper and posterior part of the lungs is usually found diseased; but in some cases life has been protracted till not one twentieth part of them appeared, on dissection, fit for performing their function. A singular observation, confirmed by the morbid collections of anatomists, is, that the left lobe is much oftener affected than the right. The indications are,

1. To moderate inflammatory action.
2. To support the strength, and promote the healing of ulcers in the lungs.
3. To palliate urgent symptoms.

The first object may require occasional small bleedings, where the strength will permit, in the early period of the disease: but in the scrofulous this measure is scarcely admissible. Local pain will more frequently lead to the use of cupping, with or without the scarificator, leeches, blisters, and other modes of deriving the nervous energy, as well as blood, from the seat of the disease. The bowels must be kept soluble by gentle laxatives, as cassia, manna, sulphate of magnesia, &c.; and diaphoresis promoted by saline medicines, or the pulvis ipecacuanhæ compositus. The occasional use of an emetic may benefit the patient by promoting the function of the skin, and expectoration, especially where there is a wheezing respiration. The inhalation of steam, impregnated, perhaps, with hemlock, or æther, may be useful as soothing the lungs, and facilitating expectoration. Certain sedative remedies, particularly digitalis and hemlock, have been much employed in this disease; and, in so far as they moderate the circulation, and relieve pain, they are clearly beneficial: but too much reliance must not be placed upon them. Certain sedative gases have been also proposed to be respired by the patient, as hydrogene, &c., but their utility is very questionable. Among the tonic medicines, the mineral acids are, perhaps, the most generally useful: however, myrrh and chalybeates, in moderate doses, often answer a good purpose. But a great deal will depend on a due regulation of the diet, which should be of a nutritious kind, but not heating, or difficult of digestion: milk, especially that of the ass; farinaceous vegetables; acescent fruits; the different kinds of shellfish; the lichen islandicus, boiled with milk, &c., are of this description. Some mode of gestation regularly employed, particularly sailing; warm clothing; removal to a warm climate, or to a pure and mild air, may materially concur in arresting the progress of the disease in its incipient stage. With regard to urgent symptoms requiring palliation, the cough may be allayed by demulcents, but especially mild opiates swallowed slowly; colliquative sweats by acids, particularly the mineral; diarrhœa by chalk, and other astringents, but most effectually by small doses of opium.

PHTHO'RIUS. (From φθορα, an abortion.) That which promotes abortion.

PHU. (n. indeclinable; from *phua*, Arabian.) The name of a plant. See *Valeriana phu*.

PHYGE'THLON. (From φυω, to grow.) A red and painful tubercle in the arm-pits, neck, and groins.

PHYLACTE'RIUM. (*um, i.* n.; from φυλασσω, to preserve.) An amulet or preservative against infection.

PHYLLA'NTHUS. (*us, i.* f.; from φυλλον, a leaf, and ανθος, a flower: because the flowers in one of the original species, now a *Hylophytta*, grow out of the leaves.) The name of a genus of plants. Class, *Monœcia*; Order, *Monadelphia*.

Phyllanthus emblica. The systematic name of the Indian tree, from which the emblic myrobalan is obtained.

Phylli'tis. (From φυλλον, a leaf: so called because the leaves only appear.) See *Scolopendrium vulgare*.

PHY'MA. (*a, atis.* n.; from φυω, to produce. It appears that this term was used by the Greek and Roman physicians with great latitude and want of precision: sometimes, as by Hippocrates and Paulus Ægineta, being applied to scrofula, and other imperfectly suppurative tumours; sometimes, as by Celsus and Galen, to tumours perfectly and rapidly suppurative; and sometimes by other writers, as Celsus also informs us, to fleshy excrescences or warts on the glans penis.) 1. A tubercle on any external part of the body.

2. A genus of a cuticular disease in Dr. Willan's arrangement, in which he includes *terminthus, epynictis, furunculus*, and *anthrax*.

PHY'SALIS. (*is, is.* f.; from φυσαω, to inflate: so called because its seed is contained in a bladder.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

Physalis alkekengi. The systematic name of the winter-cherry, or *Alkekengi*: called also, *Halicacabum*. This plant, *Physalis—foliis geminis integris acutis caule herbaceo, infernè subramosa*, of Linnæus, is cultivated in our gardens. The berries are recommended as a diuretic in dropsical and calculous diseases. They were once in great repute, and supposed to produce speedy relief in the removal of strangury. It certainly possesses sedative and diuretic properties, without heating or irritating, and seems to be worthy of further trial. As a sedative, Hoffmann employed it in hæmoptysis; and as a diuretic, it has been still more generally made use of in dropsy. About five or six cherries, or an ounce of the juice, forms a dose: the pericarp is bitter; yet the fruit within possesses little of this property, and has an acidulous and not unpleasant taste.

PHYSALITE. Prophysalite. A subspecies of primitive topaz of Jameson. A greenish white mineral found in granite in Finbo, in Sweden.

PHYSCO'NIA. (*a, æ.* f.; from φυσκων, a big-bellied fellow.) Enlargement of the abdomen: known by a tumour occupying chiefly one part of the abdomen, increasing slowly, and neither sonorous nor fluctuating.

The diseased conditions of the several viscera of the abdomen which produce such an enlargement or protuberance as to come under this genus, are described by Dr. Good by the name of *Parabysma*, a term which he thinks more appropriate. The several species are denominated from the viscus in which the enlargement takes place.

1. *Physconia hepatica.* This may be produced from a variety of causes.

α. One very common cause is a morbid turgescence of the biliary ducts, from a want of due action in the vessels themselves, or from a torpid motion of the absorbents, from both of which causes a commorant motion of the bile results. Children are frequently subjects of this disease, and those adults who indulge in malt liquors and the luxuries of the table. It is attended with symptoms of dyspepsy and hypochondriacism. In children, it is relieved by those means which invigorate the system, with occasional mercurial purges; and, in adults, by small doses of the oxides of mercury, and aperients, and especially the purging waters of Cheltenham and Leamington. The cold bath, where it can be resorted to, is an excellent adjuvant.

β. Another cause of an enlargement of the liver is the acephalo-cyst, or headless bladder-worm: but, before it can produce a physconia, it must have acquired a great size. It is only to be known by a fluctuating tumour in the region of the liver, not preceded by inflammation, and not interfering with the health, except by its mere mechanical pressure. The fasciola hepatica, or flake, so commonly found in the bile-ducts of sheep, is said to produce it; but this is very doubtful. There is no cure for this species of physconia, but by tapping, which lets out the fluid and kills the animal, and gives the person a chance of recovery. Dr. Douglas, now of Kelso, when practising at Reading, saw a case of this kind, and gave it as his opinion that the immense tumour of the hypochondrium was caused by hydatids. Mr. Bully, the surgeon, tapped, by his desire, in his presence, and a fluid, with hydatids, escaped: the opening was enlarged, an immense number discharged, and the patient got well. Electricity will kill this animal, but it is a dangerous application, for the fluid will act as an extraneous body, as well as the cysts, and create much serious mischief.

γ. Scrofula in children produces an enlargement of the liver. The child is pot-bellied, and the liver is felt large and hard. It is accompanied mostly by rickets, or scrofula in other parts, and is removed by a steady course of chalybeates and aperients, with pure air, and sea-bathing.

δ. Another cause of physconia hepatica, is all morbid growths of that organ: these are various; as the deposition of fat in the liver, cephalomatous and other tubercles, &c. Of the cure of these we are in ignorance.

2. *Physconia peritonei.* The only instance of this that I ever witnessed, was from the acephalo-cyst, or headless bladder-worm. The subject was a female, about twenty-two, who had been supposed to be pregnant for more than two years. On opening her body, the cavity of the abdomen was occupied by an immense mass of hydatids, of various sizes, but most of them the size of pot oranges, and generally oval, though of various shapes.

Every part of the abdomen was occupied by them, adhering to the peritonæum of the mesentery, intestines, omentum, and uterus: as much as filled an ordinary pail was removed before the viscera could be seen.

There is no cure for this disease.

3. *Physconia splenica.* The spleen becomes enlarged, occasionally to so great an extent as to cause an obvious increase of the size of the belly.

a. The most frequent cause is intermittent fever or ague, when the tumour is termed the ague cake. It is known by a large and hard swelling in the region of the spleen, verging towards the spine. The enlargement produced from this cause consists in a deposition of a morbid secretion into the parenchyma of the spleen, either from a morbid action of its secreting arteries, or a deficient action of the absorbents, but most probably the former, because the deposition is a morbid one. This disease gives way to tonics, such as cure the ague, in combination with mild mercurial alteratives, good pure air, and nourishing diet.

b. Another cause is morbid growths, as chondromatous, cephalomatous, and other tumours. These are beyond the reach of medicines.

4. *Physconia omentalis.* There are many morbid conditions of the omentum which cause the belly to become physconical, and these are morbid growths or depositions in the cellular tissue, which have accumulated so as to weigh from five to twenty pounds. They are lypomatous, cephalomatous, cartilaginous, bony, or other tumours. Dr. Hooper has in his collection an omentum that contains some thousands of soft tumours, which caused a physconia for near three years. The cure of these diseased conditions of the omentum is never effected, even if the disease were known.

5. *Physconia renalis.* When any enlargement of the kidney produces a swelling of the belly, it is from a growth of a morbid material. Dr. Hooper removed a kidney from an officer, which, when put into a very large wash-hand basin, so over-filled it that it was with difficulty held in it. The disease was hæmatoma.

6. *Physconia uterina.* This is, perhaps, the most frequent cause of physconia. The uterus itself, and its appendages, are often diseased, and so enlarged as to cause a great swelling of the belly, and often at a period and under circumstances to favour the opinion of the female being pregnant. The swelling may be caused by coacervated menses, from obstruction in the vagina; by other secretions into the uterus, or its appendages; by depositions of morbid substances, either cartilaginous, cephalomatous, or of other natures; by many diseased states of the ovaria, by ovarial, tubal, or extra-uterine fœtation, &c.

Medicines are of little avail against these morbid states.

7. *Physconia mesenterica.* Many cases are recorded of glandular enlargements of the mesentery causing this disease, but they are rare.

Children have protuberant bellies when labouring under mesenteric obstruction, but with such obstruction the abdomen is seldom much swollen. Mercurial alteratives, aperients, mild tonics, and especially chalybeates, are the best remedies, and, with pure air and regulated diet, they mostly effect a cure. Tumours of a scrofulous, hæmatomatous, cephalomatous, and other natures, are now and then found to produce an enlargement of the belly.

Should the nature of the swelling be known, a cure for it could not be effected when caused by one of the just-mentioned diseases.

8. *Physconia intestinalis.* A laxity of the intestinal canal produces an enlargement of the belly, which is cured by tonics, dry diet, and exercise. Morbid growths of the intestines also occasionally cause physconia.

PHYSE'MA. (*a, atis.* n.; from φυσαω, to inflate.) *Physesis.* A windy tumour.

PHYSE'TER. (*er, eris.* m.; from φυσαω, to inflate: so named from its action of blowing and discharging water from its nostrils.) The name of a genus of whale-fish in the Linnæan system.

Physeter macrocephalus. The spermaceti whale. Spermaceti, called in the pharmacopœia, *Cetaceum,* is an oily, concrete, crystalline, semi-transparent matter, obtained from the cavity of the cranium of several species of whales, but principally from the *Physeter macrocephalus,* or spermaceti whale. It was formerly very highly esteemed, and many virtues were attributed to it; but it is now chiefly employed in affections of the lungs, primæ viæ, kidneys, &c., as a softening remedy, mixed with mucilages. It is also employed by surgeons, as an emollient, in form of cerates, ointments, &c. See also *Ambergris.*

PHYSIOGNOMY. (*Physiognomia, æ.* f.; from φυσις, nature, and γινωσκω, to know.) The art of knowing the disposition of a person from the countenance.

PHYSIOLOGY. (*Physiologia, æ.* f.; from φυσις, nature, and λογος, a discourse.) That science which has for its object the knowledge of the phænomena proper to living bodies. It is divided into Vegetable Physiology, which is employed in the consideration of vegetables; into Animal or Comparative Physiology, which treats of animals; and into Human Physiology, of which the special object is man.

PHYSIS. Nature.

PHYSOCE'LE. (*e, es.* f.; from φυσα, wind, and κηλη, a tumour.) A species of hernia, the contents of which are distended with wind.

PHYSOCE'PHALUS. (*us, i.* m.; from φυσα, wind, and κεφαλη, the head.) Emphysema of the head. See *Pneumatosis.*

PHYSOME'TRA. (*a, æ.* f.; from φυσαω, to inflate, and μητρα, the womb.) *Hysterophyse.* A windy swelling of the uterus. A tympany of the womb, characterised by a

permanent elastic swelling of the hypogastrium, from flatulent distension of the womb. It is a rare disease, and seldom admits of a cure.

PHYTEU'MA. (*a, atis.* n.; from φυτευω, to generate: so called from its great increase and growth.) The name of a genus of plants. Class, *Pentandria*; Order, *Monogynia*.

Phyteuma orbiculare. *Rapunculus corniculatus.* Horned rampions. By some supposed efficacious in the cure of syphilis.

PHYTOLA'CCA. (*a, æ.* f.; from φυτον, a plant, and λακκα, gum-lac: so called because it is of the colour of lacca.) The name of a genus of plants. Class, *Decandria*; Order, *Decagynia*.

Phytolacca decandria. The systematic name of the Pork-physic; called also, Pork-weed, Poke-weed, Red-weed of Virginia, Red nightshade, and American nightshade. *Solanum racemosum americanum. Solanum magnum virginianum rubrum.* In Virginia and other parts of America, the inhabitants boil the leaves, and eat them in the manner of spinach. They are said to have an anodyne quality, and the juice of the root is violently cathartic. The Portuguese had formerly a trick of mixing the juice of the berries with their red wines, in order to give them a deeper colour; but it was found to debase the flavour. This was represented to his Portuguese majesty, who ordered all the stems to be cut down yearly before they produced flowers, thereby to prevent any further adulteration. This plant has been used as a cure for cancers, but to no purpose.

PHYTOLOGY. (*Phytologia, æ.* f.; from φυτον, an herb, and λογος, a discourse.) That part of the science of natural history which treats on plants.

PHYTOMINERA'LIS. (From φυτον, a plant, and *mineralis*, a mineral.) A substance of a vegetable and mineral nature; as amber was supposed to be.

Pi'a mater. *Localis membrana. Meninx tenuis.* A thin membrane, almost wholly vascular, that is firmly accreted to the convolutions of the cerebrum, cerebellum, medulla oblongata, and medulla spinalis. Its use appears to be, to distribute the vessels to, and contain the substance of, the cerebrum.

PI'CA. (*a, æ.* f.; the magpie: so named because it is said the magpie is subject to this affection.) Depraved appetite, with strong desire for unnatural food. It is very common as a symptom of disease in pregnancy, dyspepsy, and chlorosis.

In infants it occurs from improper management and direction, for nothing is more tractable in infancy than the organ of taste; and hence it is that different nations of the world are brought by early habit to prefer such kinds of food as their respective climates produce in greatest abundance: thus the Hindoos live almost entirely on grain; the Tonguses, on berries, and the refuse lichen found undigested in the stomach of the reindeer; the Californians on snakes, rats, lizards, &c.

It also exists as an idiopathic affection or disease, being brought on occasionally by a desire to improve the beauty of the person, or giving graceful slenderness to the form, or a fairness to the skin, from which the Greek physicians called it μαλακια, softness, or effeminacy. When this morbid propensity has once taken place, the substances for which it excites a desire are often not only of the most indigestible, but disgusting quality, as dirt, cinders, ordure, rank tallow, chalk, wood, hair, paper, stones, glass, &c.

Emetics and purgatives are useful in removing this morbid action of the stomach. Rhubarb, in combination with bark and steel, generally destroy it. The *Cachexia africana*, called also, *Mal d'estomac*, which is the desire of dirt-eating amongst the negroes, generally depends on glandular disease and dropsy, and requires their remedies.

PICATIO. See *Pica*.

PI'CEA. (*a, æ.* f. Πιτυς, pitch.) The common or red fir or pitch-tree is so termed. The cones, branches, and every part of the tree, afford the common resin called frankincense. See *Pinus abies*.

Pichu'rim. See *Pechurim*.

PICNITE. Pyenite. See *Schorlite*.

PI'CRIS. (*is, idis.* f.; from πικρος, bitter.) The name of a genus of plants. Class, *Syngenesia*; Order, *Polygamia æquales*.

Picris echoides. The name of the common ox-tongue. The leaves are frequently used as a pot-herb by the country people, who esteem it good to relax the bowels.

PICROMEL. (*el, ellis.* n.; from πικρος, bitter, and μελι, honey: so called from its taste.) The characteristic principle of bile. If sulphuric acid, diluted with five parts of water, be mixed with fresh bile, a yellow precipitate will fall. Heat the mixture, then leave it in repose, and decant off the clear part. What remains was formerly called resin of bile; but it is a greenish compound of sulphuric acid and picromel. Edulcorate it with water, and digest with carbonate of barytes. The picromel now liberated will dissolve in the water. On evaporating the solution, it is obtained in a solid state. Or by dissolving the green sulphate in alkohol, and digesting the solution over carbonate of potash till it ceases to redden litmus paper, we obtain the picromel combined with alkohol.

It resembles inspissated bile. Its colour is greenish yellow; its taste is intensely bitter at first, with a succeeding impression of sweetness. It is not affected by infusion of galls; but the salts of iron and acetate of lead precipitate it from its aqueous solution. It affords no ammonia by its destructive distillation. Hence the absence of azote is inferred, and the peculiarity of picromel.

PICROTOXIA. (*a, æ.* f.) Picrotoxine. The poisonous principle of the coccus indicus. It is obtained in the following way:—"To the filtered decoction of these berries add acetate of lead, while any precipitate falls. Filter

and evaporate the liquid cautiously, to the consistence of an extract. Dissolve in alkohol of 0·817, and evaporate the solution to dryness. By repeating the solutions and evaporations, we at last obtain a substance equally soluble in water and alkohol. The colouring matter may be removed by agitating it with a little water. Crystals of pure picrotoxia now fall, which may be washed with a little alkohol.

It acts as an intoxicating poison. The sulphate, nitrate, acetate, &c. have been formed, but not yet applied to any medical use.

PICTO'NIUS. (From the Pictones, or the inhabitants of Picto, who were subject to this disease.) Applied to a species of colic. It should be rather called, *colica pictorum*, the painter's colic, because, from their use of lead, they are much afflicted with it.

Piedmont truffle. See *Lycoperdon tuber.*

PIE'STRUM. (From πιεζω, to compress.) An instrument to compress the head of a dead fœtus, for its more easy extraction from the womb.

Pig-nut. The bulbous root of the *Bunium bulbocastanum*, of Linnæus: so called because pigs are very fond of them, and will dig with their snouts to some depth for them. See *Bunium bulbocastanum.*

PIGME'NTUM. (*um, i.* n.; from *pingo*, to paint.) A pigment. This name is given by anatomists to a mucous substance found in the eye, which is, 1. The *pigment of the iris*, which covers the anterior and posterior surface of the iris, and gives the beautiful variety of colours in the eyes. 2. *The pigment of the choroid membrane*, a black or brownish mucus, which covers the anterior surface of the choroid membrane, contiguous to the retina and the interior surface of the ciliary processes.

PIKE. See *Esox lucius.*

PI'LA HYSTRICIS. The bezoar hystricis.

PILA MARINA. A species of alcyonium, found on sea-coasts amongst wrack. It is said to kill worms, and, when calcined, to be useful in scrofula.

PILCHARD. See *Clupea pilchardus.*

PILE. The seat of this disease is the extremity of the great gut or rectum, upon the side of it, around the anus or fundament. The rectum, like the other intestines, is composed of several membranes connected to each other by an intervening cellular substance; and as the muscular fibres of this intestine always tend, by their contraction, to lessen its cavity, the internal membrane, which is very lax, forms itself into several rugæ, or folds. In this construction nature respects the use of the part, which occasionally gives passage to or allows the retention of the excrements, the hardness and bulk of which might produce considerable lacerations, if this intestine were not capable of dilatation. The arteries and veins subservient to this part are called hæmorrhoidal, and the blood that returns from hence is carried to the meseraic veins. The rectum is particularly subject to the piles, from its situation, structure, and use; for whilst the course of the blood is assisted in almost all the other veins of the body, by the distension of the adjacent muscles, and the pressure of the neighbouring parts, the blood in the hæmorrhoidal veins, which is to ascend against the natural tendency of its own weight, is not only destitute of these assistances, but is impeded in its passage: for, first, the large excrements which lodge in this intestine dilate its sides, and the different resistances which they form there are so many impediments obstructing the return of the blood; not in the large veins, for they are placed along the external surface of the intestine, but in all the capillaries which enter into its composition. Secondly, as often as these large excrements, protruded by others, approached near the anus, their successive pressure upon the internal coats of the intestine, which they dilate, drives back the blood into the veins, and for so long suspends its course; the necessary consequence of which is, a distension of the veins in proportion to the quantity of blood that fills them. Thirdly, in every effort we make, either in going to stool, or upon any other occasion, the contraction of the abdominal muscles, and the diaphragm pressing the contents of the abdomen downwards, and these pressing upon the parts contained in the pelvis, another obstruction is thereby opposed to the return of the blood, not only in the large veins, but also in the capillaries, which, being of too weak a texture to resist the impulse of the blood that always tends to dilate them, may hereby become varicose.

The dilatation of all these vessels is the *primary cause* of the piles; for the internal coat of the intestine, and the cellular membrane which connects that to the muscular coat, are enlarged in proportion to the distension of the vessels of which they are composed. This distension, not being equal in every part, produces separate tumours in the gut, or at the verge of the anus, which increases according as the venal blood is obstructed in them, or circulates there more slowly.

Whatever, then, is capable of retarding the course of the blood in the hæmorrhoidal veins, may occasion this disease. Thus, persons that are generally costive, who are accustomed to sit long at stool, and strain hard; pregnant women, or such as have had difficult labours; and likewise persons who have an obstruction in their liver, are for the most part afflicted with the piles; yet every one has not the hæmorrhoids, the different causes which are mentioned above being not common to all, or at least not having in all the same effects. When the piles are once formed, they seldom disappear entirely; and we may judge of those within the rectum by those which, being at verge of the anus, are plainly to be seen. A small pile, that has been painful for some days, may cease to be so, and dry up; but the skin does not afterwards retain its former firmness, being more lax and wrinkled, like the empty skin of a grape. If this external pile swells and sinks again several times, we may

perceive, after each return, the remains of each pile, though shrivelled and decayed, yet still left larger than before. The case is the same with those that are situated within the rectum: they may happen, indeed, never to return again, if the cause that produced them is removed; but it is probable that the excrements, in passing out, occasion a return of the swelling, to which the external ones are less liable: for the internal piles make a sort of knots or tumours in the intestine, which straitening the passage, the excrements, in passing out, occasion irritations there that are more or less painful in proportion to the efforts which the person makes in going to stool; and it is thus these tumours become gradually larger. The piles are subject to many variations: they may become inflamed from the above irritations to which they are exposed; and this inflammation cannot always be removed by art. In some, the inflammation terminates in an abscess, which arises in the middle of the tumour, and degenerates into a fistula. These piles are very painful till the abscess is formed. In others, the inflammation terminates by induration of the pile. These never lessen, but often grow larger. These hardened piles sometimes ulcerate, and continually discharge a sanies, which the patient perceives by stains on his shirt, and by its occasioning a very troublesome itching about the verge of the anus. There are some, and those of different sizes, which are covered with so fine a skin as frequently to admit blood to pass through. This fine skin is only the internal coat of the rectum, greatly attenuated by the varicose distension of its vessels. The hæmorrhage may proceed from two causes; namely, either from an excoriation produced by the hardness of the excrements, or from the rupture of the tumefied vessels, which break by their too great distension. In some of these, the patient voids blood almost every time he goes to stool; in others not so constantly. We sometimes meet with men who have a periodical bleeding by the piles, not unlike the menses in women; and as this evacuation, if moderate, does not weaken the constitution, we may infer that it supplies some other evacuation which nature either ceases to carry on, or does not furnish in due quantity; and hence, also, we may explain why the suppression of this discharge, to which nature had been accustomed, is frequently attended with dangerous diseases. The piles are sometimes distended to that degree as to fill the rectum, so that if the excrements are at all hard they cannot pass. In this case the excrements force the piles out of the anus to procure a free passage: consequently the internal coat of the rectum, to which they are connected, yields to extension; and upon examining these patients immediately after having been at stool, a part of the internal coat of that gut is perceived. A difficulty will occur in the return of these, in proportion to their size, and as the verge of the anus is more or less contracted. If the piles come out in the same manner upon going to stool, it is then they void most blood, because the verge of the anus forms a kind of ligature above them.

The most common arrangement of piles, is into,—

1. The *blind piles;* as they exist in their simplest state, consisting of nothing more than a varicose state of the veins, with more or less of thickening of the internal membrane of the bowel.

2. The *mucous piles;* in which the varicose veins or tumours and the mucous follicles are excoriated, and pour out a quantity of mucus, which mixes with some pus or sanies, and is constantly discharged by the anus.

3. The *bleeding piles;* which are attended with bleeding.

4. The *excrescential;* in which there are fleshy excrescences about the verge of the anus, or within the gut. These are mostly large, loose, and flabby within the bowel, and of great size; and externally they are of various shapes, resembling, as it was supposed, figs, on which account they have been denominated *fici, condylomata,* &c.

The treatment of this complaint will vary much, according to circumstances. When the loss of blood is considerable, we should endeavour to stop it by applying cold water, or ice; or some astringent, as a solution of alum, or sulphate of zinc: but a more certain way is making continued pressure on the part. At the same time, internal astringents may be given, joined with opium, if much pain or irritation attend. Care must be taken, however, to avoid constipation: and in all cases patients find benefit from the steady use of some mild cathartic, procuring regular loose motions. Sulphur is mostly resorted to for this purpose; and, especially in combination with supertartrate of potash, tamarinds, &c. in the form of electuary, usually answers very well; likewise castor oil is an excellent remedy in these cases. Should the parts be much inflamed, leeches may be applied near the anus, and cold saturnine lotions used; sometimes, however, fomenting with the decoction of poppy will give more relief: where symptomatic fever attends, the antiphlogistic regimen must be strictly observed, and, besides clearing the bowels, antimonials may be given to promote diaphoresis. Where the tumours are considerable and flaccid, without inflammation, powerful astringent or even stimulant applications will be proper, together with similar internal medicines; and the part should be supported by a compress kept on by a proper bandage. An ointment of galls is often very useful, with opium, to relieve pain; and some of the liquor plumbi acetatis may be farther added, if there be a tendency to inflammation. In these cases of relaxed piles of some standing, the copaiba frequently does much good, both applied locally and taken internally, usually keeping the bowels regular; also the celebrated Ward's paste, a medicine of which the active ingredient is black pepper. When a portion of the internal membrane of

the rectum is constantly protruded, and when tumours and excrescences form, which from their shape have been called *fici*, *condylomata*, &c. &c., their removal is alone to be effected by ligature or the knife.

PILEUS. A hat. The cap, or that part of a gymnosperm fungus or mushroom, which forms the upper round part or head; as in *Boletus*, and *Agaricus*.

Pilewort. See *Ranunculus ficaria*.

PILL. See *Pilula*.

Pill, aloëtic, with myrrh. See *Pilulæ aloës cum myrrhâ*.

Pill, compound aloëtic. See *Pilulæ aloës compositæ*.

Pill, compound calomel. See *Pilulæ hydrargyri submuriatis compositæ*.

Pill, compound galbanum. See *Pilulæ galbani compositæ*.

Pill, compound gamboge. See *Pilulæ cambogiæ compositæ*.

Pill, compound squill. See *Pilulæ scillæ compositæ*.

Pill of iron with myrrh. See *Pilulæ ferri compositæ*.

Pill, mercurial. See *Pilulæ hydrargyri*.

Pill, soap, with opium. See *Pilulæ saponis cum opio*.

PILOSE'LLA. (*a, æ*. f.; from *pilus*, because its leaves are hairy.) See *Hieracium*.

Pilosella major. See *Hypochæris*.

PILOSUS. (From *pilus*, hair.) Hairy. Applied very generally in *Natural History*, &c. to the stems, leaves, and receptacles of plants, as that of the *Cerastium alpinum*; to the nectary of the *Parnassus palustris*, which is in form of five hairy fascules at the base of the stamina; and to the receptacle of the *Carthamus tinctorius*.

PILOUS. See *Pilosus*.

PI'LULA. (*a, æ*. f.; diminutive of *pila*.) καταπότιον, and σφαίριον, of the Greeks. A pill. A small round form of a dry medicine, the size of a pea, which can be swallowed whole, so as to cover the taste of bitter or ungrateful ingredients: hence the proverb,—*Pilulæ et injuriæ non masticandæ, sed deglutiendæ sunt*. The consistence of pills is best preserved by keeping the mass in bladders, and occasionally moistening it. In the direction of masses to be thus divided, the proper consistence is to be looked for at first, as well as its preservation afterwards; for if the mass then become hard and dry, it is unfit for that division for which it was originally intended; and this is, in many instances, such an objection to the form, that it is doubtful whether, for the purposes of the pharmacopœia, the greater number of articles had not better be kept in powder, and their application to the formation of pills left to extemporaneous direction.

Pilulæ aloes compositæ. Compound aloëtic pills. Take of extract of spike-aloe, powdered, an ounce; extract of gentian, half an ounce; oil of caraway, forty minims; simple syrup, as much as is sufficient. Beat them together, until they form an uniform mass. From fifteen to twenty-five grains prove moderately purgative and stomachic.

Pilulæ aloes cum myrrha. Aloëtic pills with myrrh. Take of extract of spike-aloe, two ounces; saffron, myrrh, of each an ounce; simple syrup, as much as is sufficient. Powder the aloes and myrrh separately; then beat them all together until they form an uniform mass. From ten grains to a scruple of this pill, substituted for the *pilula Rufi*, prove stomachic and laxative, and are calculated for delicate females, especially where there is uterine obstruction.

Pilulæ ammoniareti cupri. An excellent tonic and diuretic pill, which may be given with advantage in dropsical diseases, where tonics and diuretics are indicated.

Pilulæ cambogiæ compositæ. Compound gamboge pills. Take of gamboge, powdered, extract of spike-aloe, powdered, compound cinnamon powder, of each a drachm; soap, two drachms. Mix the powders together: then having added the soap, beat the whole together until they are thoroughly incorporated. These pills are now first introduced in the London Pharmacopœia, as forming a more active purgative pill than the pill aloes cum myrrhâ, and in this way supplying an article very commonly necessary in practice. The dose is from ten grains to a scruple.

Pilulæ ferri compositæ. Compound iron pills. Pills of iron and myrrh. Take of myrrh, powdered, two drachms; subcarbonate of soda, sulphate of iron, sugar, of each a drachm. Rub the myrrh with the subcarbonate of soda; add the sulphate of iron, and rub them again; then beat the whole together until they are thoroughly incorporated. These pills answer the same purpose as the mistura ferri composita. The dose is from ten grains to one scruple.

Pilulæ galbani compositæ. Compound galbanum pills; formerly called *pilulæ gummosæ*. Take of galbanum gum resin, an ounce; myrrh, sagapenum, of each an ounce and half; assafœtida gum resin, half an ounce; simple syrup, as much as is sufficient. Beat them together until they form an uniform mass. A stimulating antispasmodic and emmenagogue. From half a scruple to half a drachm may be given three times a day in nervous disorders of the stomach and intestines, in hysterical affections and hypochondriasis.

Pilulæ hydrargyri. Mercurial pills. Often, from its colour, called the blue pill. Take of purified mercury, two drachms; confection of red roses, three drachms; liquorice-root, powdered, a drachm. Rub the mercury with the confection, until the globules disappear; then add the liquorice-root, and beat the whole together until they are thoroughly incorporated. An alterative and anti-venereal pill, which mostly acts on the bowels if given in sufficient quantity to attempt the removal of the venereal disease, and therefore requires the addition of opium. The dose is from five grains to a scruple. Three grains of the mass contain one of mercury. Joined with the

squill pill, it forms an excellent expectorant and alterative, calculated to assist the removal of dropsical diseases of the chest, and asthmas attended with visceral obstruction.

Pilulæ hydrargyri submuriatis compositæ. Compound pills of submuriate of mercury. Take of submuriate of mercury, precipitated sulphuret of antimony, of each a drachm; guaiacum resin, powdered, two drachms. Rub the submuriate of mercury, first with the precipitated sulphuret of antimony, then with the guaiacum resin, and add as much acacia mucilage as may be requisite to give the mass a proper consistence. This is intended as a substitute for the famed Plummer's pill. It is exhibited as an alterative in a variety of diseases, especially cutaneous eruptions, pains of the venereal or rheumatic kind, cancerous and scirrhous affections, and chronic ophthalmia. The dose is from five to ten grains. In about five grains of the mass there is one grain of the submuriate of mercury.

Pilulæ saponis cum opio. Pills of soap and opium; formerly called pilulæ saponaceæ. Take of hard opium, powdered, half an ounce; hard soap, two ounces. Beat them together until they are thoroughly incorporated. The dose is from three to ten grains. Five grains of the mass contain one of opium.

Pilulæ scillæ compositæ. Compound squill pills. Take of squill root, fresh dried and powdered, a drachm; ginger-root, powdered, hard soap, of each three drachms; ammoniacum, powdered, two drachms. Mix the powders together: then beat them with the soap, adding as much simple syrup as may be sufficient to give a proper consistence. An attenuant, expectorant, and diuretic pill, mostly administered in the cure of asthma and dropsy. The dose is from ten grains to a scruple.

PI'LUS. (Πιλος, wool carded.)

I. In *Anatomy*, the short hair which is found all over the body. The hair of the head, eyebrows, and eyelids, are termed *pili congeniti*, because they grow *in utero*; and that which grows from the surface of the body after birth, *pili postgeniti*. See *Capillus*.

II. In *Botany*, a hair: which, according to Linnæus, is an excretory duct of a bristle-like form. They are fine, slender, cylindrical, flexible bodies, found on the surfaces of the herbaceous parts of plants. Some of them are the excretory ducts of glands, but many of them are not; and it is not easy to conceive any satisfactory opinion of their use to the plant. When placed under the microscope they appear to be membraneous tubes, articulated in the majority of instances, often punctured, and in some plants, as the *Borago laxiflora*, covered with warts. They are either *simple* or undivided, *compound* or branched.

1. *Pili simplices*. The most common form of the simple hair is that of a jointed thread, generally too flexible to support itself, and thus most commonly found bent and waved. According to its degree of firmness, its quantity, and the mode of its application to the surfaces of stems and leaves, it constitutes the characteristic of surfaces: thus the surface is termed *pilosus*, or hairy, when the hairs are few and scattered, but conspicuous, as in *Hieracium pilocella*;—*lanatus*, woolly, when they are complicated, but nevertheless the single hairs are distinguishable, as in *Verbascum*;—*tomentosus*, shaggy, when they are so thickly matted that the individual hairs cannot be distinguished, and when the position of the hair is nearly parallel with the disk, being at the same time straight, or very slightly curved, and thick although unmatted: it constitutes the *silky* surface, as is seen on the leaves of *Potentilla anserina*, and *Achemilla alpina*. In some instances the simple hair is firm enough to support itself erect; in which case it is usually awl-shaped, and the articulations are shorter towards the base, as in *Bryonia alba*. It does not always, however, terminate in a point, but sometimes in a small knob, as in the newly-evolved succulent shoots of ligneous plants, *Belladonna*, &c. In some instances also, as on the under disk of the leaves of the *Symphytum officinale*, the simple hair is hooked towards its apex, which occasions the velvety feeling when the finger is passed over the surface of these leaves, the convex part of the curve of the hair being that only which comes in contact with the finger. Another variety of the simple hair is that which has given rise to the term *glanduloso-ciliata*: it is a slender hollow thread, supporting a small, cup-shaped, glandular body, and is rather to be regarded as a stipate gland.

2. *Pili compositi* are either *plumosus*, feathery, which is a simple hair with other hairs attached to it laterally, as in *Hieracium undulatum*; or it is *ramosus*, branched, that is lateral hairs are given off from common stalks, as on the petiole of the gooseberry leaf, or it consists of an erect firm stem, from the summit of which smaller hairs diverge in every direction, as in *Marrubium peregrinum*; or it is *stellatus*, star-like, being composed of a number of simple diverging awl-shaped hairs, springing from a common centre, which is a small knob sunk in the cutis, as on the leaves of marshmallow. Some authors have applied the term *ramenta* to small, flat, or strop-like hairs which are found on the leaves of some of the genus *Begonia*.—*Thomson*. See *Pubescence*.

PIMELITE. A variety of steatite found at Kosemutz, in Silesia.

PIME'NTA. (*a, æ.* f.; from *pimienta*, the Spanish fir.) See *Myrtus pimenta*.

Pime'nto. See *Myrtus pimenta*.

PIMPERNEL. See *Anagallis arvensis*.

Pimpernel, water. See *Veronica beccabunga*.

PIMPINE'LLA. (*a, æ.* f.; *quasi bipinella*, or *bipenula*, from the double pennate order of its leaves.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*. Pimpinella.

2. The pharmacopœial name of the *Pimpinella alba* and *magna*.

Pimpinella alba. A variety of the *pim-*

pinella magna, the root of which is indifferently used with that of the greater pimpinella. The *pimpinella saxifraga* was also so called.

Pimpinella anisum. The systematic name of the anise plant; called in the pharmacopœias, *Anisum*, and *Anisum vulgare*. *Pimpinella—foliis radicalibus trifidis incisis*, of Linnæus. A native of Egypt. Anise seeds have an aromatic smell, and a pleasant, warm, and sweetish taste. An essential oil and distilled water are prepared from them, which are employed in flatulencies and gripes, to which children are more especially subject; also in weakness of the stomach, diarrhœas, and loss of tone in the primæ viæ.

Pimpinella italica. See *Sanguisorba*.

Pimpinella magna. The systematic name of the greater pimpinella; called also, *Pimpinella nigra*. The root has been lately extolled in the cure of erysipelatous ulcerations, tinea capitis, rheumatism, and other diseases.

Pimpinella nigra. See *Pimpinella magna*.

Pimpinella saxifraga. The systematic name of the Burnet saxifrage; formerly called *Tragoselinum*. Several species of pimpinella were formerly used officinally; but the roots which obtain a place in the Materia Medica of the Edinburgh Pharmacopœia, are those of this species of saxifrage, the *Pimpinella—foliis pinnatis, foliolis radicalibus subrotundis, ummis linearibus*, of Linnæus. They have an unpleasant smell, and a hot, pungent, bitterish taste: they are recommended by several writers as a stomachic: in the way of gargle, they have been employed for dissolving viscid mucus, and to stimulate the tongue when that organ becomes paralytic.

Pinaste'llum. (From *pinus*, the pine-tree: so called, because its leaves resemble those of the pine-tree.) See *Peucedanum silaus*.

PINE. See *Pinus*.

Pine-apple. See *Bromelia ananas*.

Pine-thistle. See *Atractylis gummifera*.

Pi'nea. See *Pinus pinea*.

PINEAL. (*Pinealis*; from *pinea*, a pine-apple: from its supposed resemblance to that fruit.) Formed like the fruit of the pine.

Pineal gland. *Glandula pinealis*. *Conarium*. A small heart-like substance, about the size of a pea, situated immediately over the corpora quadrigemina, and hanging from the *thalami nervorum opticorum* by two crura or peduncles. Its use is not known. It was formerly supposed to be the seat of the soul.

Pi'neus purgans. See *Jatropha curcas*.

PINGUE'DO. (*o, inis*. f.; from *pinguis*, fat.) See *Fat*.

PINGUI'CULA. (*a, æ*. f.; from *pinguis*, fat: so called, because its leaves are fat to the touch.) 1. The name of a genus of plants. Class, *Diandria*; Order, *Monogynia*.

2. The name of a form of pterygium. See *Pterygium*.

Pinguicula vulgaris. *Sanicula montana*. *Sanicula eboracensis*. *Viola Palustris*. *Liparis*. *Cucullata*. *Dodecatheon Plinii*. Butterwort, or Yorkshire sanicle. The remarkable unctuosity of this plant has caused it to be applied to chaps, and as a pomatum to the hair. Decoctions of the leaves in broths are used by the common people in Wales as a carthartic.

PINGUIDENOUS. (*Pinguidenosus*; from *pinguis*, fat.) Fatty; greasy.

Pinho'nes indici. See *Jatropha curcas*.

PINIC. (*Pinicus*; from *pinus*, the fir.) Appertaining to the fir.

Pinic acid. *Acidum pinicum*. In the colophony of France, or resin, which is obtained in all probability from the *Pinaster* or *Pinus maritima*, Mons. Baup has found a substance which crystallises in triangular plates, soluble in about four parts of alkohol, but insoluble in water. It re-acts like an acid, and neutralises alkaline matter.

PINITE. Micarelle of Kirwan. A blackish green mineral, consisting of silica, alumina, and oxide of iron, found in the granite of St. Michael's Mount, Cornwall, and in porphyry in Scotland.

PINK, INDIAN. See *Spigelia*.

PINNA. (*a, æ* f. Πιννα, a wing.) 1. The name of the lateral and inferior part of the nose, and the broad part of the ear.

2. The leaflet of a pinnate leaf. See *Leaf*.

Pinna'culum. (Dim. of *pinna*, a wing.) A pinnacle: applied formerly to the uvula, from its shape.

PINNATIFID. *Pinnatifidus*. Leaves which are cut transversely into several oblong parallel segments; as in *Ipomosis*, and *Myriophyllum verticillatum*.

PINNATUS. Pinnate. A leaf which has several leaflets proceeding laterally from one stalk. It imitates a pinnatifid leaf; whereas *alatus* relates to the stem or leaf-stalk. There are several kinds: —

1. *Folium pinnatum cum impari*, with an odd or terminal leaflet; as in roses.

2. *Cirrosum*, with a tendril, when furnished with a tendril instead of the odd leaflet; as in the pea and vetch tribe.

3. *Abruptè pinnatum*, abruptly, without either a terminal leaflet or a tendril; as in the genus *Mimosa*.

4. *Oppositè pinnatum*, oppositely, when the leaflets are opposite or in pairs; as in saint-foin, roses, and *Sium angustifolium*.

5. *Alternatim pinnatum*, alternately, when they are alternate; as in *Viscia dumetorum*.

6. *Interruptè pinnatum*, interruptedly, when the principal leaflets are ranged alternately with an intermediate series of smaller ones; as in *Spiræa filipendula* and *ulmaria*.

7. *Articulatè pinnatum*, jointedly, with apparent joints in the common foot-stalk; as in *Weinmannia pinnata*.

8. *Decursivè pinnatum*, decurrently, when the leaflets are decurrent; as in *Eryngium campestre*.

9. *Lyrato-Pinnatum*, in a lyrate manner, having the terminal leaflet largest, and the rest gradually smaller as they approach the base, as in *Erysimum præcox*; and with intermediate smaller leaflets, as in *Geum rivale*, and the common turnip.

10. *Verticillato-pinnatum,* in a whorled manner, the leaflets cut into five divaricated segments, embracing the footstalk; as in *Sium verticillatum.*

PINNULA. (*a, æ.* f.) The leaflet of bipinnate and tripinnate leaves.

PINNULATUS. Pinnulate: applied to the leaflet of a winged leaf when it is again subdivided.

PI'NUS. (*us, i.* and *ûs.* f.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.* The pine-tree.

Pinus abies. The fir called formerly *Elate theleia.* The Norway spruce fir, which affords the Burgundy pitch and common frankincense.

1. *Pix burgundica,* from the place it was made at. *Pix arida.* The prepared resin of the *Pinus abies—foliis solitariis, subtetragonis acutiusculis distichis, ramis infra nudis conis cylindraceis,* of Linnæus. It is obtained by incision through the bark. The different portions are collected, fused in boiling water, and cleansed by pressing through canvass cloths. When genuine it has a very peculiar odour; and, although brittle in cold weather, it assumes a tenacious viscidity when gently heated or kneaded in the warm hand. It therefore forms an excellent adhesive and gently stimulating plaster, exciting some degree of irritation, and often a slight serous exudation from the parts to which it is applied. It will remain adherent to the cuticle for a long time; and is beneficially applied to the thorax in catarrhal affections, and to the loins in rheumatism and lumbago. These plasters, independently of the irritation of the skin which they excite, are useful merely as keeping the part warm and supported. It is customary with apothecaries to keep Burgundy pitch in a small ladle, or old saucepan, and to remelt the same portion repeatedly, by which it loses its characteristic adhesiveness and irritating quality, and is little more active than common resin. It should always be applied fresh, and spread upon the leather with the aid of as little heat as possible. Upon some skins, a Burgundy pitch plaster, or any similar application, creates incessant itching, and excites a pimply eruption, attended by almost unbearable irritation, so that it is frequently necessary to remove it within a few hours after its application: in these instances, however, it often does great service, especially in chronic rheumatism, where it may thus prove almost as effectual as a blister.

2. *Abietis resina:* called also, *Thus.* Common frankincense. This is a spontaneous exudation, and is brought in small masses, or tears, chiefly from Germany, but partly and purest from France. It is applicable to the same purposes as Burgundy pitch.

Pinus balsamea. The systematic name of the balsam of Gilead fir-tree, which affords the Canada balsam. The Canada balsam is one of the purest turpentines. For its properties, see *Turpentine.*

Pinus cedrus. The wood of this species, cedar wood, is very odorous, more fragrant than that of the fir, and it possesses similar virtues.

Pinus cembra. This affords the Carpathian balsam, and Briançon turpentine, and the shoots the Riga balsam, by distillation. This balsam, called *Oleum germanis,* and *Oleum carpathicum,* is obtained both by wounding the young branches of the *Pinus—foliis quinus, levibus,* of Linnæus, and by boiling them. It is mostly diluted with turpentine, and comes to us in a very liquid and pellucid state, rather white.

Pinus larix. The tree which gives us the agaric and Venice turpentine. The larch tree. *Larix. Pinus—foliis fasciculatis mollibus obtusiusculis bracteis extra squamas strobilorum extantibus.* Hort. Kew. The Venice turpentine issues spontaneously through the bark. It is usually thinner than any of the other sorts; of a clear whitish or pale yellowish colour; a hot, pungent, bitterish, disagreeable taste; and a strong smell, without any thing of the aromatic flavour of the Chian kind. Orenburgh gum, and Briançon manna, exude from the bark of this tree. See *Turpentine,* and *Boletus laricis.*

Pinus picea. The systematic name of the silver fir, or common fir. From it is obtained the Strasburg turpentine, by puncturing the small vesicles of the bark in which it is contained, and common turpentine by larger incisions.

Pinus pinea. The systematic name of the stone pine-tree. The young and fresh fruit of this plant are eaten in some countries in the same manner as almonds are here, either alone or with sugar. They are nutritive, aperient, and diuretic.

Pinus pumilio. Mountain pine. Mugho pine. The turpentine called Hungarian balsam exudes from this tree, and it is also procured by pressing the cones.

Pinus sylvestris. The systematic name of the Scotch fir. *Pinus—foliis geminis rigidis, conis, ovato-conicis longitudine foliorum subgeminis basi rotundatis,* of Linnæus, which affords the following officinals:—

1. *Common turpentine* is the juice, which flows out on the tree being wounded in hot weather. See *Turpentine.*

2. An oil is obtained from this tree by distillation, mostly with water, in which case yellow resin is left; but if without addition, the residuum is common resin, or colophony. The oil is ordered to be purified in the pharmacopœia. See *Oleum terebinthinæ rectificatum.*

3. When the cold begins to check the exudation of the juice from the tree, a part concretes in the wounds; which is collected, and termed *galipot* in Provence, *barras* in Guienne, sometimes also *white resin,* when thoroughly hardened by long exposure to the air. See *Resina flava* and *alba.*

4. The *Pix liquida,* or tar, is produced by cutting the wood into pieces, which are en-

closed in a large oven constructed for the purpose. It is well known for its economical uses. Tar-water, or water impregnated with the more soluble parts of tar, was some time ago a very fashionable remedy in a variety of complaints, but in the present practice it is not much used.

5. Common pitch is tar inspissated; it is now termed in the pharmacopœia, *Resina nigra.*

PI'PER. (*er, eris.* n. Πεπερι; from πεπτω, to concoct: because by its heat it assists digestion.) Pepper. The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Trigynia.*

Piper album. See *Piper nigrum.*

Piper brasilianum. See *Capsicum.*

Piper calecuticum. See *Capsicum.*

Piper caryophyllatum. See *Myrtus.*

Piper caudatum. See *Piper cubeba.*

Piper cubeba. The plant, the berries of which are called cubebs. *Piper caudatum. Cumamus. Piper—foliis oblique ovatis, seu oblongis venosis acutis, spica solitaria pedunculata oppositifolia, fructibus pedicellatis,* of Linnæus. The dried berries are of an ash-brown colour, generally wrinkled, and resembling pepper, but furnished each with a slender stalk. They are a warm spice, of a pleasant smell, and moderately pungent taste, imported from Java; and may be exhibited in all cases where warm spicy medicines are indicated, but they are inferior to pepper. Of late they have been successfully given internally in the cure of the common gleet and clap. Mr. Crawford informs us that they are the common remedy in Bengal and Java, where it yields very soon to their use. Well pounded, about half a drachm, or a dessert spoonful, is given three times a day, during which time all heating aliments are to be abstained from.

Piper decorticatum. White pepper.

Piper favasci. The clove berry tree.

Piper guineense. See *Capsicum.*

Piper hispanicum. See *Capsicum.*

Piper indicum. See *Capsicum annuum.*

Piper jamaicense. See *Myrtus pimenta.*

Piper longum. *Macropiper. Acapatli. Catu-tripali. Pimpilim.* Long pepper. *Piper—foliis cordatis petiolatis sessilibusque,* of Linnæus. The berries or grains of this plant are gathered while green, and dried in the heat of the sun, when they change to a blackish or dark grey colour. They possess precisely the same qualities as the Cayenne pepper, only in a weaker degree.

Piper lusitanicum. See *Capsicum.*

Piper murale. See *Sedum acre.*

Piper nigrum. *Melanopiper. Molagocodi. Lada. Piper aromaticum.* Black pepper. This species of pepper is obtained in the East Indies from the *Piper—foliis ovatis septemnerviis glabris, petiolis simplicissimis,* of Linnæus. Its virtues are similar to those of the other peppers. The black and white pepper are both obtained from the same tree, the difference depending on their preparation and degrees of maturity. Pelletier has extracted a new vegetable principle from black pepper, in which the active part of the grain resides, to which the name of *piperine* is given. To obtain it, black pepper was digested repeatedly in alkohol, and the solution evaporated until a fatty resinous matter was left. This, on being washed in warm water, became of a good green colour. It had a hot and burning taste; dissolved readily in alkohol, less so in æther. Concentrated sulphuric acid gave it a fine scarlet colour. The alkoholic solution after some days deposited crystals, which were purified by repeated crystallisation in alkohol and æther. They then formed colourless four-sided prisms, with single inclined terminations. They have scarcely any taste. Boiling water dissolves a small portion; but not cold water. They are soluble in acetic acid, from which combination feather-formed crystals are obtained. This substance fuses at 212° F. The fatty matter left after extracting the piperine, is solid at a temperature near 32°, but liquefies at a slight heat. It has an extremely bitter and acrid taste, is very slightly volatile, tending rather to decompose than to rise in vapour. It may be considered as composed of two oils, one volatile and balsamic, the other more fixed, and containing the acrimony of the pepper.

PIPERINE. The active principle of pepper. See *Piper nigrum.*

Piperi'tis. (*is, idis.* f.; from *piper,* pepper: so called because its leaves and roots are biting like pepper to the taste.) The herb dittany or lepidium and peppermint.

PIPERITUS. (From *piper,* pepper.) Peppered.

Piperitæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of the *Piper,* and such as, like it, have flowers in a thick spike.

PISCATORIUS. *Piscarius.* Of or belonging to fishes.

PISIFORM. (*Pisiformis;* from *pisum,* a pea, and *forma,* likeness.) Pea-like.

Pisifo'rme os. The fourth bone of the first row of the carpus.

PISMIRE. See *Formica rufa.*

Piss-a-bed. See *Leontodon taraxacum.*

Pissaspha'ltus. (From πισσα, pitch, and ασφαλτος, bitumen.) The thicker kind of rock-oil.

PISTA'CIA. (*a, æ.* f. Πιςακια, supposed to be a Syrian word.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Pentandria.*

Pistacia lentiscus. The systematic name of the tree which affords the mastich. *Mastiche. Mastix. Pistacia—foliis abruptè pinnatis, foliolis lanceolatis,* of Linnæus. A native of the south of Europe. In the island of Chio, the officinal mastich is obtained most abundantly; and, according to Tournefort, by making transverse incisions in the bark of the tree, from whence the mastich exudes in drops, which are suffered to run down to the ground, when, after sufficient time is allowed for their concretion, they are collected for use. Mastich is brought to us in small, yellowish,

transparent, brittle tears, or grains: it has a light agreeable smell, especially when rubbed or heated; on being chewed, it firsts crumbles, soon after sticks together, and becomes soft and white, like wax, without impressing any considerable taste. No volatile oil is obtained from this substance when distilled with water. Pure alcohol and oil of turpentine dissolve it; water scarcely acts upon it; though by mastication it becomes soft and tough, like wax. When chewed a little while, however, it is white, opake, and brittle, so as not to be softened again by chewing. The part insoluble in alkohol much resembles in its properties caoutchouc. It is considered to be a mild corroborant and astringent; and as possessing a balsamic power, it has been recommended in hæmoptysis, proceeding from ulceration, leucorrhœa, debility of the stomach, and in diarrhœas and internal ulcerations. Chewing this drug has likewise been said to have been of use in pains of the teeth and gums, and in some catarrhal complaints: it is, however, in the present day, seldom used either externally or internally. The wood abounds with the resinous principle, and a tincture may be obtained from it, which is esteemed in some countries in the cure of hæmorrhages, dysenteries, and gout.

Pistacia nux. See *Pistacia vera*.

Pistacia terebinthus. The systematic name of the tree which gives out the Cyprus, Chio, or Chian turpentine. *Terebinthina de Chio.* This substance is classed among the resins. It is procured by wounding the bark of the trunk of the tree. The best Chio turpentine is about the consistence of honey, very tenacious, clear, and almost transparent; of a white colour, inclining to yellow, and a fragrant smell, moderately warm to the taste, but free from acrimony and bitterness. Its medicinal qualities are similar to those of the other turpentines. See *Turpentine*.

Pistacia vera. The systematic name of a large tree, which affords the pistachio nut. *Pistacia vera—foliis impari pinnatis—foliolis subovatis recurvis*, of Linnæus. An oblong pointed nut, about the size and shape of a filbert, including a kernel of a pale greenish colour, covered with a yellow or greenish skin. Pistachio nuts have a sweetish unctuous taste, resembling that of sweet almonds, and, like the latter, afford an oil, and may be formed into an emulsion.

Pistachio nut. See *Pistacia vera.*

Pistacite. See *Epidote*.

PISTIL. See *Pistillum*.

PISTILLIFEROUS. (*Pistilliferus;* from *pistillum*, a pistil, and *fero*, to bear.) Pistil-bearing: applied to flowers or florets which contain one or more pistils, but no stamens.

PISTI′LLUM. (*um, i.* n.; a pestle, from its likeness.) A pistil or pointal: the female genital organ of a flower, which, being no less essential than the male, stands within them in the centre of the flower. Linnæus conceived the pistil originated from the pith, and the stamens from the wood; and hence constructed an ingenious hypothesis relative to the propagation of vegetables, which is not destitute of observations and analogies to support it, but not countenanced by the anatomy and physiology of the parts: —

A pistil consists of three parts: —

1. The *germen*, or rudiment of the young fruit and seed, which of course is essential.

2. The *stylus*, or style, various in length and thickness, sometimes wanting, and, when present, serving merely to elevate the third part.

3. The *stigma*, which is indispensable. The *Nicotiana tabacum* has these organs well displayed.

Pistolo′chia. (From πιςος, faithful, and λοχεια, parturition: so called because it was thought to promote delivery.) Birthwort. See *Aristolochia*.

PISUM. (*um, i.* n.; an ancient name, the origin of which is lost in its antiquity.) The name of a genus of plants. Class, *Diadelphia*; Order, *Decandria*. The pea.

Pisum sativum. The common pea. A very nutritious, but somewhat flatulent article of food, of which there are very many varieties.

PITCAIRN, Archibald, was born at Edinburgh, in 1652. In 1688, he published a little tract to establish Harvey's claim to the discovery of the Circulation. About four years after he was invited to become professor of physic at Leyden, which he accepted; and he ranked among his pupils the celebrated Boerhaave. However, his mathematical illustrations of medicine not being favourably received, he relinquished the appointment in about a year. He returned then to practise at Edinburgh, where his life terminated in 1713. He published while at Leyden, and subsequently, several dissertations to prove the utility of mathematics in medical discussion; which were more than once reprinted. After his death, his lectures were made public, under the title of "Elementa Medicinæ Physico-Mathematica."

PITCH. See *Pinus sylvestris*.

Pitch, Burgundy. See *Pinus abies.*

Pitch, Jews'. See *Bitumen judaicum.*

Pitch-tree. See *Pinus abies.*

Pitcher-shaped. Urceolatus. See *Ascidiatus*.

PITCHSTONE. A subspecies of indivisible quartz, of a green colour and vitreo-resinous lustre, found in Scotland and Ireland.

Pitta′cium. (From πιττα, pitch.) A pitch plaster.

Pittizite. Pitchy iron ore.

Pitto′tum. (From πιττα, pitch.) A medicine in which pitch is the principal ingredient.

PITUI′TA. Phlegm; that is, viscid and glutinous mucus.

PITUITARY. *Pituitarius.* Of or belonging to phlegm.

Pituitary gland. *Glandula pituitaria.* A gland situated within the cranium, between a duplicature of the dura mater, in the sella turcica of the sphenoid bone.

Pituitary membrane. *Membrana pituitaria.* Schneiderian membrane. The mucous membrane that lines the nostrils and sinuses,

communicating with the nose, is so called, because it secretes the mucus of those parts, to which the ancients assigned the name of *pituita*.

PITYRI'ASIS. (*is, is.* f.; from πιτυρον, bran: so named from its branny-like appearance.) A genus in the second order, or scaly diseases, of Dr. Willan's cutaneous diseases. The pityriasis consists of irregular patches of small thin scales, which repeatedly form and separate, but never collect into crusts, nor are attended with redness or inflammation, as in the lepra and scaly tetter. Dr. Willan distinguishes pityriasis from the porrigo of the Latins, which has a more extensive signification, and comprehends a disease of the scalp, terminating in ulceration; whereas the former is, by the best Greek authors, represented as always dry and scaly. Thus, according to Alexander and Paulus, pityriasis is characterised by "the separation of slight furfuraceous substances from the surface of the head, or other parts of the body, without ulceration. Their account of this appearance is conformable to experience; and the two varieties of it which they have pointed out may be denominated, *Pityriasis capitis*, and *Pityriasis versicolor*.

1. *Pityriasis capitis*, when it affects very young infants, is termed by nurses the dandriff. It appears at the upper edge of the forehead and temples, as a slight whitish scurf set in the form of a horse-shoe; on other parts of the head there are large scales, at a distance from each other, flat and semipellucid. Sometimes, however, they nearly cover the whole of the hairy scalp, being close together and imbricated. A similar appearance may take place in adults; but it is usually the effect of lepra, scaly tetter, or some general disease of the skin.

Elderly persons have the pityriasis capitis in nearly the same form as infants; the only difference is, that this complaint in old people occasions larger exfoliations of the cuticle. The remedies are, a regular ablution of the scalp with soap and water, or an alkaline or weak spirituous lotion, for which purpose the hair must be removed if not thin.

2. The *Pityriasis rubra* occurs most frequently in advanced life, and is the result of a slight inflammation of the portions of the skin affected, somewhat resembling in this respect the psoriasis diffusa. The cuticle is at first only red and rough, but soon becomes mealy or scurfy, and exfoliates, leaving a similar red cuticle underneath, which undergoes the like process; the scaliness becoming greater as the exfoliation is repeated. This complaint is attended with a dry and unperspiring surface, a troublesome itching, and a feeling of stiffness. There is also a general languor and restlessness. When the redness and scales disappear, the patches are left of a yellowish or a sallow hue. But the whole process is liable to be repeated at short intervals, and the disease to be thus greatly prolonged.

This form of the disease is removed by a combination of antimonials with the decoction of woods, and the warm sea-water bath. It is also materially relieved by small doses of the tinctura veratri. Where the irritability of the skin is not very great, a gently restringent lotion or ointment, containing a portion of borax or alum, and super-acetate of lead, may be applied to the parts affected with advantage.

3. The *Pityriasis versicolor* chiefly affects the arms, breast, and abdomen. It is diffused very irregularly; and being of a different colour from the usual skin colour, it exhibits a singular chequered appearance. These irregular patches, which are at first small, and of a brown or yellow hue, appear at the scrobiculus cordis, about the mammæ, clavicles, &c. Enlarging gradually, they assume a tesselated form; in other cases they are branched, so as to resemble the foliaceous lichens growing on the bark of trees; and sometimes, when the discolouration is not continuous, they suggest the idea of a map being distributed on the skin like islands, continents, peninsulas, &c. All the discoloured parts are slightly rough, with minute scales, which soon fall off, but are constantly replaced by others. This scurf, or scaliness, is most conspicuous on the sides and epigastric region. The cuticular lines are somewhat deeper in the patches than on the contiguous parts; but there is no elevated border, or distinguishing boundary between the discoloured part of the skin, and that which retains its natural colour. The discolouration rarely extends over the whole body. It is strongest and fullest round the umbilicus, on the breasts, and sides; it seldom appears in the skin over the sternum, or along the spine of the back. Interstices of proper skin colour are more numerous, and largest at the lower part of the abdomen and back, where the scales are often small, distinct, and a little depressed. The face, nates, and lower extremities are least affected; the patches are found upon the arms, but mostly on the inside, where they are distinct and of different sizes. The pityriasis versicolor is not a cuticular disease; for when the cuticle is abraded from any of the patches, the sallow colour remains as before in the skin or rete mucosum. This singular appearance is not attended with any internal disorder, nor with any troublesome symptom, except a little itching or irritation felt on getting into bed, and after strong exercise, or drinking warm liquors. There is in some cases a slight exanthema, partially distributed among the discoloured patches; and sometimes an appearance like the lichen pilaris; but eruptions of this kind are not permanent, neither do they produce any change in the original form of the complaint. The duration of the pityriasis versicolor is always considerable. Dr. Willan has observed its continuance in some persons for four, five, or six years. It is not limited to any age or sex. Its causes are not pointed out with certainty.

Several patients have referred it to fruit taken in too great quantities; some have thought it was produced by eating mushrooms; others by exposure to sudden alternations of cold and heat. In some individuals, who had an irritable skin, and occasionally used violent exercise, the complaint has been produced, or at least much aggravated, by wearing flannel next to the skin. It is likewise often observed in persons who have resided for a length of time in a tropical climate.

PIUS. Tender; natural; affectionate, &c.: applied to a membrane of the brain, because it embraces the brain as a good mother folds her child. See *Pia mater*.

PIX. (*ix, icis.* f.; from πισσα.) Pitch. See *Pinus sylvestris.*

Pix arida. See *Pinus abies.*

Pix burgundica. See *Pinus abies.*

Pix liquida. See *Pinus sylvestris.*

PLACE'BO. (I will please.) An epithet given to any medicine adapted more to please than benefit the patient.

PLACE'NTA. (*a, æ.* f.; from πλακους, a cake: so called from its resemblance to a cake.) The afterbirth. The membranes of the ovum have usually been mentioned as two, the amnion and the chorion; and the latter has again been divided into the true and the false. The third membrane (which, from its appearance, has likewise been called the villous or spongy, and, from the consideration of it as the inner lamina of the uterus, cast off like the exuviæ of some animals, the decidua,) has been described by Harvey, not as one of the membranes of the ovum, but as a production of the uterus. The following is the order of the membranes of the ovum, at the full period of gestation: 1st, There is the outer or connecting, which is flocculent, spongy, and extremely vascular, completely investing the whole ovum, and lining the uterus. 2dly, The middle membrane, which is nearly pellucid, with a very few small blood-vessels scattered over it, and which forms a covering to the placenta and funis, but does not pass between the placenta and uterus. 3dly, The inner membrane, which is transparent, of a firmer texture than the others, and lines the whole ovum, making, like the middle membrane, a covering for the placenta and funis with the two last. The ovum is clothed when it passes from the ovarium into the uterus, where the first is provided for its reception.

These membranes, in the advanced state of pregnancy, cohere slightly to each other, though, in some ova, there is a considerable quantity of fluid collected between them, which, being discharged when one of the outer membranes is broken, forms one of the circumstances which have been distinguished by the name of, by or false waters.

Between the middle and inner membrane, upon or near the funis, there is a small, flat, and oblong body, which, in the early part of pregnancy, seems to be a vesicle containing milky lymph, which afterwards becomes of a firm, and apparently fatty texture. This is called the *vesicula umbilicalis*; but its use is not known.

The placenta is a circular, flat, vascular, and apparently fleshy substance, different in its diameter in different subjects, but usually extending about six inches, or upwards, over about one fourth part of the outside of the ovum in pregnant women. It is more than one inch in thickness in the middle, and becomes gradually thinner towards the circumference from which the membranes are continued. The placenta is the principal medium by which the communication between the parent and child is preserved; but though all have allowed the importance of the office which it performs, there has been a variety of opinions on the nature of that office, and of the manner in which it is executed.

The surface of the placenta, which is attached to the uterus by the intervention of the connecting membrane, is lobulated and convex; but the other, which is covered with the amnion and chorion, is concave and smooth, except the little eminence made by the blood-vessels. It is seldom found attached to the same part of the uterus in two successive births; and, though it most frequently adheres to the anterior part, it is occasionally fixed to any other, even to the os uteri, in which state it becomes a cause of a dangerous hæmorrhage at the time of parturition. The placenta is composed of arteries and veins, with a mixture of pulpy or cellular substance. Of these vessels there are two orders, very curiously interwoven with each other. The first is a continuation of those from the funis, which ramify on the internal surface of the placenta, the arteries running over the veins, which is a circumstance peculiar to the placenta; and then, sinking into its substance, anastomose and divide into innumerable small branches. The second order proceeds from the uterus; and these ramify in a similar manner with those from the funis, as appears when a placenta is injected from those of the parent. The veins, in their ramifications, accompany the arteries as in other parts. There have been many different opinions with respect to the manner in which the blood circulates between the parent and child, during its continuance in the uterus. For a long time it was believed that the intercourse between them was uninterrupted, and that the blood, propelled by the powers of the parent, pervaded, by a continuance of the same force, the vascular system of the fœtus; but repeated attempts having been made, without success, to inject the whole placenta, funis, and fœtus, from the vessels of the parent, or any part of the uterus, from the vessels of the funis, it is now generally allowed, that the two systems of vessels in the placenta, one of which may be called maternal, the other fœtal, are distinct. It is also admitted, that the blood of the fœtus is, with regard to its formation, increase, and circulation, unconnected with and totally independent of the parent; except that the matter by which the blood of the fœtus is

formed must be derived from the parent. It is thought that which has probably undergone some preparatory changes in its passage through the uterus, is conducted by the uterine or maternal arteries of the placenta to some cells or small cavities, in which it is deposited; and that some part of it, or something secreted from it, is absorbed by the fœtal veins of the placenta, and by them conveyed to the fœtus for its nutriment. When the blood which circulates in the fœtus requires any alteration in its qualities, or when it has gone through the course of the circulation, it is carried by the arteries of the funis to the placenta, in the cells of which it is deposited, and then absorbed by the maternal veins of the placenta, and conducted to the uterus, whence it may enter the common circulation of the parent. Thus it appears, according to the opinion of Harvey, that the placenta performs the office of a gland, conveying air, or secreting the nutritious juices from the blood brought from the parent by the arteries of the uterus, and carried to the fœtus by the veins of the funis, in a manner probably not unlike to that in which milk is secreted and absorbed from the breasts. The veins in the placenta are mentioned as the absorbents, because no lymphatic vessels have yet been found in the placenta or funis; nor are there any nerves in these parts; so that the only communication hitherto discovered between the parent and child, is by the sanguineous system. The proofs of the manner in which the blood circulates between the parent and child are chiefly drawn from observations made upon the funis. When it was supposed that the child was supplied with blood in a direct stream from the parent, it was asserted that, on the division of the funis, if that part next to the placenta was not secured by a ligature, the parent would be brought into extreme danger by the hæmorrhage which must necessarily follow. But this opinion, which laid the foundation of several peculiarities in the management of the funis and placenta, is proved not to be true: for, if the funis be compressed immediately after the birth of the child, and whilst the circulation in it is going on, the arteries between the part compressed and the child throb violently, but those between the compression and the placenta have no pulsation; but the vein between the part compressed and the placenta swells, and that part next to the fœtus becomes flaccid; but if, under the same circumstances, the funis be divided, and that part next the child be not secured, the child would be in danger of losing its life by the hæmorrhage; yet the mother would suffer no inconvenience if the other part was neglected. It is, moreover, proved, that a woman may die of an hæmorrhage occasioned by a separation of the placenta, and the child be nevertheless born, after her death, in perfect health. But if the placenta be injured, without separation, either by the rupture of the vessels which pass upon its inner surface, or in any other way, the child being deprived of its proper blood, would perish; yet the parent might escape without injury.

The receptacle of the fructification of plants has been called placenta. See *Receptaculum.*

Place'ntula. (*a, æ.* f.; diminutive of *placenta.*) A small placenta.

Pladaro'tis. (From πλαδαρος, moist, flaccid.) A fungous and flaccid tumour within the eyelid.

PLAGUE. See *Pestis.*

PLAICE. See *Pleuronectes platessa.*

PLAITED. See *Plicatus.*

PLANTA. The lower part or sole of the foot, comprehended between the tarsus and toes.

PLANTA'GO. (*o, inis.* f.; from *planta*, the sole of the feet: so called from the shape of its leaves, or because its leaves lie upon the ground and are trodden upon.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.* The plantain.

2. The pharmacopœial name of the *Plantago major.*

Plantago coronopus. The systematic name of the buck's-horn plantain. *Coronopodium. Cornu cervinum. Stella terræ. Herba stella.* Its medical virtues are the same as those of the other plantains.

Plantago latifolia See *Plantago major.*

Plantago major. The systematic name of the broad-leaved plantain; called also, *Centinervia, Heptapleurum, Polyneuron,* and *Plantago latifolia. Plantago—foliis ovatis glabris, scapo tereti, spica flosculis imbricatis,* of Linnæus. This plant was retained until very lately in the materia medica of the Edinburgh College, in which the leaves are mentioned as the pharmaceutical part of the plant: they have a weak herbaceous smell; an austere, bitterish, subsaline taste; and their qualities are said to be refrigerant, attenuating, substyptic, and diuretic.

Plantago psyllium. The systematic name of the branching plantain, or flea-wort. *Psyllium, Pulicaris herba, Crystallion,* and *Cynomoia* of Oribasius. The seeds of this plant, *Plantago — caule ramoso herbaceo, foliis subdentatis, recurvatis; capitulis aphyllis,* of Linnæus, have a nauseous mucilaginous taste, and no remarkable smell. The decoction of the seeds is recommended in hoarseness and asperity of the fauces.

PLANTAIN. See *Plantago.*

Plantain-tree. See *Musa.*

Plantain, water. See *Alisma plantago aquatica.*

PLANTA'RIS. (From *planta*, the sole of the foot.) *Tibialis gracilis,* vulgo *plantaris,* of Winslow. *Extensor tarsi minor,* vulgo *plantaris,* of Douglas. A muscle of the foot, situated on the leg, that assists the soleus, and pulls the capsular ligament of the knee from between the bones. It is sometimes, though seldom, found wanting on both sides. This long and slender muscle, which is situated under the gastrocnemius externus, arises,

by a thin fleshy origin, from the upper and back part of the outer condyle of the os femoris. It adheres to the capsular ligament of the joint; and after running obliquely downwards and outwards, for the space of three or four inches, along the second origin of the gastrocnemius internus, and under the gastrocnemius externus, terminates in a long, thin, and slender tendon, which adheres to the inside of the tendo Achillis, and is inserted into the inside of the posterior part of the os calcis. This tendon sometimes sends off an aponeurosis that loses itself in the capsular ligament, but it does not at all contribute to form the aponeurosis that is spread over the sole of the foot, as was formerly supposed, and as its name would seem to imply. Its use is to assist the gastrocnemii in extending the foot. It likewise serves to prevent the capsular ligament of the knee from being pinched.

Plants, sexual system of. See *Linnæan system.*

PLANUM OS. The papyraceous or orbital portion of the ethmoid bone was formerly so called.

PLA'NUS. Flat; smooth. Applied to parts of animals, as *os planum;* and to the receptacle of the fruit of plants, as that of the *Helianthus annuus.*

PLASMA. A mineral of grass or leek green colour. It occurs in beds associated with common calcedony, and found also among the ruins at Rome.

PLASTER. See *Emplastrum.*

Plaster, ammoniacum. See *Emplastrum ammoniaci.*

Plaster, ammoniacum, with mercury. See *Emplastrum ammoniaci cum hydrargyro.*

Plaster, blistering fly. See *Emplastrum cantharidis.*

Plaster, compound Galbanum. See *Emplastrum Galbani compositum.*

Plaster, compound pitch. See *Emplastrum picis compositum.*

Plaster, cumin. See *Emplastrum cumini.*

Plaster, lead. See *Emplastrum plumbi.*

Plaster, mercurial. See *Emplastrum hydrargyri.*

Plaster of opium. See *Emplastrum opii.*

Plaster of Paris. See *Gypsum.*

Plaster, resin. See *Emplastrum resinæ.*

Plaster, soap. See *Emplastrum saponis.*

Plaster, wax. See *Emplastrum ceræ.*

PLA'TA. (From πλατυς, broad.) The shoulder-blade.

PLATER, FELIX, was born at Basle, in 1536, his father being principal of the College there. The following are his principal works: *De Corporis Humani Structurâ et Usu,* in three books; *De Febribus; Praxeos Medicæ, tomi tres; Observationum Medicinalium, libri tres.*

PLATIA'SMUS. (*us, i.* m.; from πλατυς, broad.) A defect in the speech in consequence of too broad a mouth.

PLATI'NUM. (*um, i.* n.; the name given to this metal by the Spaniards, from the word *plata,* which signifies silver in their language, by way of comparison with that metal, whose colour it imitates; or from the river *Plata,* near which it is found.) *Platina.* A metal which exists in nature only in a metallic state. Its ore has recently been found to contain, likewise, four new metals, *palladium, iridium, osmium,* and *rhodium,* besides iron and chrome. The largest mass of which we have heard, is one of the size of a pigeon's egg, in the possession of the Royal Society of Bergara.

The crude platinum is to be dissolved in nitro-muriatic acid, precipitated by muriate of ammonia, and exposed to a very violent heat. Then the acid and alkali are expelled, and the metal reduced in an agglutinated state, which is rendered more compact by pressure while red-hot.

Pure or refined platinum is by much the heaviest body in nature. Its sp. gr. is 21·5. It is very malleable, though considerably harder than either gold or silver; and it hardens much under the hammer. Its colour on the touch-stone is not distinguishable from that of silver. Pure platinum requires a very strong heat to melt it; and, when urged by a white heat, its parts will adhere together by hammering.

Platinum is not altered by exposure to air; neither is it acted upon by the most concentrated simple acids, even when boiling or distilled from it.

Platinum is now hammered in Paris into leaves of extreme thinness. By enclosing a wire of it in a little tube of silver, and drawing this through a steel plate in the usual way, Dr. Wollaston succeeded in producing platinum wire not exceeding 1-3000th of an inch in diameter.

There are two *oxides* of platinum: —

1. When 100 parts of the protochloride, or muriate of platinum, are calcined, they leave 73·3 of metal; 26·7 of chlorine escape. Hence the prime equivalent of the metal would seem to be 12·3. When the above protochloride is treated with caustic potash, it is resolved into a *black oxide* of platinum and chloride of potassium. This oxide should consist of 12·3 metal + 1 oxygene.

2. The *peroxide* appears to contain three prime proportions. Berzelius obtained it by treating the muriate of platinum with sulphuric acid, at a distilling heat, and decomposing the sulphate by aqueous potash. The precipitated oxide is a yellowish brown powder, easily reducible by a red heat to the metallic state. None of its compounds are used in medicine.

PLATYCO'RIA. (*a, æ.* f.; from πλατυς, broad, and κορη, the pupil of the eye.) An enlarged pupil.

PLATYOPHTHA'LMUM. (From πλατυς, broad, and οφθαλμος, the eye: so called because it is used by women to enlarge the appearance of the eye.) Antimony.

PLATYPHY'LLUM. (*um, i.* n.; from πλατυς, broad, and φυλλον, a leaf.) Broad-leaved.

PLATY'SMA-MYOIDES. (From πλατυς, broad, μυς, a muscle, and ειδος, resemblance.) *Musculus cutaneus,* of Winslow. *Quadratus genæ vel latissimus colli,* of Douglas. *Latissimus colli,* of Albinus. *Quadratus genæ, seu tetragonus,* of Winslow. A thin muscle on the side of the neck, immediately under the skin, that assists in drawing the skin of the cheek downwards; and when the mouth is shut, it draws all that part of the skin to which it is connected below the lower jaw upwards.

PLE'CTANÆ. (From πλεκτω, to fold.) The horns of the uterus.

PLE'CTRUM. (From πλητ7ω, to strike: so named from their resemblance to a drum-stick.) The styloid process of the temporal bone, and the uvula.

PLEMPIUS, V. F., was born at Amsterdam in 1601. He died in 1671. He increased the reputation of Louvain by the extent of his attainments, and distinguished himself in all the public questions that came under discussion. He was author of many works in Latin and Dutch.

PLENUS. See *Flos.*

PLEONASTE. See *Celanite.*

PLERO'SIS. See *Plethora.*

PLE'SMONE. See *Plethora.*

PLE'THORA. (*a, æ.* f.; from πληθω, to fill.) *Plerosis. Plesmone.* I. An excessive fulness of vessels, or a redundance of blood. In a state of health, the quantity of blood produced from the substances that constitute our common diet bears an exact proportion to the quantity demanded by the vascular system in its ordinary diameter, and the various secretions which are perpetually taking place in every part of the body. But the quantity of blood produced within a given period of time may vary; and the diameter of the blood-vessels, or the call of the different secernent organs, may vary; yet, so long as a due balance is maintained, and the proportion of new-formed blood is answerable to the demand, the general health continues perfect, or is little interfered with. Thus, a man exhausted and worn down by shipwreck, or by having lost his way in a desert, or who is just recovering from a fever, will devour double the food, and elaborate double the quantity of blood, in the course of four and twenty hours, to what he would have done in the ordinary wear of life: but the whole system demands this double exertion; the double supply is made use of, and the general harmony of the frame is as accurately maintained, as at any former period: there is no accumulation or plethora.

It should also be observed, that in this case the same remedial or instinctive power that stimulates the sanguific organs to the formation of a larger proportion of blood, stimulates also the blood-vessels to a diminution of their ordinary capacity, and lessens the activity of the secernents; and hence the difficulty to which the animal machine is reduced is also met another way; and a balance between the contained fluid, and the containing tubes, is often preserved as completely during the utmost degree of exhaustion, as in the fullest flow of healthy plenitude.

We sometimes, however, meet with cases in which an increased supply of blood is fabricated when no such increase is wanted, and the vessels remain of their ordinary capacity. And we also, sometimes, meet with cases in which, from a peculiar diathesis, the capacity of the vessels is unduly contracted, while no change takes place in the ordinary supply of blood. It it evident, that in both these contingencies there must be an equal disturbance of the balance between the substance contained and the substance containing, and that the measure of the former must be too large for the measure of the latter. In other words, there must be in both cases an excess of fluid, or a plethora, though from very different, and what are usually regarded as opposite causes; and hence it has been distinguished by different names,—that proceeding from an actual surplus of blood being denominated a plethora *ad molem,* or a plethora in respect to its general mass or absolute quantity; and that proceeding from a diminished capacity of the vessels being denominated a plethora *ad spatium,* or a plethora in respect to the space to be occupied.

It is possible, however, for both these causes of plethora to exist at the same time, and for the vessels to evince a contractile habit or diathesis, while the blood is produced in an inordinate proportion. And this, in truth, is by no means an uncommon state of the animal frame; for where the excess of blood is the result of a highly vigorous action of the organs of sanguification, we often see proof of the same highly vigorous action through the whole range of the vascular system, and indeed of every other part of the machine: the pulse is full, strong, and rebounding; the muscular fibres firm and energetic, the complexion florid, the whole figure strongly marked. We have here the sanguine temperament; and this kind of plethora has hence been called the *sanguine plethora.*

But we often meet with an inordinate formation of blood in a constitution where the vascular action is peculiarly weak instead of being peculiarly vigorous, the muscular fibres are relaxed instead of being firm, and the coats of the vessels readily give way, and become enlarged instead of being diminished in their diameter; and where, instead of excess of strength, there is considerable irritability or deficiency of strength in the organs of sanguification.

Yet, though the cause is different, the result is the same: the vessels, notwithstanding their facility of dilatation, at length become distended, and a plethora is produced, which has been denominated a plethora *ad vires;* or a plethora as it respects the actual strength of the system. The pulse is here indeed full, but frequent and feeble; the vital actions are languid; the skin smooth and soft; the figure

plump, but inexpressive; all which are symptoms of debility of the living power, or rather of that peculiar diathesis which has been distinguished by the name of the serous, phlegmatic, or pituitary temperament: and therefore this sort of plethora has been commonly denominated *serous plethora.*

We have, hence, a foundation for the two following very distinct species of this affection, the names for which are derived from their proximate causes:—

1. *Sanguine plethora.*—This is more common to men; and the serous to women. It is the disease of manhood, of the robust and athletic. Plethora of this kind must be distinguished from obesity: in effect, they are rarely found in conjunction, for the excess of vigorous action is common to every part of the animal frame; and hence, though it is probable that a larger portion of animal oil is secreted than in many other conditions of the body, yet it is carried off by the activity of the absorbents, and there is no leisure for its accumulation in the cellular membrane. And hence persons labouring under sanguine plethora are rather muscular than fat, and their distended veins lie superficially, and appear to peep through the skin.

In this state of the blood-vessels, slight excitements produce congestion in the larger vessels or organs. The head feels heavy and comatose; the sleep is disturbed by tumultuous dreams; the lungs labour in respiration, and the muscles feel a want of freedom or elasticity in exercise. If fever arise, it will assume the inflammatory type; and a slight excess in feasting or conviviality will endanger an apoplexy.

The cure, however, is not in general accompanied with much difficulty, and far more easily effected in this species than in the ensuing: for the excessive power may readily be lowered by venesection and purgatives; and its disposition to return may commonly be prevented by the use of refrigerants, as nitre or other neutral salts, and an adherence to a reducent diet and liberal exercise; at the same time it should be observed, that where the plethora depends upon a sanguineous temperament, or phlogistic diathesis, venesection, though rightly employed at first, should be repeated with great caution, as it will tend to generate in the system a periodical necessity for the same kind of depletion, and consequently promote the disease it is designed to cure.

2. *Serous plethora.*—The general pathology we have already treated of; and the reasons given under the last species for the usual appearance of sanguine plethora in persons of a spare and slender make, will explain the plumpness of figure and glossiness of skin which so peculiarly mark the species before us. In the first, there is great and universal vigour and rapidity of action; the secretions are all hurried forward in their elaborations, and carried off as soon as produced. In the second, there is little vigour or activity of any kind, and whatever is eliminated is suffered to accumulate. Hence costiveness is a common symptom; the ankles are cold and pituitous; and the animal oil, when once separated and deposited in the chambers of the cellular membrane, remains there, becomes augmented, and produces corpulency and sleekness. The inertness of the body is communicated to the mind; every exertion is a fatigue; and the mind thus participating in the inertness of the body, the countenance, though fair and rounded, is without expression, and often vacant.

Debility is always a source of irritability: and hence there is great irregularity, and a seeming fickleness in many of the symptoms by which this species of plethora is characterised, and the results to which it leads. The bowels, though usually quiescent and costive, are sometimes all of a sudden attacked with flatulent spasms, or a troublesome looseness. The appetite is languid and capricious; the heart teased with palpitations, the chest with dyspnœa and wheezing; the head is heavy and somnolent; the urine pale, small in quantity, and discharged frequently.

In this species, as in the last, we are compelled to begin with cupping or the use of the lancet. But, though the distended and overflowing vessels demand an abstraction of blood, it should never be forgotten that the relief hereby afforded is only temporary; and that, as the disease is, in this case, an effect of debility, we are directly adding to the cause as often as we have recourse to the lancet. Our leading object should be to give tone to the relaxed fibres; and to take off the morbid tendency to the production of a surplus of blood by counteracting the irritability which gives rise to it. Our attack must be made upon the entire habit, which, as far as possible, should undergo a total change. The diet should be nutritious, but perfectly simple, and the meals less frequent or less abundant than usual; the sedentary life should give way to exercise, at first easy and gentle, but by degrees more active, and of longer extent or duration. Tonics, as bitters, astringents, and sea-bathing, may now be employed with advantage; and the muscular fibres will become firmer as the cellular substance loses its bulk.

The whole, however, must be the work of time. Health being the middle term between excess and deficiency, every day is giving us a proof that where either of these extremes has become habitual, the system can only be let up or let down by slow degrees, so as to reach and rest at the middle point with certainty, and without inconvenience.

II. A fullness or plumpness of body.

Pleumo'nia. See *Pneumonitis.*

PLEU'RA. (*a, æ.* f. Πλευρα.) A membrane which lines the internal surface of the thorax, and covers its viscera. It forms a great process, the mediastinum, which divides the thorax into two cavities. Its use is to render the surface of the thorax moist by the

vapour it exhales. The cavity of the thorax is every where lined by this smooth and glistening membrane, which is in reality two distinct portions or bags, which, by being applied to each other laterally, form the septum called mediastinum: thus divides the cavity into two parts, and is attached posteriorly to the vertebræ of the back, and anteriorly to the sternum. But the two laminæ of which this septum is formed, do not every where adhere to each other: for at the lower part of the thorax they are separated, to afford a lodgment to the heart; and at the upper part of the cavity they receive between them the thymus gland. The pleura is plentifully supplied with arteries and veins from the internal mammary, and the intercostals. Its nerves, which are very inconsiderable, are derived chiefly from the dorsal and intercostal nerves. The surface of the pleura, like that of the peritonæum and other membranes lining cavities, is constantly bedewed with a serous moisture, which prevents adhesions of the viscera. The mediastinum, by dividing the breast into two cavities, obviates many inconveniences to which we should otherwise be liable. It prevents the two lobes of the lungs from compressing each other when we lie on one side, and consequently contributes to the freedom of respiration, which is disturbed by the least pressure on the lungs. If the point of a sword penetrates between the ribs into the cavity of the thorax, the lungs on that side cease to perform their office, because the air being admitted through the wound, prevents the dilatation of that lobe; while the other lobe, which is separated from it by the mediastinum, remains unhurt, and continues to perform its functions as usual.

PLEURA'LGIA. (*a, æ.* f.; from πλευρα, and ἀλγος, pain.) Pain in the pleura or side.

PLEURI'TIS. (*is, idis.* f.; from πλευρα, the pleura.) Pleurisy, or inflammation of the pleura or membrane which lines the cavity of the chest, and is reflected over the lungs. In some instances the inflammation is partial, or affects one place in particular, which is commonly on the right side; but, in general, a morbid affection is communicated throughout its whole extent. The disease is occasioned by exposure to cold, and by all the causes which usually give rise to all inflammatory complaints; and it attacks chiefly those of a vigorous constitution and plethoric habit. In consequence of the previous inflammation, it is apt, at its departure, to leave behind a thickening of the pleura, or adhesions to the ribs and intercostal muscles, which either lay the foundation of future pneumonic complaints, or render the patient more susceptible of the changes of the atmosphere than before.

It comes on with an acute pain in the side, which is much increased by making a full inspiration, and is accompanied by flushing in the face, increased heat over the whole body, rigors, difficulty of lying on the side affected, together with a cough and nausea, and the pulse is hard, strong, and frequent, and vibrates under the finger when pressed upon, not unlike the tense string of a musical instrument. If blood is drawn and allowed to stand for a short time, it will exhibit a thick sizy or buffy coat on its surface. If the disease be neglected at its onset, and the inflammation proceeds with great violence and rapidity, the lungs themselves become affected, the passage of the blood through them is stopped, and the patient is suffocated; or, from the combination of the two affections, the inflammation proceeds on to suppuration, and an abscess is formed. The prognostic in pleurisy must be drawn from the severity of the symptoms. If the fever and inflammation have run high, and the pain should cease suddenly, with a change of countenance, and a sinking of the pulse, great danger may be apprehended; but if the heat and other febrile symptoms abate gradually, if respiration is performed with greater ease and less pain, and a free and copious expectoration ensues, a speedy recovery may be expected.

The appearances on dissection are much the same as those mentioned under the head of pneumonia, viz. an inflamed state of the pleura, connected with the lungs, having its surface covered with red vessels, and a layer of coagulated lymph lying upon it, adhesions too, of the substance of the lungs to the pleura. Besides these, the lungs themselves are often found in an inflamed state, with an extravasation either of blood or coagulated lymph in their substance. Tubercles and abscesses are likewise frequently met with. The treatment is in every respect similar to that of inflammation of the lungs. See *Pneumonitis.*

PLEUROCOLLE'SIS. (*is, is.* f.; from πλευρα, the pleura, and κολλαω, to adhere.) An adhesion of the pleura to the lungs, or some neighbouring part.

PLEURODY'NIA. (*a, æ.* f.; from πλευρα, and οδυνη, pain.) A pain in the side.

PLEURONECTES. The name of a genus of fishes, of the order *Thoracici.*

Pleuronectes hippoglossus. The holibut or holybut. This is not only one of the largest of the flat fish, but the largest of fishes properly so called, having been found of the weight of 300 or 400 pounds.

Pleuronectes limanda. The dab. Very like to the sole, but not so fine in flavour.

Pleuronectes maximus. The turbot. By many this is esteemed the best of all fishes. It is a finely flavoured fish when in season, and inhabits the European and Mediterranean seas, and grows sometimes to thirty pounds weight. The flesh is firm, and easy of digestion.

Pleuronectes platessa. The plaice. A large flat fish, found in considerable quantity about our own and the Dutch coasts. The flesh is good, especially when large, but more watery than the sole. It is of easy digestion.

Pleuronectes flessus. The flounder. Extremely common about our coasts, and is

found in the rivers at a considerable distance from the salt water. It is a much esteemed fish, being easy of digestion, and proper for weak stomachs.

Pleuronectes roseus. The rose-coloured flounder. This is frequently found in the river Thames, and is considered as the finest of all flounders.

Pleuronectes solea. The sole. By far the most common of all the flat fish, and perhaps inferior to none in delicacy and flavour. It is in season the greater part of the year.

Pleuronectes zebra. An elegant flat fish, rather larger than our sole, a native of the Indian seas, and much esteemed as a wholesome and good fish.

PLEURO-PNEUMO'NIA. (*a, æ.* f.; from πλευρα, and πνευμονια, an inflammation of the lungs.) An inflammation of the lungs and pleura.

PLEURORTHOPNÆ'A. (*a, æ.* f.; from πλευρα, the pleura, ορθος, upright, and πνεω, to breathe.) A pleurisy in which the patient cannot breathe without keeping his body upright.

PLEUROSTHO'TONOS. (*os, i.* m.; from πλευρον, the side, and τεινω, to stretch.) A spasmodic disease in which the body is bent to one side.

PLEX'US. (*us, ûs.* m.; from *plector,* to plait or knit.) A network: applied to blood-vessels, absorbents, and nerves, when many are near together, the branches crossing and entwining like a net.

Plexus cardiacus. The cardiac plexus of nerves is the union of the eighth pair of nerves and great sympathetic.

Plexus choroides. The choroid plexus of vessels is situated in the lateral ventricle of the brain.

Plexus pampiniformis. The plexus of blood-vessels about the spermatic chord.

Plexus pulmonicus. The pulmonic plexus is formed by the union of the eighth pair of nerves with the great sympathetic.

Plexus reticularis. The network of vessels under the fornix of the brain.

PLI'CA. (*a, æ.* f.; from *plico,* to entangle.) *Helotis. Kolto. Rhopalosis. Trichiasis. Trichoma.* Plaited hair. A disease of the hairs, in which they become long and coarse, and matted and glued into inextricable tangles. It is peculiar to Poland, Lithuania, and Tartary, and generally appears during the autumnal season.

PLICA'RIA. (*a, æ.* f.; from *plico,* to entangle: so called because its leaves are entangled together in one mass.) Wolf's-claw, or club moss. See *Lycopodium.*

PLICA'TUS. Plaited; folded. Applied to leaves when the disk, especially towards the margin, is acutely folded up and down; as in *Malva crispa.*

Pli'nthius. Πλινθιος. The fourfold bandage.

PLUM. Three sorts of plums are ranked amongst the articles of the materia medica: they are all met with in the gardens of this country, but the shops are supplied with them, moderately dried, from abroad.

1. The *prunum brignolense,* the Brignole plum, or prunello, brought from Brignole in Provence: it is of a reddish yellow colour, and has a very grateful, sweet, subacid taste.

2. The *prunum Gallicum,* the common or French prune.

3. The *prunum damascenum,* or damson.

All these fruits possess the same general qualities with the other summer fruits. The prunelloes, in which the sweetness has a greater mixture of acidity than in the other sorts, are used as mild refrigerants in fevers and other hot indispositions. The French prunes and damsons are the most emollient and laxative; they are often taken by themselves to gently move the belly, where there is a tendency to inflammation. Decoctions of them afford a useful basis for laxative or purgative mixtures, and the pulp in substance for electuaries.

Plum, Malabar. See *Eugenia jambos.*

PLUMBA'GO. (*o, inis.* f.; from *plumbum,* lead: so called because it is covered with lead-coloured spots.) 1. The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.*

2. Lead-wort. See *Polygonum persicaria.*

3. Black-lead. An ore of a shining blue-black colour, a greasy feel, and tuberculated when fractured. See *Graphite.*

Plumbago europæa. The systematic name of the tooth-wort. *Dentaria. Dentillaria.* This plant is to be distinguished from the pellitory of Spain, which is also called dentaria. It is the *Plumbago—foliis amplexicaulibus, lanceolatis scabris,* of Linnæus. The root was formerly esteemed, prepared in a variety of ways, as a cure for the toothache, arising from caries.

Plumbi acetas. *Cerussa acetata. Saccharum saturni.* Sugar of lead: so called from its sweet state. It possesses sedative and astringent qualities in a very high degree, and is perhaps the most powerful internal medicine in profuse hæmorrhages, especially combined with opium: but its use is not entirely without hazard, as it has sometimes produced violent colic and palsy; wherefore it is better not to continue it unnecessarily. The dose may be from one to three grains. It has been also recommended to check the expectoration and colliquative discharges in phthisis, but will probably be only of temporary service. Externally it is often used for the same purposes as the liquor plumbi subacetatis.

Plumbi acetatis liquor. Solution of acetate of lead; formerly called *aqua lithargyri acetati.* Goulard's extract. Take of semi-vitrified oxide of lead, two pounds; acetic acid, a gallon. Mix, and boil down to six pints, constantly stirring; then set it by, that the feculencies may subside, and strain. It is principally employed, in a diluted state, by surgeons, as a resolvent against inflammatory affections.

PLUMBI ACETATIS LIQUOR DILUTUS. Diluted solution of acetate of lead. *Aqua lithargyri acetati composita.* Take of solution of sub-acetate of lead, a fluid drachm; distilled water, a pint; weak spirit, a fluid drachm. Mix. The virtues of this water, the *aqua vegeto-mineralis* of former pharmacopœias, applied externally, are resolvent, refrigerant, and sedative.

PLUMBI CARBONAS. See *Plumbi subcarbonas.*

PLUMBI OXIDUM SEMIVITREUM. See *Lithargyrus.*

PLUMBI SUBCARBONAS. *Carbonas plumbi.* Subcarbonate of lead; commonly called cerusse, or white lead. This article is made in the large way in white-lead manufactories, by exposing thin sheets of lead to the vapour of vinegar. The lead is curled up and put into pots of earthenware, in which the vinegar is, in such a way as to rest just above the vinegar. Hundreds of these are arranged together, and surrounded with dung, the heat from which volatilises the acetic acid, which is decomposed by the lead, and an imperfect carbonate of lead is formed, which is of a white colour. This preparation is seldom used in medicine or surgery but for the purpose of making other preparations, as the acetate. It is sometimes employed medicinally in form of powder and ointment, to children whose skin is fretted. It should, however, be cautiously used, as there is great reason to believe that complaints of the bowels of children originate from its absorption. See *Pulvis cerussæ compositus.*

PLU'MBUM. (*um, i.* n.) See *Lead.*

PLUMBUM CANDIDUM. See *Tin.*

PLUMBUM CINEREUM. Bismuth.

PLUMBUM NIGRUM. Black-lead.

PLUMBUM RUBEUM. The philosopher's stone is so called in some old books.

PLUMBUM USTUM. Burnt lead.

PLUMME'RI PILULÆ. Plummer's pills. See *Pilulæ hydrargyri submuriatis compositæ.*

PLUMO'SUS. (From *pluma*, a feather.) Plumose: feathered. In general use in *Natural History;* and applied, in *Botany,* to the down of seeds, which sometimes consists of fine, simple, or undivided hairs; in others it sends out lateral hairs, and then it is said to be feathered.

PLU'MULA. (*a, æ.* f.; a diminutive of *pluma*, a feather.) A little feather. The expanding embryo or germ of a plant within the seed, resembling a little feather. It soon becomes a tuft of young leaves, with which the young stem, if there be any, ascends. See *Corculum,* and *Cotyledon.*

PLUNKET'S CANCER REMEDY.—Take crow's foot, which grows in low grounds, one handful; dog's fennel, three sprigs, both well pounded; crude brimstone, in powder, three middling thimbles-full; white arsenic, the same quantity: incorporated all in a mortar, and made into small balls the size of a nutmeg, and dried in the sun. These balls must be powdered and mixed with the yolk of an egg, and laid over the sore or cancer upon a piece of pig's bladder, or stripping of a calf when dropped, which must be cut to the size of the sore, and smeared with the yolk of an egg. This must be applied cautiously to the lips or nose, lest any part of it get down; nor is it to be laid on too broad on the face, or too near the heart, nor to exceed the breadth of half-a-crown; but elsewhere as far as the sore goes. The plaster must not be stirred until it drops off of itself, which will be in a week. Clean bandages are often to be put on.

PNEUMATIC. (*Pneumaticus;* from πνευμα, wind, relating to air.) Of or belonging to air or gas.

PNEUMATIC APPARATUS. See *Apparatus.*

Pneumatic trough. See *Gas.*

PNEUMATOCE'LE. (*e, es.* f.; from πνευμα, wind, and κηλη, a tumour.) Any species of hernia that is distended with flatus.

PNEUMATOMETER. (*Pneumatometrum, i.* n.; from πνευμα, air, and μετρον, a measure.) A graduated gasometer, by which the quantity of inspired air can be measured.

PNEUMATO'MPHALUS. (From πνευμα, wind, and ομφαλος, the navel.) A flatulent umbilical hernia.

PNEUMATO'SIS. (From πνευματοω, to inflate.) *Emphysema.* Windy swelling. A genus of disease in the Class *Cachexiæ,* and Order *Intumescentiæ,* of Cullen.

His species are,—

1. *Pneumatosis spontanea,* without any manifest cause.
2. *Pneumatosis traumatica,* from a wound.
3. *Pneumatosis venenata,* from poisons.
4. *Pneumatosis hysterica,* with hysteria.

Pneumatosis is known by a collection of air in the cellular texture under the skin, rendering it tense, elastic, and crepitating. Air in the cellular membrane is confined to one place; but, in a few cases, it spreads universally over the whole body, and occasions a considerable degree of swelling. It sometimes arises spontaneously, which is, however, a very rare occurrence, or comes on immediately after delivery, without any evident cause; but it is most generally induced by some wound or injury done to the thorax, and which affects the lungs; in which case the air passes from these, through the wound, into a surrounding cellular membrane, and from thence spreads over the whole body.

Pneumatosis is attended with an evident crackling noise, and elasticity upon pressure; and sometimes with much difficulty of breathing, oppression, and anxiety.

We are to consider it as a disease by no means unattended with danger; but more probably from the causes which give rise to it, than any hazard from the complaint itself. In every species the air may be let out by very small punctures with a lancet; and a bandage applied where it can be used. The poisonous species requires the internal administration of the antidote for the particular poison; and the other species is cured by anti-hysterical remedies.

PNEUMO'NIA. (*a, æ.* f.; from πνευμων, a lung.) See *Pneumonitis.*

PNEUMONITIS. (*is, idis.* f.; from πνευμων, the lung, and *itis*, inflammation.) Inflammation of the lung. This disease has also been called *Pneumonia*, *Peripneumonia*, and *Peripneumonia vera.* It is characterised by fever, difficulty of breathing, cough, and a sense of weight and pain in the thorax. It is mostly produced by the application of cold to the body, which gives a check to the perspiration, and determines a great flow of blood to the lungs. It attacks principally those of a robust constitution and plethoric habit, and occurs most frequently in the winter season and spring of the year; but it may arise in either of the other seasons, when there are sudden vicissitudes from heat to cold.

Other causes, such as violent exertions in singing, speaking, or playing on wind instruments, by producing an increased action of the lungs, have been known to occasion peripneumony. Those who have laboured under a former attack of this complaint, are much predisposed to returns of it.

The true peripneumony comes on with an obtuse pain in the chest or side, great difficulty of breathing, (particularly in a recumbent position, or when lying on the side affected,) together with a cough, dryness of the skin, heat, anxiety, and thirst. At the first commencement of the disease the pulse is usually full, strong, hard, and frequent; but in a more advanced stage it is commonly weak, soft, and often irregular. In the beginning, the cough is frequently dry and without expectoration; but in some cases it is moist, even from the first, and the matter spit up is various both in colour and consistence, and is often streaked with blood.

If relief is not afforded in time, and the inflammation proceeds with such violence as to endanger suffocation, the vessels of the neck will become turgid and swelled; the face will alter to a purple colour; an effusion of blood will take place into the cellular substance of the lungs, so as to impede the circulation through that organ, and the patient will soon be deprived of life.

If these violent symptoms do not arise, and the proper means for carrying off the inflammation have either been neglected, or have proved ineffectual, although adopted at an early period of the disease, a suppuration may ensue, which event is to be known by frequent slight shiverings, and an abatement of the pain and sense of fulness in the part, and by the patient being able to lie on the side which was affected, without experiencing great uneasiness.

When peripneumony proves fatal, it is generally by an effusion of blood taking place in the cellular texture of the lungs, so as to occasion suffocation, which usually happens between the third and seventh day; but it may likewise prove fatal, by terminating either in suppuration or gangrene.

When it goes off by resolution, some very evident evacuation always attends it; such as a great flow of urine, with a copious sediment, diarrhœa, a sweat diffused over the whole body, or a hæmorrhage from the nose; but the evacuation which most frequently terminates the complaint, and which does it with the greatest effect, is a free and copious expectoration of thick white or yellow matter, slightly streaked with blood; and by this the disease is carried off generally in the course of ten or twelve days.

Our opinion as to the event is to be drawn from the symptoms which are present. A high degree of fever, attended with delirium, great difficulty of breathing, acute pain, and dry cough, denote great danger; on the contrary, an abatement of the febrile symptoms, and of the difficulty of breathing, and pain, taking place on the coming on of a free expectoration, or the happening of any other critical evacuation, promises fair for the recovery of the patient. A termination of the inflammation in suppuration is always to be considered as dangerous.

On dissection, the lungs usually appear inflamed; and there is often found an extravasation, either of blood or of coagulable lymph, in their cellular substance. The same appearances likewise present themselves in the cavity of the thorax, and within the pericardium. The pleura connected with the lungs is also in an inflated state, having its surface every where crowded with red vessels. Besides these, abscesses are frequently found in the substance of the lungs, as likewise tubercles and adhesions to the ribs are formed. A quantity of purulent matter is often discovered also in the bronchia. In the early period of this disease we may hope, by active measures, to bring about immediate resolution; but when it is more advanced, we must look for a discharge by expectoration, as the means of restoring the part to a healthy state. We should begin by large and free bleeding, not deterred by the obscure pulse sometimes found in peripneumony, carring this evacuation to faintness, or to the manifest relief of the breathing. In the subsequent use of this measure, we must be guided by the violence of the disease on the one hand, and the strength of the patient on the other: the scrofulous, in particular, cannot bear it to any extent; and it is more especially in the early part of the complaint, that it produces a full and decisive effect. Under doubtful circumstances it will be better to take blood locally, particularly when there are pleuritic symptoms; with which blisters may co-operate. The bowels must be well evacuated in the first instance, and subsequently kept regular; and antimonials may be given with great advantage, combined often with mercurials, to promote the discharges, especially from the skin and lungs. Digitalis is proper also, as lessening the activity of the circulation. The antiphlogistic regimen is to be observed, except that the patient will not bear too free expo-

sure to cold. To quiet the cough, demulcents may be of some use, or cooling sialagogues; but where the urgency of the symptoms is lessened by copious depletion, opiates are more to be relied upon: a little syrup of poppy, for instance, swallowed slowly from time to time; or a full dose of opium may be given at night to procure sleep, joined with calomel and antimony, that it may not heat the system, but, on the contrary, assist them in promoting the secretions. Inhaling steam will occasionally assist in bringing about expectoration; or, where there is a wheezing respiration, squill in nauseating, or sometimes even emetic, doses may relieve the patient from the viscid matter collected in the air passages. When the expectoration is copious in the decline of the complaint, tonic medicines, particularly myrrh, with a more nutritious diet, become necessary to support the strength; and the same means will be proper, if it should go on to suppuration. Where adhesions have occurred, or other organic change, though the symptoms may appear trifling, much caution is required to prevent the patient falling into phthisis; on which subject, see the management of that disease: and, should serous effusion happen, see *Hydrothorax*.

PNEUMONIC. (*Pneumonicus;* from πνευμων, the lung.) Appertaining to the lungs.

PNEUMOPLEURI'TIS. (*is, idis.* f.; from πνευμων, the lungs, and πλευριτις, an inflammation of the pleura.) An inflammation of the lungs and pleura.

PNIGA'LIUM. (*um, i.* n.; from πνιγω, to suffocate.) The nightmare. A disorder in which the patient appears to be suffocated.

PNIX. (From πνιγω, to suffocate.) A sense of suffocation.

POD. See *Siliqua.*

PODA'GRA. (*a, æ.* f.; from πους, the foot, and αγρα, a taking, or seizure.) See *Gout.*

PODAGRA'RIA. (*a, æ.* f.; from *podagra*, the gout: so called because it was thought to expel the gout.) See *Ægopodium.*

PODECIUM. (*um, ii.* n.; from πους, a foot.) The name given by Acharus to the peculiar footstalk of the tubercles in the cup lichens.

PODONI'PTRUM. (*um, i.* n.; from πους, a foot, and νιπτω, to wash.) A bath for the feet.

PODOPHY'LLUM. (*um, i.* n.; from πους, a foot, and φυλλον, a leaf: so named from its shape.) A species of wolf's-bane.

PODOTHE'CA. (*a, æ.* f.; from πους, a foot, and τιθημι, to put.) A shoe or stocking. An anatomical preparation, consisting of a kind of shoe of the scarf-skin, with the nails adhering to it, taken from a dead subject.

POICILIA. (*a, æ.* f. Ποικιλια; from ποικιλος, *versicolor.*) The piebald skin, or that affection found among negroes, in which it is marbled generally with alternate spots, or patches of black and white.

POINTAL. See *Pistillum.*

POINTED. See *Acuminatus.*

POISON. *Venenum. Toxicum.* That which, when applied externally, or taken into the human body, uniformly effects such a derangement in the animal economy as to produce disease, may be defined a poison. It is extremely difficult, however, to give a definition of a poison; and the above is subject to great inaccuracy.

Poisons are divided, with respect to the kingdom to which they belong, into animal, vegetable, mineral, and halituous, or aërial.

Poisons, in general, are only deleterious in certain doses; for the most active, in small doses, form the most valuable medicines. There are, nevertheless, certain poisons, which are really such in the smallest quantity, and which are never administered medicinally; as the poison of hydrophobia or the plague. There are likewise substances which are innocent when taken into the stomach, but which prove deleterious when taken into the lungs, or when applied to an abraded surface: thus carbonic acid is continually swallowed with fermented liquors, and thus the poison of the viper may be taken with impunity; whilst inspiring carbonic acid kills, and the poison of the viper, inserted into the flesh, often proves fatal.

Several substances also act as poisonous when applied either externally or internally; as arsenic.

When a substance produces disease, not only in mankind, but in all animals, it is distinguished by the term *common poison;* as arsenic, sublimate, &c.; whilst that which is poisonous to man only, or to animals, and often to one genus merely, is said to be a *relative poison:* thus aloes are poisonous to dogs and wolves; the *phellandrium aquaticum* kills horses, whilst oxen devour it greedily, and with impunity. It appears, then, that substances act as poisonous only in regard to their *dose, the part of the body they are applied to,* and the *subject.*

Poisons enter the body in the following ways:—

1. Through the œsophagus alone, or with the food.
2. Through the anus, by clysters.
3. Through the nostrils.
4. Through the lungs, with the air.
5. Through the absorbents of the skin, either whole, ulcerated, cut, or torn.

Poisons have been arranged in six classes:—

I. — Corrosive or Escharotic.

They are so named because they usually irritate, inflame, and corrode the animal texture with which they come into contact. Their action is in general more violent and formidable than that of the other poisons. The following list from Orfila contains the principal bodies of this class: —

1. *Mercurial:* corrosive sublimate; red oxide of mercury; turbeth mineral, or yellow subsulphate of mercury; pernitrate of mercury; mercurial vapours.

2. *Arsenical:* such as white oxide of arsenic, and its combinations with the bases, called arsenites; arsenic acid, and the arseniates; yellow and red sulphuret of arsenic; black oxide of arsenic, or fly-powder.

3. *Antimonial:* such as tartar emetic, or cream tartrate of antimony; oxide of antimony; kermes mineral; muriate of antimony; and antimonial wine.

4. *Cupreous:* such as verdigris; acetate of copper; the cupreous sulphate, nitrate, and muriate; ammoniacal copper; oxide of copper; cupreous soaps, or grease tainted with oxide of copper; and cupreous wines or vinegars.

5. *Muriate of tin.*
6. *Oxide and sulphate of zinc.*
7. *Nitrate of silver.*
8. *Muriate of gold.*
9. *Pearl-white*, or *the oxide of bismuth*, and the subnitrate of this metal.
10. *Concentrated acids:* sulphuric, nitric phosphoric, muriatic, hydriodic, acetic, &c.
11. *Corrosive alkalies:* pure or subcarbonated potash, soda, and ammonia.
12. The *caustic earths*, lime and barytes.
13. *Muriate and carbonate of barytes.*
14. *Glass and enamel powder.*
15. *Cantharides.*

II. — Astringent.

1. *Preparations of lead:* such as the acetate, carbonate, wines sweetened with lead, water impregnated with its oxide, food cooked in vessels containing lead, syrups clarified with subacetate of lead, plumbean vapours.

III. — Acrid.

1. The *gases:* chlorine, muriatic acid, sulphurous acid, nitrous gas, and nitro-muriatic vapours.
2. *Jatropha manihot*, the fresh root, and its juice, from which cassava is made.
3. *The Indian ricinus*, or Molucca wood.
4. *Scammony.*
5. *Gamboge.*
6. *Castor oil.*
7. *Croton oil.*
8. *Elaterium.*
9. *Colocynth.*
10. *White hellebore root.*
11. *Black hellebore root.*
12. Seeds of *stavesacre.*
13. The wood and fruit of the *Ahovāi.*
14. *Rhododendron chrysanthum.*
15. Bulbs of *Colchicum.*
16. The juice of the *Convolvulus arvensis.*
17. *Asclepias.*
18. *Œnanthe fistulosa* and *crocata.*
19. Some species of *clematis.*
20. *Anemone pulsatilla.*
21. Root of *Wolf's-bane.*
22. Fresh roots of *Arum maculatum.*
23. Berries and bark of the root of the *Daphne mezereum.*
24. The *Rhus toxicodendron.*
25. *Euphorbia officinalis.*
26. Several species of *Ranunculus*, particularly the *aquatilis.*
27. *Nitre*, in a large dose.
28. Some muscles and other shell-fish.

IV. — Narcotic and Stupifying.

1. The *gases:* hydrogene, azote, and oxide of azote.
2. Poppy and opium.
3. The roots of the *Solanum somniferum;* berries and leaves of the *Solanum nigrum;* those of the *Morel* with yellow fruit.
4. The roots and leaves of the *Atropa mandragora.*
5. *Datura stramonium.*
6. *Hyoscyamus*, or henbane.
7. *Lactuca virosa.*
8. *Paris quadrifolia*, or herb Paris.
9. *Lauro cerasus*, and prussic acid.
10. Berries of the *yew-tree.*
11. *Ervum ervilia;* the seeds.
12. The seeds of *Lathyrus cicera.*
13. Distilled water of *bitter almonds.*
14. The effluvia given off from many of the above plants.

V. — Narcotico-acrid.

1. *Carbonic acid;* or the gas of charcoal stoves and fermenting liquors.
2. The *manchenille.*
3. *Faba Sancti Ignatii.*
4. The exhalations and juice of the *poison-tree* of Macassar, or *Upas-Antiar.*
5. The *Ticunas.*
6. Certain species of *Strychnos.*
7. The whole plant, *Lauro-cerasus.*
8. *Belladonna*, or deadly nightshade.
9. *Tobacco.*
10. Roots of *white bryony.*
11. Roots of the *Chærophyllum silvestre.*
12. *Conium maculatum*, or hemlock.
13. *Æthusa cynapium.*
14. *Cicuta virosa*, or water hemlock.
15. *Anagallis arvensis.*
16. *Mercurialis perennis.*
17. *Digitalis purpurea.*
18. The distilled waters and oils of some of the above plants.
19. The *odorant principle* of some of them.
20. *Woorara* of Guiana.
21. *Camphora.*
22. *Cocculus indicus.*
23. Several *mushrooms.*
24. *Secale cornutum.*
25. *Lolium temulentum.*
26. *Sium latifolium.*
27. *Coriaria myrtifolia.*

VI. — Septic or Putrescent.

1. Sulphuretted hydrogene.
2. Putrid effluvia of animal bodies.
3. Contagious effluvia, or fomites and miasmata.
4. Venomous animals; the viper, rattle-snake, scorpion, mad dog, &c.

Antidotes for vegetable poisons. Drapiez has ascertained, by numerous experiments, that the fruit of the *Feuillea cordifolia* is a powerful antidote against the vegetable poisons. He poisoned dogs with the rhus toxicodendron, hemlock, and nux vomica; and all those which were left to the effects of the poison died, but those to which the above fruit was administered recovered completely, after a short illness. To see whether the antidote

would act in the same way, applied externally to wounds, into which vegetable poisons had been introduced, he took two arrows, which had been dipped into the juice of the *manchenille,* and slightly wounded with them two cats: to one of these wounds he applied a poultice, composed of the fruit of the *feuillea cordifolia,* while the other was left without any application. The former suffered no inconvenience, except from the pain of the wound, which speedily healed; while the other, in a short time, fell into convulsions, and died. This fruit loses these valuable virtues, if kept two years after it is gathered.

Dr. Chisholm states that the juice of the sugar-cane is the best antidote for arsenic.

Dr. Lyman Spalding, of New York, announces in a small pamphlet, that for above these fifty years, the *Scutellaria lateriflora* has proved to be an infallible means for the prevention and cure of the hydrophobia, after the bite of rabid animals. It is better applied as a dry powder than fresh. According to the testimonies of several American physicians, this plant, not yet received as a remedy into any European *Materia Medica,* afforded perfect relief in above a thousand cases, as well in the human species as in the brute creation (dogs, swine, and oxen).

Method of detecting Poisons.

" When sudden death is suspected to have been occasioned by the administration of poison, either wilfully or by accident, the testimony of the physician is occasionally required to confirm or invalidate this suspicion. He may also be sometimes called upon to ascertain the cause of the noxious effects arising from the presence of poisonous substances in articles of diet; and it may, therefore, serve an important purpose, to point out concisely the simplest and most practicable modes of obtaining, by experiment, the necessary information.

The only poisons, however, that can be clearly and decisely detected by chemical means, are those of the mineral kingdom. Arsenic and corrosive sublimate are most likely to be exhibited with the view of producing death; and lead and copper may be introduced undesignedly, in several ways, into our food and drink. The continued and unsuspected operation of the two last may often produce effects less sudden and violent, but not less baneful to health and life, than the more active poisons; and their operation generally involves, in the pernicious consequences, a greater number of sufferers.

Method of discovering arsenic. — When the cause of sudden death is believed, from the symptoms preceding it, to be the administration of arsenic, the contents of the stomach must be attentively examined. To effect this let a ligature be made at each orifice, the stomach removed entirely from the body, and its whole contents washed out into an earthen or glass vessel. The arsenic, on account of its greater specific gravity, will settle to the bottom, and may be obtained separate, after washing off the other substances by repeated effusions of cold water. These washings should not be thrown away, till the presence of arsenic has been clearly ascertained. It may be expected at the bottom of the vessel in the form of a white powder, which must be carefully collected, dried on a filter, and submitted to experiment.

A. Boil a small portion of the powder with a few ounces of distilled water, in a clean Florence flask, and filter the solution.

B. To this solution add a portion of water, saturated with sulphuretted hydrogene gas. If arsenic be present, a golden yellow sediment will fall down, which will appear sooner if a few drops of acetic acid be added.

C. A similar effect is produced by the addition of sulphuret of ammonia, or hydro-sulphuret of potash.

It is necessary, however, to observe, that these tests are decomposed not only by all metallic solutions, but by the mere addition of any acid. But among these precipitates, Dr. Bostock assures us, the greatest part are so obviously different as not to afford a probability of being mistaken; the only two which bear a close resemblance to it, are the precipitate from tartarised antimony, and that separated by an acid. In the latter, however, the sulphur preserves its peculiar yellow colour, while the arsenic presents a deep shade of orange; but no obvious circumstance of discrimination can be pointed out between the hydro-sulphurets of arsenic and of antimony. Hence Dr. Bostock concludes that sulphuretted hydrogene and its compounds merit our confidence only as collateral tests. They discover arsenic with great delicacy: sixty grains of water, to which one grain only of liquid sulphuret (hydroguretted sulphuret?) had been added, was almost instantly rendered completely opake by one eightieth of a grain of the white oxide of arsenic in solution.

D. To a little of the solution A, add a single drop of a weak solution of sub-carbonate of potash, and afterward a few drops of a solution of sulphate of copper. The presence of arsenic will be manifested by a yellowish-green precipitate. Or boil a portion of the suspected powder with a dilute solution of pure potash, and with this precipitate the sulphate of copper, when a similar appearance will ensue still more remarkably, if arsenic be present. The colour of this precipitate is perfectly characteristic. It is that of the pigment called Scheele's green. To identify the arsenic with still greater certainty, it may be proper, at the time of making the experiments on a suspected substance, to perform similar ones, as a standard of comparison, on what is actually known to be arsenic. Let the colour, therefore, produced by adding an alkaline solution of the substance under examination, to a solution of sulphate of copper, be compared with that obtained by a similar admixture of a solution of copper with one of real arsenic in alkali.

The proportions in which the different ingredient are employed, Dr. Bostock has

found to have considerable influence on the distinct exhibition of the effect. Those which he has observed to answer best, were one of arsenic, three of potash (probably the sub-carbonate, or common salt of tartar), and five of sulphate of copper. For instance, a solution of one grain of arsenic, and three grains of potash, in two drams of water, being mingled with another solution of five grains of sulphate of copper in the same quantity of water, the whole was converted into a beautiful grass green, from which a copious precipitate of the same hue slowly subsided, leaving the supernatant liquor transparent, and nearly colourless. The same materials, except with the omission of the arsenic, being employed in the same manner, a delicate sky-blue resulted, so different from the former, as not to admit of the possibility of mistake. In this way one fortieth of a grain of arsenic, diffused through sixty grains of water, afforded, by the addition of sulphate of copper and potash in proper proportions, a distinct precipitate of Scheele's green. In employing this test, it is necessary to view the fluid by reflected and not by transparent light, and to make the examination by daylight. To render the effect more apparent, a sheet of white paper may be placed behind the glass in which the mixed fluids are contained; or the precipitation may be effected by mixing the fluids on a piece of writing paper.

E. The sediments, produced by any of the foregoing experiments, may be collected, dried, and laid on red-hot charcoal. A smell of sulphur will first arise, and will be followed by that of garlic.

F. A process for detecting arsenic has been proposed by Hume, of London, in the *Philosophical Magazine* for May, 1809, vol. xxxiii. The test which he has suggested, is the fused nitrate of silver or lunar caustic, which he employs in the following manner:—

Into a clean Florence oil-flask introduce two or three grains of any powder suspected to be arsenic; add not less than eight ounce measures of either rain or distilled water; and heat this gradually over a lamp, or a clear coal fire, till the solution begins to boil. Then, while it boils, frequently shake the flask, which may be readily done by wrapping a piece of leather round its neck, or putting a glove upon the hand. To the hot solution, add a grain or two of subcarbonate of potash or soda, agitating the whole to make the mixture uniform.

In the next place, pour into an ounce phial, or a small wine-glass, about two table-spoonfuls of this solution, and present, to the mere surface of the fluid, a stick of dry nitrate of silver or lunar caustic. If there be any arsenic present, a beautiful yellow precipitate will instantly appear, which will proceed from the point of contact of the nitrate with the fluid, and settle towards the bottom of the vessel as a flocculent and copious precipitate.

The nitrate of silver, Hume finds, also acts very sensibly upon *arseniate* of potash, and decidedly distinguishes this salt from the above solution or *arsenite* of potash; the colour of the precipitate, occasioned by the *arseniate*, being much darker, and more inclined to brick-red. In both cases, he is of opinion that the test of nitrate of silver is greatly superior to that of sulphate of copper; inasmuch as it produces a much more copious precipitate, when equal quantities are submitted to experiment. The tests he recommends to be employed in their dry state, in preference to that of solution; and that the piece of salt be held on the surface only.

A modified application of this test has since been proposed by Dr. Marcet, whose directions are as follow:—Let the fluid suspected to contain arsenic be filtered; let the end of a glass rod, wetted with a solution of pure ammonia, be brought into contact with this fluid, and let the end of a clean rod, similarly wetted with solution of nitrate of silver, be immersed in the mixture. If the minutest quantity of arsenic be present, a precipitate of a bright yellow colour, inclining to orange, will appear at the point of contact, and will readily subside to the bottom of the vessel. As this precipitate is soluble in ammonia, the greatest care is necessary not to add an excess of that alkali. The acid of arsenic, with the same test, affords a brick-red precipitate.—Hume, it may be added, now prepares his test by dissolving a few grains, say ten, of lunar caustic in nine or ten times its weight of distilled water; precipitating by liquid ammonia; and adding cautiously, and by a few drops at once, liquid ammonia, till the precipitate is re-dissolved, and no longer. To obviate the possibility of any excess of ammonia, a small quantity of the precipitate may be left undissolved. To apply this test, nothing more is required than to dip a rod of glass into this liquor, and then touch with it the surface of a solution supposed to contain arsenic, which will be indicated by a yellow precipitate.

Sylvester has objected to this test, that it will not produce the expected appearance, when common salt is present. He has, therefore, proposed the red acetate of iron as a better test of arsenic, with which it forms a bright yellow deposit; or the acetate of copper, which affords a green precipitate. Of the two, he recommends the latter in preference, but advises that both should be resorted to in doubtful cases. Dr. Marcet, however, has replied, that the objection arising from the presence of common salt is easily obviated; for if a little diluted nitric acid be added to the suspected liquid, and then nitrate of silver very cautiously till the precipitate ceases, the muriatic acid will be removed, but the arsenic will remain in solution, and the addition of ammonia will produce the yellow precipitate in its characteristic form. It is scarcely necessary to add, that the quantity of ammonia must be sufficient to saturate any excess of nitric acid which the fluid may contain.

A more important objection to nitrate of silver as as a test of arsenic is, that it affords, with the alkaline phosphates, a precipitate of phosphate of silver, scarcely distinguishable by its colour from the arseniate of that metal. In answer to this, it is alleged by Hume, that the arsenite of silver may be discriminated by a curdy or flocculent figure, resembling that of fresh precipitated muriate of silver, except that its colour is yellow; while the phosphate is smooth and homogeneous. The better to discriminate these two arsenites, he advises two parallel experiments to be made, upon separate pieces of clean writing paper, spreading on the one a little of the fresh prepared arsenite, and on the other a little of the phosphate. When these are suffered to dry, the phosphate will gradually assume a black colour, or nearly so, while the arsenite will pass from its original vivid yellow to an Indian yellow, or nearly a fawn colour.

Dr. Paris conducts the trial in the following manner: — Drop the suspected fluid on a piece of white paper, making with it a broad line; along this line a stick of lunar caustic is to be slowly drawn several times successively, when a streak will appear of the colour resembling that known by the name of *Indian yellow*. This is equally produced by arsenic and by an alkaline phosphate, but the one from arsenic is rough, curdy, and flocculent, like that from a crayon; that from a phosphate is homogeneous and uniform, resembling a water colour laid smoothly on with a brush. But a more important and distinctive peculiarity soon succeeds: for in less than two minutes the phosphoric yellow fades into a *sad green*, and becomes gradually darker, and ultimately quite black; while, on the other hand, the arsenic yellow continues permanent, or nearly so, for some time, and then becomes brown. In performing this experiment, the sunshine should be avoided, or the change of colour will take place too rapidly. — *Ann. of Phil.* x. 60. The author of the *London Dispensatory* adds, that the test is improved by brushing the streak lightly over with liquid ammonia immediately after the application of the caustic, when, if arsenic be present, a bright queen's yellow is produced, which remains permanent for nearly an hour; but that when lunar caustic produces a *white* yellow before the ammonia is applied, we may infer the presence of some alkaline phosphate rather than of arsenic.

G. Smithson proposes to fuse any powder suspected to contain arsenic with nitre: this produces arseniate of potash, of which the solution affords a brick-red precipitate with nitrate of silver. In cases where any sensible portion of the alkali of the nitre has been set free, it must be saturated with acetous acid, and the saline mixture dried and re-dissolved in water. So small is the quantity of arsenic required for this mode of trial, that a drop of solution of oxide of arsenic in water, (which, at 54° of Fahrenheit, may be estimated to contain one eightieth its weight of the oxide,) mixed with a little nitrate of potash, and fused in a platinum spoon, affords a very sensible quantity of arseniate of silver. —*Ann. of Phil. N. S.* iv. 127.

H. Dr. Cooper, president of Columbia College, finds a solution of chromate of potash to be one of the best tests of arsenic. One drop is turned green by the fourth of a grain of arsenic, by two or three drops of Fowler's mineral solution, or any other arsenite of potash. The arsenious acid takes oxygene from the chromic, which is converted into oxide of chrome. To exhibit the effect, take five watch-glasses: put on one, two or three drops of a watery solution of white arsenic; on the second, as much arsenite of potash; on the third, one fourth of a grain of white arsenic in substance; on the fourth, two or three drops of a solution of corrosive sublimate; on the fifth, two or three drops of a solution of copper. Add to each three or four drops of a solution of chromate of potash. In half an hour, a bright clear grass-green colour will appear in numbers 1, 2, 3, unchangeable by ammonia; number 4 will instantly exhibit an orange precipitate; and number *5* a green, which a drop of ammonia will instantly change to blue. — *Silliman's American Journal*, iii.

I. But the most decisive mode of determining the presence of arsenic (which, though not absolutely indispensable, should always be resorted to, when the suspected substance can be obtained in sufficient quantity,) is by reducing it to a metallic state; for its characters are then clear and unequivocal. For this purpose, let a portion of the white sediment, collected from the contents of the stomach, be dried and mixed with three times its weight of black flux; or, if this cannot be procured, with two parts of very dry carbonate of potash (the salt of tartar of the shops), and one of powdered charcoal. Dr. Bostock finds that, for this mixture, we may advantageously substitute one composed of half a grain of charcoal, and two drops of oil, to a grain of the sediment. Procure a tube eight or nine inches long, and one fourth or one sixth of an inch in diameter, of thin glass, sealed hermetically at one end. Then put into the tube the mixture of the powder and its flux; and if any should adhere to the inner surface, let it be wiped off by a feather, so that the inside of all the upper part of the tube may be quite clean and dry. Stop the end of the tube loosely, with a little paper, and heat the sealed end only, on a chafing dish of red-hot coals, taking care to avoid breathing the fumes. The arsenic, if present, will rise to the upper part of the tube, on the inner surface of which it will form a thin brilliant coating. Break the tube, and scrape off the reduced metal. Lay a little on a heated iron, when, if it be arsenic, a dense smoke will arise, and a strong smell of garlic will be perceived. The arsenic may be farther identified, by putting a small quantity between two polished plates of copper, surrounding it by

powdered charcoal, to prevent its escape, binding these tightly together by iron wire, and exposing them to a low red heat. If the included substance be arsenic, a white stain will be left on the copper.

K. It may be proper to observe, that neither the stain on copper, nor the odour of garlic, is produced by the white oxide of arsenic, when heated without the addition of some inflammable ingredient. The absence of arsenic must not, therefore, be inferred, if no smell should be occasioned by laying the white powder on a heated iron.

Dr. Black ascertained, that all the necessary experiments, for the detection of arsenic, may be made on a single grain of the white oxide; this small quantity having produced, when heated in a tube with its proper flux, as much of the metal as clearly established its presence.

If the quantity of arsenic in the stomach should be so small, which is not very probable, as to occasion death, and yet to remain suspended in the washings, the whole contents, and the water employed to wash them, must be filtered, and the clear liquor assayed for arsenic by the tests B, C, D, and E.

In this case it is necessary to be careful that the colour of the precipitate is not modified by that of the liquid found in the stomach. If this be yellow, the precipitate by sulphate of copper and carbonate of potash will appear green, even though no arsenic be present; but on leaving it to settle, decanting off the fluid, and replacing it with water, it will evidently be blue, without any tinge of green, being no longer seen through a yellow medium.—*Dr. Paris.*

The liquid contents of the stomach may also be evaporated to dryness below 250° Fahr., and the dry mass be exposed to heat at the bottom of a Florence flask, to sublime the arsenic. If dissolved in an oily fluid, Dr. Ure proposes to boil the solution with distilled water, and afterwards to separate the oil by the capillary action of wick threads. The watery fluid may then be subjected to the usual tests.

In an investigation, the event of which is to affect the life of an accused person, it is the duty of every one who may prepare himself to give evidence, not to rest satisfied with the appearances produced by any one test of arsenic; but to render its presence quite unequivocal by the concurring results of several. See also *Arsenic.*

Discovery of corrosive sublimate, baryta, &c.—Corrosive sublimate (the bichloride or oxymuriate of mercury), next to arsenic, is the most virulent of the metallic poisons. It may be collected by treating the contents of the stomach in the manner already described; but as it is more soluble than arsenic, viz. in about nineteen times its weight of water, no more water must be employed than is barely sufficient, and the washings must be carefully preserved for examination.

If a powder should be collected by this operation, which proves, on examination, not to be arsenic, it may be known to be corrosive sublimate by the following characters:—

A. Expose a small quantity of it, without any admixture, to heat in a coated glass tube, as directed in the treatment of arsenic. Corrosive sublimate will be ascertained by its rising to the top of the tube, lining the inner surface in the form of a shining white crust.

B. Dissolve another portion in distilled water; and it may be proper to observe how much of the salt the water is capable of taking up.

C. To the watery solution add a little lime-water. A precipitate of an orange yellow colour will instantly appear.

D. To another portion of the solution add a single drop of a dilute solution of subcarbonate of potash (salt of tartar). A white precipitate will appear; but, on a still farther addition of alkali, an orange-coloured sediment will be formed.

E. The carbonate of soda has similar effects.

F. Sulphuretted water throws down a dark-coloured sediment, which, when dried and strongly heated, is wholly volatilised, without any odour of garlic.

For the detection of corrosive sublimate, Sylvester has recommended the application of galvanism, which exhibits the mercury in a metallic state. A piece of zinc wire, or, if that cannot be had, of iron wire about three inches long, is to be twice bent at right angles, so as to resemble the Greek letter Π. The two legs of this figure should be distant about the diameter of a common gold wedding ring from each other, and the two ends of the bent wire must afterwards be tied to a ring of this description. Let a plate of glass, not less than three inches square, be laid as nearly horizontal as possible, and on one side drop some sulphuric acid, diluted with about six times its weight of water, till it spreads to the size of a halfpenny. At a little distance from this, towards the other side, next drop some of the solution supposed to contain corrosive sublimate, till the edges of the two liquids join together; and let the wire and ring prepared as above be laid in such a way that the wire may touch the acid, while the gold ring is in contact with the suspected liquid. If the minutest quantity of corrosive sublimate be present, the ring in a few minutes will be covered with mercury on the part which touched the fluid.

Smithson remarks, that all the oxides and saline compounds of mercury, if laid in a drop of marine acid on gold, with a bit of tin, quickly amalgamate the gold. In this way, a very minute quantity of corrosive sublimate, or a drop of its solution, may be tried, and no addition of muriatic acid is then required. Quantities of mercury may thus be rendered evident, which could not be so by any other means. Even the mercury of cinnabar may be exhibited; but it must previously be boiled with a little sulphuric acid in a platinum spoon, to convert it into sulphate. An exceedingly minute quantity of

metallic mercury in any powder may be discovered by placing it in nitric acid on gold, drying, and adding muriatic acid and tin.

The only mineral poison of great virulence that has not been mentioned, and which, from its being little known to act as such, it is very improbable we should meet with, is the carbonate of baryta. This, in the country where it is found, is employed as a poison for rats, and there can be no doubt would be equally destructive to human life. It may be discovered by dissolving it in muriatic acid, and by the insolubility of the precipitate which this solution yields on adding sulphuric acid, or sulphate of soda. Soluble barytic salts, if these have been the means of poison, will be contained in the water employed to wash the contents of the stomach, and will be detected, on adding sulphuric acid, by a copious precipitate.

It may be proper to observe, that the failure of attempts to discover poisonous substances in the alimentary canal after death, is by no means a sufficient proof that death has not been occasioned by poison. For it has been clearly established, by experiments made on animals, that a poison may be so completely evacuated, that no traces of it shall be found, and yet that death may ensue from the morbid changes which it has occasioned in the alimentary canal, or in the general system.

Method of detecting copper or lead. — Copper and lead sometimes gain admission into articles of food, in consequence of the employment of kitchen utensils of these materials.

1. If copper be suspected in any liquor, its presence will be ascertained by adding a solution of pure ammonia, which will strike a beautiful blue colour. If the solution be very dilute, it may be concentrated by evaporation; and if the liquor contain a considerable excess of acid, like that used to preserve pickles, as much of the alkali must be added as is more than sufficient to saturate the acid. In this, and all other experiments of the same kind, the fluid should be viewed by reflected, and not by transmitted light.

If into a newly prepared tincture of guaiacum wood we drop a concentrated solution of a salt of copper, the mixture instantly assumes a blue colour. This effect does not take place when the solution is very weak, for example, when there is not above half a grain of the salt to an ounce of water; but then, by the addition of a few drops of prussic acid, the blue colour is instantly developed of great purity and intensity. This colour is not permanent, but soon passes to a green, and at length totally disappears. For want of prussic acid, distilled laurel water may be employed. The test produces its effect, even when the proportion of the salt of copper to the water does not exceed 1-45000th. In this minute proportion no other test, whether the prussiate of potash, soda, or ammonia, gives the least indication of copper.—*Quart. Journ.* x. 182.

2. Lead is occasionally found, in sufficient quantity to be injurious to health, in water that has passed through leaden pipes, or been kept in leaden vessels, and sometimes even in pump water, in consequence of that metal having been used in the construction of the pump. Acetate of lead has also been known to be fraudulently added to bad wines, with the view of concealing their defects.

Lead may be discovered by adding, to a portion of the suspected water, about half its bulk of water impregnated with sulphuretted hydrogene gas. If lead be present, it will be manifested by a dark brown or blackish tinge. This test is so delicate, that water condensed by the leaden worm of a still-tub, is sensibly affected by it. Lead is also detected by a similar effect ensuing on the addition of sulphuret of ammonia, or potash.

The adequacy of this method, however, to the discovery of very minute quantities of lead, has been set aside by the experiments of Dr. Lambe, the author of a skilful analysis of the springs of Leamington Priors, near Warwick. By new methods of examination, he has detected the presence of lead in several spring waters that manifest no change on the addition of the sulphuretted test; and has found that metal in the precipitate separated from such waters by the carbonate of potash, or of soda. In operating on these waters, Dr. Lambe noticed the following appearances: —

a. The test forms sometimes a dark cloud, with the precipitate affected by alkalies, which has been re-dissolved in nitric acid.

b. Though it forms, in other cases, no cloud, the precipitate itself becomes darkened by the sulphuretted test.

c. The test forms a white cloud, treated with the precipitate as in *a.* These two appearances may be united.

d. The test neither forms a cloud, nor darkens the precipitate.

e. In the cases *b*, *c*, *d*, heat the precipitate, in contact with an alkaline carbonate, to redness; dissolve out the carbonate by water, and treat the precipitate as in *a.* The sulphuretted test then forms a dark cloud with the solution of the precipitate. In these experiments, it is essential that the acid, used to re-dissolve the precipitate, shall not be in excess; and if it should so happen, that excess must be saturated before the test is applied. It is better to use so little acid, that some of the precipitate may remain undissolved.

f. Instead of the process *e*, the precipitate may be exposed, without addition, to a red heat, and then treated as in *a.* In this case, the test will detect the metallic matter; but with less certainty than the foregoing one.

The nitric acid used in these experiments should be perfectly pure; and the test should be recently prepared by saturating water with sulphuretted hydrogene gas. A few drops of nitric acid, added to a water containing lead, which has been reduced to 1-8th or 1-10th its bulk by evaporation, and then

followed by the addition of a few drops of hydriodate of potash, produces a yellow insoluble precipitate.

Another mode of analysis, employed by Dr. Lambe, consists in precipitating the lead by solution of common salt; but as muriate of lead is partly soluble in water, this test cannot be applied to small portions of suspected water. The precipitate must be, therefore, collected from two or three gallons, and heated to redness with twice its weight of carbonate of soda. Dissolve out the soda; add nitric acid, saturating any superfluity, and then apply the sulphuretted test. Sulphate of soda would be found more effectual in this process than the muriate, on account of the greater insolubility of sulphate of lead. This property, indeed, renders sulphate of soda an excellent test of the presence of lead, when held in solution by acids, for it throws down that metal, even when present in very small quantity, in the form of a heavy white precipitate, which is not soluble by acetic acid.

The third process, which is the most satisfactory of all, and is very easy, except for the trouble of collecting a large quantity of precipitate, is the actual reduction of the metal, and its exhibition in a separate form. The precipitate may be mixed with its own weight of alkaline carbonate, and exposed either with or without the addition of a small proportion of charcoal, to a heat sufficient to melt the alkali. On breaking the crucible, a small globule of lead will be found reduced at the bottom. The precipitate from about fifty gallons of water yielded Dr. Lambe, in one instance, about two grains of lead.

For discovering the presence of lead in wine, a test invented by Dr. Hahnemann, and known by the title of Hahnemann's wine test, may be employed. This test is prepared by putting together, into a small phial, sixteen grains of sulphuret of lime, prepared in the dry way (by exposing to a red heat, in a covered crucible, equal weights of powdered lime and sulphur, accurately mixed), and twenty grains of bitartrate of potash (cream of tartar). The phial is to be filled with water, well corked, and occasionally shaken for the space of ten minutes. When the powder has subsided, decant the clear liquor, and preserve it in a well-stopped bottle for use. The liquor, when fresh prepared, discovers lead by a dark-coloured precipitate. A farther proof of the presence of lead in wines is the occurrence of a precipitate on adding a solution of the sulphate of soda.

Sylvester has proposed the gallic acid as an excellent test of the presence of lead.

The quantity of lead which has been detected in sophisticated wine may be estimated at forty grains of the metal in every fifty gallons.

When a considerable quantity of acetate of lead has been taken into the stomach, (as sometimes, owing to its sweet taste, happens to children,) after the exhibition of an active emetic, the hydro-sulphuret of potash or of ammonia may be given; or probably a solution of sulphate of soda (Glauber's salt) would render it innoxious. — *Henry's Chem.*

Poison-oak. See *Rhus toxicodendron.*

POLEMO'NIUM. (*um, ii.* n.; an ancient name derived from πολεμος, war: because, according to Pliny, kings had contended for the honour of its discovery.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

2. Wild sage, or *Teucrium scorodonia* of Linnæus.

POLEMONIUM CÆRULEUM. The systematic name of the Greek valerian, or Jacob's ladder, the root of which is esteemed by some as a good astringent against diarrhœas and dysentery.

POLEY-MOUNTAIN. See *Teucrium.*

POLIOSIS. (*is, is.* f.; from πολος, *candidus*, white or hoary.) A disease of the hairs, in which they are prematurely grey or hoary.

PO'LIUM. (*um, ii.* n.; from πολιος, white: so called from its white capillaments.) Poley. *Teucrium* of Linnæus.

POLIUM CRETICUM. See *Teucrium.*

POLIUM MONTANUM. See *Teucrium.*

POLLACK. See *Gadus pollacius.*

POLLEN. (*en, inis.* n.; fine flour, or dust.) Farina of flowers. The powder which adheres to the anthers of the flowers of plants, and which is contained in the anther, and is thrown out chiefly in warm dry weather, when the coat of the latter contracts and bursts. The pollen, though to the naked eye a fine powder, and light enough to be wafted along by the air, is so curiously formed, and so various in different plants, as to be an interesting and popular object for the microscope. It is so minute, that the naked eye cannot see its beauty; but, by the assistance of a glass, it is found to be very different in different plants. Each grain of it is commonly a membraneous bag, round or angular, rough or smooth, which remains entire till it meets with any moisture, being contrary in this respect to the nature of the anther; then it bursts with great force, discharging its subtile and vivifying vapour. It is,

1. *Echinate* in the *Helianthus annuus.*
2. *Perforate* in *Geraniums.*
3. *Didymous* in *Symphatum.*
4. *Dentate* in *Mallow.*
5. *Angulate* in *Viola odorata.*
6. *Reniforme* in *Narcissus*; and,
7. *Convolute* in *Borago.*

POLLENIN. The pollen of tulips has been ascertained by Professor John to contain a peculiar substance, insoluble in alkohol, æther, water, oil of turpentine, naphtha, carbonated and pure alkalies; extremely combustible, burning with great rapidity and flame; and hence used at the theatres to imitate lightning.

POLLEX. (*ex, icis.* m.; so called, *quòd vi et potestate inter ceteros digitus plurimum polleat.*) The thumb, or great toe.

POLYADELPHIA. (*a, æ* f.; from πολυς, many, and αδελφια, a brotherhood.) The name of a class of plants in the sexual system of Linnæus, embracing plants with hermaphrodite flowers, in which several stamina are united by their filaments into three or more distinct bundles.

POLYA'NDRIA. (*a, æ.* f.; from πολυς, many, and ανηρ, a husband.) The name of a class of plants in the sexual system of Linnæus. It consists of plants with hermaphrodite flowers, furnished with several stamina, that are inserted into the common receptacle of the flower; by which circumstance this class is distinguished from *Icosandria,* in which the striking character is the situation of the stamina on the calyx or petals.

POLYCHRE'STUS. (From πολυς, much, and χρηςτος, useful.) Having many virtues, or uses: applied to medicines from their extensive usefulness.

POLYCHROITE. The colouring matter of saffron.

POLYDI'PSIA. (*a, æ,* f.; from πολυς, much, and διψη, thirst.) Excessive thirst. It is mostly symptomatic of fever, dropsy, excessive discharges, or poisons. See *Thirst.*

POLY'GALA. (*a, æ.* f.; from πολυς, much and γαλα, milk: so named from the abundance of its milky juice.) 1. The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Octandria.*

2. The pharmacopœial name of the common milk-wort. See *Polygala vulgaris.*

Polygala amara. This is a remarkably bitter plant, and though not used in this country, promises to be as efficacious as those in greater repute. It has been given freely in phthisis pulmonalis, and, like other remedies, failed in producing a cure; yet, as a palliative, it claims attention. Its virtues are balsamic, demulcent, and corroborant.

Polygala senega. The systematic name of the rattlesnake milk-wort. *Seneka. Polygala—floribus imperbibus spicatis, caule erecto herbaceo simplicissimo, foliis ovato-lanceolatis,* of Linnæus. The root of this plant was formerly much esteemed as a specific against the poison of the rattlesnake, and as an antiphlogistic in pleurisy, pneumonia, &c.; but it is now very much laid aside. Its dose is from ten to twenty grains; but when employed, it is generally used in the form of decoction, which, when prepared according to the formula of the Edinburgh Pharmacopœia, may be given every second or third hour.

Polygala vulgaris. The systematic name of the common milk-wort. The root of this plant is somewhat similar in taste to that of the seneka, but much weaker. The leaves are very bitter, and a handful of them, infused in wine, is said to be a safe and gentle purge.

POLYGA'MIA. (*a, æ.* f.; from πολυς, many, and γαμος, a marriage.) Polygamy. The name of a class of plants in the sexual system of Linnæus, consisting of polygamous plants, or plants having hermaphrodite flowers, and likewise male and female flowers, or both. The orders of this division are, according to the beautiful uniformity or plan which runs through this ingenious system, distinguished upon the principles of the Classes *Monœcia, Diœcia,* and *Triœcia.* It has the five following orders:—

1. *Polygamia æqualis.* The name of an order of Class *Syngenesia,* of the sexual system of plants. The florets are all perfect or united; that is, each furnished with perfect stamens.

2. *Polygamia frustranea.* Florets of the disk, with stamens and pistil: those of the radius with merely an abortive pistil, or with not even the rudiments of any.

3. *Polygamia necessaria.* Florets of the disk, with stamens only: those of the radius, with pistils only.

4. *Polygamia segregata.* Several flowers, either simple or compound, but with united anthers, and with a proper calyx, included in one common calyx.

5. *Polygamia superflua.* Florets of the disk, with stamens and pistil: those of the radius with pistil only; but each, of both kinds, forming perfect seed.

POLYGONA'TUM. (*um, i.* n.; from πολυς, many, and γονυ, a joint: so named from its numerous joints or knots.) Solomon's seal. See *Convallaria polygonatum.*

POLY'GONUM. (*um, i.* n.; from πολυς, many, and γονυ, a joint: so named from its numerous joints.) The name of a genus of plants in the Linnæan system. Class, *Octandria;* Order, *Trigynia.* Knot-grass.

Polygonum aviculare. The systematic name of the knot-grass. *Centumnodia. Polygonum latifolium. Polygonum mas. Sanguinaria.* This plant is never used in this country: it is said to be useful in stopping hæmorrhages, diarrhœas, &c.; but little credit is to be given to this account.

Polygonum bacciferum. A species of equisetum, or horse-tail.

Polygonum bistorta. The systematic name of the officinal bistort, called *bistorta* in the pharmacopœias. *Polygonum—caule simplicissimo monostachio, foliis ovatis in petiolum decurrentibus,* of Linnæus. This plant is a native of Britain. Every part manifests a degree of stypticity to the taste, and the root is esteemed to be one of the most powerful of the vegetable astringents, and frequently made use of as such in disorders proceeding from a laxity and debility of the solids, for restraining alvine fluxes, after due evacuations, and other preternatural discharges both serous and sanguineous. It has been sometimes given in intermittent fevers; and sometimes also, in small doses, as a corroborant and antiseptic, in acute malignant and colliquative fevers; in which intentions Peruvian bark has now deservedly superseded both these and all other astringents. The

common dose of bistort root, in substance, is fifteen or twenty grains: in urgent cases it is extended to a drachm. Its astringent matter is totally dissolved both by water and rectified spirits.

Polygonum divaricatum. The systematic name of the eastern buck-wheat plant. The roots, reduced to a coarse meal, are the ordinary food of the Siberians.

Polygonum fagopyrum. The systematic name of the buck-wheat, the grain of which constitutes the principal food of the inhabitants of Russia, Germany, and Switzerland.

Polygonum hydropiper. The systematic name of the poor man's pepper: called also, biting arsmart, lake-weed, and water-pepper; and *Hydropiper* in the pharmacopœias. This plant is very common by the sides of our ditches and on waste lands: the leaves have an acrid burning taste, and seem to be nearly of the same nature with those of the arum. They have been recommended as possessing antiseptic, aperient, diuretic virtues; and given in scurvies and cachexies, asthmas, hypochondriacal and nephritic complaints, and wandering gout. A decoction of the leaves is used in Persia as a gargle against ulcerated sore throat with fever (our malignant sore throat). The first leaves have been applied externally, as a stimulating cataplasm.

Polygonum latifolium. Common knotgrass. See *Polygonum aviculare.*

Polygonum mas. See *Polygonum aviculare.*

Polygonum minus. Rupture-wort. See *Herniaria glabra.*

Polygonum persicaria. The systematic name of the *Persicaria* of the old pharmacopœias. *Persicaria mitis. Plumbago.* This plant is said to possess vulnerary and antiseptic properties; with which intentions it is given in wine to restrain the progress of gangrene.

Polygonum selenoides. Parsley breakstone.

POLYPETALOUS. (*Polypetalus;* from πολυς, many, and πεταλον, a leaf.) Many-petaled, or having more than one.

POLYPHYLLOUS. (*Polyphyllus;* from πολυς, many, and φυλλον, a leaf.) Many-leaved.

POLYPO'DIUM. (*um, ii.* n.; from πολυς, many, and πους, a foot: so called because it has many roots.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Filices.* Fern, or polypody.

Polypodium aculeatum. Spear-pointed fern. Fallen into disuse.

Polypodium barometz. The Scythian lamb; called also, *Agnus Sythicus.*

Polypodium calaguala. The root of this plant, called in the shops *radix calahualæ*, has been exhibited internally, with success, in dropsy; and it is said to be efficacious in pleurisy, contusions, abscesses, &c. It was first used in America, where it is obtained; and Italian physicians have since written concerning it, in terms of approbation.

Polypodium filix mas. See *Aspidium.*

Polypodium quercinum. See *Polypodium vulgare.*

Polypodium vulgare. Polypody of the oak. *Polypodium quercinum.* The root has a sweetish taste: a decoction of it was formerly used as a purgative.

Polypody of the oak. See *Polypodium vulgare.*

PO'LYPUS. (*us, i.* m.; from πολυς, many, and πους, a foot: from its sending off many ramifications, like legs.) 1. The name of a genus of zoophytes.

2. A tumour, most commonly met with in the nose, uterus, or vagina; and has received its name from an erroneous idea, that it usually had several roots or feet, like zoophyte polypi.

Polypi vary from each other, according to the different causes that produce them, and the alterations that happen in them. Sometimes a polypus of the nose is owing to a swelling of the pituitary membrane, which swelling may possess a greater or less space of the membrane, as also its cellular substance, and may affect either one or both nostrils. At other times it arises from an ulcer produced by a caries of some of the bones which form the internal surface of the nostrils. Polypuses are sometimes so soft, that upon the least touch they are lacerated and bleed; at other times they are very compact, and even scirrhous. Some continue small a great while; others increase so fast as, in a short time, to push out at the nostrils, or extend backwards towards the throat. Le Dran mentions, that he has known them fill up the space behind the uvula, and, turning towards the mouth, have protruded the fleshy arch of the palate so far forwards as to make it parallel with the third *dentes molares.* There are others which, though at first free from any malignant disposition, become afterwards carcinomatous, and even highly cancerous. Of whatever nature the polypus is, it intercepts the passage of the air through the nostril, and, when large, forces the *septum narium* into the other nostril, so that the patient is unable to breathe, unless through the mouth. A large polypus, pressing in like manner upon the spongy bones, gradually forces them down upon the maxillary bones, and thus compresses and stops up the orifice of the *ductus lachrymalis;* nor is it impossible for the sides of the *canalis nasalis* to be pressed together. In which case the tears, having no passage through the nose, the eye is kept constantly watering, and the *sacchus lachrymalis,* not being able to discharge its contents, is sometimes so much dilated as to form what is called a flat *fistula.* The above writer has seen instances of polypuses so much enlarged as to force down the ossa palati.

The polypus of the uterus is of three kinds, in respect to situation. It either grows from the fundus, the inside of the cervix, or from the lower edge of the os uteri. The first case is the most frequent, the last the most uncommon. Polypi of the uterus are always shaped like a pear, and have a thin pedicle. They are almost invariably of that species

which is denominated fleshy, hardly ever being scirrhous, cancerous, or ulcerated.

3. The coagulated substance which is found in the cavities of the heart of those who are some time *in articulo mortis,* is improperly called a polypus.

POLYSA'RCIA. (*a, æ.* f.; from πολυς, much, and σαρξ, flesh.) Troublesome corpulency, obesity, or fatness. It is an increased bulk of the body, beyond what is sightly and healthy, from a superabundant accumulation of fat in the adipose membranes. In these cases the animal oil is secreted very rapidly, almost as much so as water in anasarca; on which account some writers have called obesity a dropsy of fat. Those who have been accustomed to hard exercise of body or mind, and suddenly relinquish it, and more especially if they indulge with sweet ale, are apt to become obese, especially if the mind be tranquil and the disposition cheerful; but where the disposition to form fat is great, it matters not what food is taken. In some cases of polysarcia the bulk of the body has been enormous. Bright, of Maldon, weighed seven hundred and twenty-eight pounds; Lambert, of Leicester, seven hundred and thirty-nine pounds, a little before his death, which was in the fortieth year of his age. In the Philosophical Transactions for 1813 there is an account of a girl who weighed two hundred and fifty-six pounds, though only four years old.

In attempting the cure, the first step is to avoid all the common and more obvious causes,—as indolence, indulgence at the table, and taking severe, regular, and habitual exercise. The plan cannot be better illustrated than in the case of Mr. Wood, the noted miller of Billericay, in Essex, related in the second volume of the Medical Transactions. Born of intemperate parents, he was accustomed to indulge himself in excessive eating, drinking, and indolence, till, in the forty-fourth year of his age, he became unwieldy from his bulk, was almost suffocated, laboured under very ill health from indigestion, and was subject to fits of gout and epilepsy. Fortunately, a friend pointed out to him the Life of Cornaro, and he instantly determined to take Cornaro for his model, and, if necessary, to surpass his abridgments. With great prudence, however, he made his change, from a highly superfluous to a very spare diet, gradually; first, diminishing his ale to a pint a day, and using a much smaller portion of animal food, till at length, finding the plan work wonders, as well in his renewed vigour of mind as of body, he limited himself to a diet of simple pudding, made of sea-biscuit, flour, and skimmed milk, of which he allowed himself a pound and a half, about four or five o'clock in the morning, for his breakfast, and the same quantity at noon for his dinner. Besides this he took nothing, either of solids or fluids; for he had at length brought himself to abstain even from water, and found himself easier without it. He went to bed about eight or nine o'clock, rarely slept for more than five or six hours, and hence rose usually at one or two in the morning, and employed himself in laborious exercise, of some kind or other, till the time of his breakfast. By this regimen he reduced himself to the condition of a middle-sized man, of firm flesh, well-coloured complexion, and sound health.

It sometimes happens that obesity takes place in the belly only, or principally, forming what is called the Falstaff, or pot-belly. This is from an accumulation of fat in the omentum, and requires, in addition to the above plan, the use of strong purgatives.

POLYSOMA'TIA. (From πολυς, much, and σωμα, a body.) Corpulency. See *Polysarcia.*

POLYSPA'STUM. (From πολυς, much, and σπαω, to draw.) A forcible instrument for reducing luxations.

POLYSPERMAL. (*Polysperma;* from πολυς, many, and σπερμα, a seed.) Having many seeds.

POLYSPERMOUS. (*Polyspermus;* from πολυς, many, and σπερμα, a seed.) Having many seeds.

POLYSTOMA. (*a, atis.* n.; from πολυς, many, and στομα, a mouth.) A genus of worms in Rudolphi's classification.

POLYSTOMA PINGUICULA. This species has been found by Treutler in a fatty tumour covering the ovary of a female who died in labour.

POLYTRI'CHUM. (*um, i.* n.; from πολυς, many, and θριξ, hair: so called from its resemblance to a woman's hair, or because, in ancient times, women used to dye the hair with it, to keep it from shedding.) *Polytrycon.* 1. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Musci.*

2. The pharmacopœial name of the golden maidenhair. See *Polytrichum commune.*

POLYTRICHUM COMMUNE. The systematic name of the golden maidenhair. *Adianthum aureum.* It possesses, in an inferior degree, astringent virtues; and was formerly given in diseases of the lungs and calculous complaints.

POMACEÆ. (From *pomum,* an apple.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of those which have a fruit of a pulpy, esculent, apple, berry, or cherry kind.

POMA'CEUM. (*um, i.* n.; from *pomum,* an apple.) Cider, or the fermented juice of apple.

POMEGRANATE. See *Punica.*

POMPHOLYGO'DES. (From πομφολυξ, a bubble, and ειδος, resemblance.) Urine, with bubbles on the surface.

PO'MPHOLYX. (*yx, ygis.* f.; from πομφος, a bladder.) I. A small vesicle or bubble.

II. A cutaneous disease described by Dr. Willan as an eruption of bullæ, appearing without any inflammation round them, and without fever, and therefore differing most

materially from the pemphigus described by nosologists. Dr. Willan applied to it the appellation of pompholyx, of which he has described three varieties: —

1. The *pompholyx benignus* exhibits a succession of transparent bullæ, about the size of a pea, or sometimes of a hazel-nut, which break in three or four days, discharge their lymph, and soon heal. They appear chiefly on the face, neck, and extremities; and occur in boys in hot weather, in infants during dentition, and in young persons of irritable habit from eating acrid vegetable substances, or from swallowing a few grains of mercury.

2. The *pompholyx diutinus* is a tedious and painful disorder, and is usually preceded for some weeks by languor and lassitude, headache, sickness, and pains in the limbs. Numerous red pimple-like elevations of the cuticle appear, with a sensation of tingling, which are presently raised into transparent vesications, that become as large as a pea within twenty-four hours, and, if not broken, afterwards attain the size of a walnut. If they are rubbed off prematurely, the excoriated surface is sore and inflamed, and does not readily heal. The bullæ continue to arise in succession on different parts of the body, and even re-appear on the parts first affected, in some cases for several weeks, so that the whole number of bullæ is very great; and when the excoriations are thus multiplied, a slight febrile paroxysm occurs every night, and the patient suffers much from the irritation, and from want of sleep.

This disease chiefly affects persons of debilitated habits, and is very severe in the aged. It seems to originate under different conditions of the body, but often after continued fatigue and anxiety, with low diet; sometimes from intemperance; and not unfrequently it is connected with anasarca, or general dropsy, with scurvy, purpura, and other states of the constitution, in which the powers of the cutaneous circulation are feeble. It has in some instances appeared after profuse sweating, during which cold liquors were copiously swallowed, in common with several other forms of chronic cutaneous disease. In the fevers in which it has been observed, it was obviously symptomatic; for it has not only occurred at various periods, and varied much in its duration, but has accompanied fevers of the continued, remittent, and intermittent type, as well as arthritic and other secondary fevers.

It is sufficiently clear, from the statements of the writers just referred to, that the pompholyx is never communicated by contagion; and that the fluid contained in the vesicles is not ichorous, but a bland lymph, resembling that which is poured into the ventricles of the brain in hydrocephalus. In several of the persons whose cases are recorded, the disease occurred more than once. The pompholyx is most troublesome and obstinate in old persons, in whom the transparent bullæ sometimes equal the size of a turkey's egg, while others of a smaller size are intermixed with them, which appear dark and livid. When broken, they leave a black excoriated surface, which sometimes ulcerates.

The warm-bath, used every second day, was considered by Dr. Willan as the most active palliative, and the best remedy. The decoction of cinchona, with cordials and diuretics, have been found of considerable advantage in these cases, especially when the eruption was combined with anasarca. In young persons, in whom the pompholyx is seldom severe, these remedies are affirmed by Dr. Willan to be successful within two or three weeks; but the warm bath seems to increase both the tingling in the skin and the number of the vesications in these patients.

3. The *pompholyx solitarius* is a rare form of the disease, which seems to affect only women. One large vesication appears usually in the night, after a sensation of tingling in the skin, and rapidly distends itself, so as to contain sometimes a teacupful of lymph: within forty-eight hours it breaks, discharging its fluid, and leaving a superficial ulceration. Near this another bulla arises in a day or two, and goes through the same course; and it is sometimes followed, in like manner, by two or three others in succession; so that the whole duration shall be eight or ten days. Cinchona internally, and linseed poultices, followed by light dressings to the sores externally, were employed with advantage in three cases seen by Dr. Willan.

III. The whitish oxide of zinc which adheres to the covers of the crucibles, in making brass, in the form of small bubbles.

POMPHOS. (*us, i.* m.; from πεμφω, to put forth.) *Pomphus.* A bladder of air or watery fluid.

POMUM. (*um, i.* n.) 1. An apple.

2. In botanical language it is a fleshy pericarpium or seed-vessel, containing a capsule within it, with several seeds. Its species are,—

1. *Oblong*; as in *Pyrus communis.*
2. *Baccate*; as in *Pyrus baccata.*
3. *Muricate*; as in *Momordica trifoliata.*
4. *Hispid*; as in *Momordica elaterium.*

The navel-like remains is part of the calyx.

The pomum is comprehended by Gærtner under the different kinds of bacca, it being sometimes scarcely possible to draw the line between them. See *Pyrus malus.*

Pomum adami. (Adam's apple: so called in consequence of a whimsical supposition that part of the forbidden apple which Adam ate stuck in the throat, and thus became the cause.) Adam's-apple. The protuberance in the anterior part of the neck, formed by the forepart of the thyroid gland.

Pomum amoris. See *Solanum.*

Ponderous spar. See *Barytes.*

PONS. (*s, tis.* m.) A bridge.

Pons varolii. (So termed because it was first described by Varolius.) Varolius's bridge: called also, *Corpus annulare, Processus annularis,* and *Eminentia annularis.*

An eminence of the medulla oblongata, first described by Varolius: so called from its arched appearance. It is formed by the two exterior crura of the cerebellum becoming flattened and passing over the crura of the cerebrum.

PONTICUM MEL. A poisonous honey.

Poor man's pepper. See *Polygonum hydropiper*, and *Lepidium*.

POPLAR. See *Populus*.

PO'PLES. (*es, itis.* m.) The ham or joint of the knee.

POPLITEAL. (*Popliteus*; from *poples*, the ham.) 1. Appertaining to the ham or back part of the knee-joint.

2. A small triangular muscle lying across the back part of the knee-joint is so called.

POPLITEAL ARTERY. *Arteria poplitea.* The continuation of the crural artery, through the hollow of the ham.

POPPY. See *Papaver*.

Poppy, red corn. See *Papaver rhœas*.

Poppy, white. See *Papaver somniferum*.

POPULA'GO. (*o, inis.* f.; from *populus*, the poplar: because its leaves resemble those of the poplar.) See *Caltha*.

PO'PULUS. (*us, i.* f.; from πολυς, many; because of the multitude of its shoots.) 1. The name of a genus of plants in the Linnæan system. Class, *Diœcia*; Order, *Octandria*.

2. The pharmacopœial name of the black poplar. See *Populus nigra*.

POPULUS BALSAMIFERA. See *Fagara*.

POPULUS NIGRA. The systematic name of the black poplar. *Ægeiros.* The young buds, *oculi*, or rudiments of the leaves, which appear in the beginning of the spring, were formerly employed in an officinal ointment. At present they are almost entirely disregarded, though they should seem, from their sensible qualities, to be applicable to purposes of some importance. They have a yellow, unctuous, odorous, balsamic juice.

PORCELLUS. (*us, i.* m.) A pig. See *Sus scrofa*.

PO'RCUS. A name for the pudendum muliebre.

PORI BILIARII. The biliary pores or ducts that receive the bile from the penicilli of the liver, and convey it to the hepatic duct. See *Liver*.

PORIFO'RMIS. Poriform: resembling a pore. Applied to a nectary, when of that appearance; as that of the hyacinth, which has three like pores in the germen.

PORK. See *Sus scrofa*.

POROCE'LE. (*e, es.* f.; from πωρος, a callus, and κηλη, a tumour.) A hard tumour of any part.

PORO'MPHALUM. (From πωρος, a callus, and ομφαλος, the navel.) A hard tumour of the navel.

PORPHYRA. See *Scorbutus*.

PORPHYRY. A compound rock, having a basis, in which the other contemporaneous constituent parts are imbedded. The base is sometimes clay-stone, sometimes hornstone, sometimes compact felspar; or pitchstone, pearlstone, and obsidian. The imbedded parts are most commonly felspar and quartz, which are usually crystallised more or less perfectly, and hence they appear sometimes granular. According to Werner, there are two distinct porphyry formations: the oldest occurs in gneiss, in beds of great magnitude; and also in mica slate and clay slate. Between Blair in Athole and Dalnacardoch, there is a very fine example of a bed of porphyry slate in mica. The second porphyry formation is much more widely extended. It consists principally of clay porphyry, while the former consists chiefly of hornstone porphyry and felspar porphyry.

It sometimes contains considerable repositories of ore, in veins. Gold, silver, lead, tin, copper, iron, and manganese occur in it; but chiefly in the newer porphyry, as happens with the Hungarian mines. It occurs in Arran, and in Perthshire between Dalnacardoch and Tummel Bridge.

PORRET. See *Allium porrum*.

PO'RRIGO. (*o, inis.* f.; *à porrigendo*: from its spreading abroad.) Ringworm of the scalp. Scald head. A genus of disease in Dr. Willan's arrangement, which is contagious, and principally characterised by an eruption of the pustules called *favi* and *achores*, unaccompanied by fever.

The several appearances which it assumes are reducible to the following species:—

1. *Porrigo larvalis.* This is the *crusta lactea* of writers, which is almost exclusively a disease of infancy. It commonly appears first on the forehead and cheeks, in an eruption of numerous minute and whitish achorous pustules, which are crowded together, upon a red surface. These soon break, and discharge a viscid fluid, which concretes into thin yellowish scabs. As the pustular patches spread, the discharge is renewed, and continues also from beneath the scabs, increasing their thickness and extent, until the forehead, cheeks, and even the whole face, become enveloped as by a mask, whence the epithet *larvalis*, the eyelids and nose alone remaining exempt from the incrustation. The eruption is liable, however, to considerable variation in its course; the discharge being sometimes profuse, and the surface red and excoriated; and at other times scarcely perceptible, so that the surface remains covered with a dry and brown scab. When the scab ultimately falls of, and ceases to be renewed, a red, elevated, and tender cuticle, marked with deep lines, and exfoliating several times, is left behind; differing from that which succeeds to impetigo, inasmuch as it does not crack into deep fissures.

Smaller patches of the disease not unfrequently appear about the neck and breast, and sometimes on the extremities; and the ears and scalp are usually affected in the course of its progress. In general the health of the child is not materially affected, especially when the eruption does not appear in the early period of lactation; but it is always accom-

panied with considerable itching and irritation, which, in young infants, often greatly diminish the natural sleep and disturb the digestion. Whence much debility sometimes ensues; the eyes and eyelids become inflamed, and purulent discharges take place from them and from the ears; the parotid and subsequently the mesenteric glands become inflamed; and marasmus, with diarrhœa and hectic, cut off the patient.

Most commonly, however, the disease terminates favourably, though its duration is often long and uncertain. It sometimes suddenly puts on the appearance of cessation, and afterwards returns with severity. Sometimes it disappears spontaneously soon after weaning, or after the cutting of the first teeth; and sometimes it will continue from two or three months to a year and a half, or even longer. It is remarkable, however, that whatever excoriation may be produced, no permanent deformity ensues.

In the commencement, while the discharge is copious and acrid, it is necessary to clear the surface two or three times a day by careful ablution with some tepid and mild fluid, as milk and water, thin gruel, or a decoction of bran; and to apply a mild ointment, such as the unguentum zinci, or a combination of this with a saturnine cerate. The latter will be useful to obviate excoriation, while the surface remains red and tender, after the discharge has ceased.

The removal of the disease is much accelerated by the use of alterative doses of mercurial purgatives, especially where the biliary secretion is defective, the abdomen tumid, or the mesenteric glands enlarged, which should be continued for three weeks or longer, according to circumstances. Small doses of the submuriate may be given twice a day, alone, or in combination with soda and a testaceous powder; or, if the bowels are very irritable, the hydrargyrus cum cretâ, or the cinereous oxide, may be substituted. But if the general health appear sound, the inflammatory condition of the skin, and the profuse exudation, may be alleviated by the internal use of soda, with precipitated sulphur, or with the testacea.

When the state of irritation is removed, and the crusts are dry and falling off, the unguentum hydrargyri nitrati, much diluted, may be applied with advantage. And now some gentle tonic should be administered; such as the decoction of cinchona, or the chalybeates, which are more readily taken by children, especially the saturated solution of the tartrite, or the vinum ferri.

2. *Porrigo furfurans.* In this form of the disease, which commences with an eruption of small *achores*, the discharge from the pustules is small in quantity, and the excoriation slight: the humour, therefore, soon concretes, and separates in innumerable thin laminated scabs, or scale-like exfoliations. At irregular periods, the pustules re-appear, and the discharge being renewed, the eruption becomes moist; but it soon dries again and exfoliates. It is attended with a good deal of itching, and some soreness of the scalp, to which the disease is confined; and the hair, which partially falls off, becomes thin, less strong in its texture, and sometimes lighter in its colour. Occasionally the glands of the neck are swelled and painful.

This species occurs principally in adults, especially in females, in whom it is not always easily distinguished from the scaly diseases, pityriasis, psoriasis, or lepra, affecting the hairy scalp. The circumstances just enumerated, however, will serve to establish the diagnosis: as, in those diseases, no pustules appear in the beginning, there is no moisture or ulceration, and the hair is not detached, nor changed in texture and colour; neither are they communicable by contact.

In the treatment, it is absolutely necessary to keep the scalp closely shaven. The branny scabs should then be removed by gentle washing, with some mild soap and water, twice a day; and an oil-silk cap should be worn, partly for the purpose of keeping the surface moist as well as warm, and partly for the convenience of retaining an ointment in contact with it.

The nature of the ointments employed in this, as in the other species, must be varied, according to the period of the disease, and the irritability of the part affected. In the commencement of the eruption, when the surface is moist, tender, and somewhat inflamed, the zinc ointment should be applied; or, what is still more beneficial, an ointment prepared with the cocculus indicus, in the proportion of two drachms of the powdered berry to an ounce of lard. But when the scalp becomes dry and inirritable, in the progress of the complaint, it may be washed with the common soft soap and water; or with a lather made by mixing equal portions of soft soap and unguentum sulphuris in warm water. More stimulant ointments will then be requisite, such as the unguentum hydrargyri nitrati, unguentum hydrargyri nitrico-oxidi, the tar and sulphur ointments, or the unguentum acidi nitrosi of the Edinburgh Pharmacopœia. These, and other stimulant applications, succeed in different individuals, in the inert state of the disease; but they must be intermitted, in case the inflammation and discharge return.

3. The *Porrigo lupinosa* is characterised by the formation of dry, circular scabs, of a yellowish-white colour, set deeply in the skin, with elevated edges and a central indentation or depression, sometimes containing a white scaly powder, and resembling, on the whole, the seeds of lupines. These scabs are formed upon small separate clusters of *achores*, by the concretion of the fluid, which exudes when they break; and they acquire, when seated on the scalp, the size of a sixpence. Frequently there is also a thin white incrustation, covering the intervening parts of the scalp, which commonly exfoliates; but, if allowed to accumulate through inattention to cleanliness, it forms an elevated crustaceous cap. The disease,

however, is not exclusively confined to the head; but sometimes appears on the extremities, where the little white and indented scabs do not exceed two lines in diameter. This variety of porrigo is liable to increase much, if neglected; and is usually tedious, and of long duration.

The first object in the management of this species, is to remove the crusts and little indented scabs, by a diligent application of soap and water, or other emollient applications. If the scalp be the seat of the disease, the previous removal of the hair will be necessary. If the scabs are not penetrable by these ablutions or by ointments, or if any thick intervening incrustation is present, a lotion of the liquor potassæ, or of the muriatic acid in a diluted state, may be employed. When the surface is cleared, the ointment of cocculus indicus may be applied to the red and shining cuticle; and afterwards the more stimulant unguents, as in the case of porrigo furfurans, with regular daily ablution, will complete the cure.

4. The *Porrigo scutulata*, popularly termed the *ringworm of the scalp*, appears in distinct and even distant patches, of an irregularly circular figure, upon the scalp, forehead, and neck. It commences with clusters of small light-yellow pustules, which soon break, and form thin scabs over each patch, which, if neglected, become thick and hard by accumulation. If the scabs are removed, however, the surface of the patches is left red and shining, but studded with slight elevated points, or papulæ, in some of which minute globules of pus again appear in a few days. By these repetitions of the eruption of *achores*, the incrustations become thicker, and the areas of the patches extend, often becoming confluent, if the progress of the disease be unimpeded, so as to affect the whole head. As the patches extend, the hair covering them becomes lighter in its colour, and sometimes breaks off short; and, as the process of pustulation and scabbing is repeated, the roots of the hair are destroyed, and at length there remains uninjured only a narrow border of hair round the head.

This very unmanageable form of porrigo generally occurs in children of three or four years old and upwards, and often continues for several years. Whether the circles remain red, smooth, and shining, or become dry and scurfy, the prospect of a cure is still distant; for the pustules will return, and the ulceration and scabbing will be repeated. It can only be considered as about to terminate, when the redness and exfoliations disappear together, and the hair begins to grow of its natural colour and texture.

The disease seems to originate spontaneously in children of feeble and flabby habit, or in a state approaching to marasmus, who are ill-fed, uncleanly, and not sufficiently exercised: but it is principally propagated by contagion; *i. e.* by the actual conveyance of the matter from the diseased to the healthy, by the frequent contact of the heads of children, but more generally by the use of the same towels, combs, caps, and hats. Whence the multiplication of boarding schools appears to have given rise to an increased prevalence of this disease, among the more cleanly classes of the community, at the present time: for such is the anxiety of parents to regain the lost years of education, that they too often send their children to these schools, when capable of communicating the infection, although supposed to be cured; against which no vigilance on the part of the superintendents can afford a sufficient security.

The principles of local treatment already laid down, are particularly applicable in this species of porrigo. While the patches are in an inflamed and irritable condition, it is necessary to limit the local applications to regular ablution, or sponging, with warm water, or some emollient fomentation. Even the operation of shaving, which is necessary to be repeated at intervals of eight or ten days, produces a temporary increase of irritation. At this time, the patient should wear a light linen cap, which should be frequently changed; and all stimulant lotions and ointments, which tend only to aggravate the disease, should be proscribed.

In the progress of the disorder, various changes take place, which require corresponding variations of the method of treatment. By degrees the inflammatory state is diminished, and a dry exfoliation and scabbing ensue: but again the pustular eruption breaks out, and the patches become again red and tender: or, in some cases, without much redness, there is an acrimonious exudation, with considerable irritability of the scalp. In other instances, the surface becomes inert, and in some degree torpid, while a dry scaly scab constantly appears, and active stimulants are requisite to effect any change in the disorder. It is very obvious, as Dr. Willan used to remark, that the adoption of any one mode of practice, or of any single pretended *specific*, under these varying circumstances of the disease, must be unavailing, and often extremely injurious.

In the more irritative states, the milder ointments, such as those prepared with cocculus indicus, with the submuriate of mercury, the oxide of zinc, the superacetate of lead, or with opium or tobacco, should be employed; or sedative lotions, such as decoctions or infusion of poppy heads, or of tobacco, may be substituted. Where there is an acrimonious discharge, the zinc and saturnine ointments, with the milder mercurial ones,—such as the unguentum hydrargyri præcipitati, or the ointment of calomel, or a lotion of lime-water with calomel,—are advantageous.

According to the different degrees of inertness which ensue, various well-known stimulants must be resorted to, and may be diluted, or strengthened, and combined, according to the circumstances. The mercurial ointments, as the unguentum hydrargyri præ-

cipitati, hydrargyri nitrico-oxidi, and especially of the hydrargyrus nitratus, are often effectual remedies: and those prepared with sulphur, tar, hellebore, and turpentine, the unguentum elemi, &c. separately or in combination, occasionally succeed; as well as preparations of mustard, stavesacre, black pepper, capsicum, rue, and other acrid vegetable substances. Lotions containing the sulphates of zinc and copper, or the oxymuriate of mercury, in solution, are likewise occasionally beneficial.

In the very dry and inert state of the patches, the more caustic substances are often extremely successful. A lotion, containing from three to six grains of the nitrate of silver in an ounce of distilled water, has effectually removed the disease in this condition. Touching the patches with the muriated tincture of iron, or with the sulphuric or muriatic acids, slightly diluted, in some cases removes the morbid cuticle, and the new one assumes a healthy action. The application of a blister, in like manner, sometimes effectually accomplishes the same end. But, in many instances, the effect of these renovations of the cuticle is merely temporary, and the disease returns in a week or two, upon the new surface.

Professor Hamilton, of Edinburgh, who considers the ringworm of the scalp, as "quite different from the scald head," affirms, in a late publication, that he has seldom failed to cure the former, by the use of the unguentum ad scabiem of Banyer. For delicate children, he dilutes this ointment with an equal portion of simple cerate, and sometimes alternates the use of it with that of common basilicon.

These various applications are enumerated, because not one of them is always successful, singly, even under circumstances apparently the same. They must be varied, and combined; and the best criterion in the choice and combination of them, is the degree of existing irritation in the morbid parts, or in the general habit. The rude and severe employment of depilatories, which some practitioners have recommended, is to be deprecated, as often inflicting great injury to the scalp, and retarding, rather than expediting, the progress to recovery.

Nothing has been said respecting the administration of internal medicine in the porrigo scutulata; because it is often merely local, being communicated by contagion to children in other respects healthy. But in those in whom it appears in combination with cachectic symptoms, chalybeate medicines, or the decoction of cinchona, and alteratives, must be prescribed, according to the particular indications; and the diet, clothing, and exercise of the patient must be carefully regulated.

5. *Porrigo decalvans.* This singular variety of the disease presents no appearance whatever, except patches of simple baldness, of a more or less circular form, on which not a single hair remains, while that which surrounds the patches is as thick as usual. The surface of the scalp, within these areæ, is smooth, shining, and remarkably white. It is probable, though not ascertained, that there may be an eruption of minute achores about the roots of the hair, in the first instance, which are not permanent, and do not discharge any fluid. The disease, however, has been seen to occur, in one or two instances, in a large assemblage of children, among whom the other forms of the porrigo prevailed. But in other cases, and also in adults, it has appeared where no communication could be traced or conjectured. The areæ gradually enlarge, and sometimes become confluent, producing extensive baldness, in which condition the scalp remains many weeks, especially if no curative measures are adopted. The hair, which begins to grow, is of a softer texture, and lighter colour than the rest; and, in persons beyond the middle age, it is grey.

If the scalp is cleared by constant shaving, and at the same time some stimulant liniment be steadily applied to it, this obstinate affection may be at length overcome, and the hair will regain its usual strength and colour. In fact, until this change takes place, the means of cure must not be intermitted. Some of the more active ointments, mentioned under the preceding head, may be employed, with friction; but liniments containing an essential oil dissolved in spirit, (for instance, two drachms of the oil of mace, in three or four ounces of alkohol,) or prepared with oil of tar, petroleum Barbadense, camphire, turpentine, &c. are more efficacious.

6. *Porrigo favosa.* This species of the disorder consists of an eruption of the large, soft, straw-coloured pustules, denominated *favi.* These are not in general globular, with a regularly circular margin; but somewhat flattened, with an irregular edge, and surrounded by a slight inflammation. They occur on all parts of the body; sometimes on the scalp alone, and sometimes on the face, or on the trunk and extremities only; but most commonly they spread from the scalp, especially from behind the ears, to the face, or from the lips and chin to the scalp, and occasionally from the extremities to the trunk and head. They are usually accompanied with considerable itching. Children from six months to four years of age are most liable to this eruption; but adults are not unfrequently affected with it.

The pustules, especially on the scalp, appear at first distinct, though near together; but on the face and extremities they generally rise in irregular clusters, becoming confluent when broken, and discharging a viscid matter, which gradually concretes into greenish, or yellowish, semi-transparent scabs. The disease extends, by the successive formation of new blotches, which sometimes cover the chin, or surround the mouth, and spread to the cheeks and nose; and, on the scalp, the ulceration ultimately extends, in a similar manner, over the whole head, with a constant dis-

charge, by which the hair and moist scabs are matted together. Under the last-mentioned circumstances, pediculi are often generated in great numbers, and greatly aggravate the itching and irritation of the disease. On the face, too, a similar aggravation of the symptoms is occasioned, in children, by an incessant picking and scratching about the edges of the scabs, which the itching demands, and by which the skin is kept sore, and the ulceration extended; while the scabs are thickened into irregular masses, not unlike honeycomb, by the multiplied and concreting discharge. On the lower extremities considerable ulcerations sometimes form, especially about the heels and roots of the toes; and the ends of the toes are sometimes ulcerated, the pustules arising at their sides, and even under the nails.

The ulcerating blotches seldom continue long, or extend far, before the lymphatic system exhibits marks of irritation, probably from the acrimony of the absorbed matter. When the scalp or face is the seat of the disease, the glands on the sides of the neck enlarge and harden, being at first perceived like a chain of little tumours, lying loose under the skin; and the sub-maxillary and parotid glands are often affected in a similar manner. At length some of them inflame, the skin becomes discoloured, and they suppurate slowly, and with much pain and irritation. The eruption, in these situations, is likewise often accompanied by a discharge from behind the ears, or from the ears themselves, with a tumid upper lip, and inflammation of the eyes, or obstinate ulcerations of the edges of the eyelids. When the eruption appears on the trunk, although the pustules there are smaller and less confluent, and the scabs thinner and less permanent, the axillary glands are liable to be affected in the same way.

The discharge from the ulcerated surfaces, especially on the scalp, when the crusts and coverings are removed, exhales an offensive rancid vapour, not only affecting the organs of smell and taste, but the eyes, of those who examine the diseased parts. The acrimony of the discharge is also manifested by the appearance of inflammation, followed by pustules, ulceration, and scabbing, on any portion of the sound skin which comes into frequent contact with the disease: thus, in young children, the breast is inoculated by the chin, and the hands and arms by contact with the face. The arm and breast of the nurse are also liable to receive the eruption in the same manner; but it is not so readily communicated to adults as to children.

The duration of this form of porrigo is very uncertain; but it is, on the whole, much more manageable than the porrigo scutulata and decalvans. Young infants often suffer severely from the pain and irritation of the eruption, and of the glandular affections which it induces; and those who are bred in large towns, and are ill fed and nursed, are thus sometimes reduced to a state of fatal marasmus.

The porrigo favosa requires the exhibition of the same alteratives internally, which have been recommended for the cure of the porrigo larvalis, in doses proportioned to the age and strength of the patients. The diet and exercise should also be regulated with care: all crude vegetables and fruits on the one hand, and stimulating substances, whether solid or fluid, on the other, should be avoided; and milk, puddings, and a little plain animal food or broths, should be alone recommended. If the patient be of a squalid habit, or the glandular affections severe, the bark and chalybeates, or the solution of muriate of barytes united with the former, will contribute materially to the restoration of health.

There is commonly some degree of inflammation present, which contraindicates the use of active stimulants externally. The unguentum zinci, or the unguentum hydrargyri præcipitati, mixed with the former, or with a saturnine ointment, will be preferred as external applications, especially where the discharge is copious: and the ointment of the nitrate of mercury, diluted with about equal parts of simple cerate and of the ceratum plumbi superacetati, is generally beneficial; but the proportion of the unguentum ceræ must be varied according to the degree of inflammation. All stiff and rigid coverings, whether of oiled silk, or, according to a popular practice, of the leaves of cabbage, beet, &c. should be prohibited; for they often excite a most severe irritation.

PO'RRUM. (*um, i*, n., and *us, i*. m.) See *Allium porrum*.

PO'RTA. (*a, æ*, f.; a door or gate; *à portando*, because through it the blood is carried to the liver.) That part of the liver where its vessels enter.

Portæ vena. See *Vena portæ*.

Portaiguille. The acutenaculum.

PORTIO. (*o, onis*. f.) A portion or branch: applied to a nerve.

Portio dura. (One branch of the seventh pair of nerves is called *portio dura*, the hard portion, either from its being more firm than the other, or because it runs into the hard part of the skull; and the other the *portio mollis*, or soft portion.) Facial nerve. This nerve arises near the pons, from the crus of the brain, enters the petrous portion of the temporal bone, gives off a branch into the tympanum, which is called the chorda tympani, and then proceeds to form the *pes anserinus* on the face, from whence the integuments of the face are supplied with nerves. See *Facial nerve*.

Portio mollis. Auditory nerve. Acoustic nerve. This nerve arises from the medulla oblongata and fourth ventricle of the brain, enters the petrous portion of the temporal bone, and is distributed on the internal ear, by innumerable branches, not only to the cochlea, but also to the membrane lining the vestibulum and semicircular canals, and is the immediate organ of hearing.

Portland powder. A celebrated gout re-

medy. It consists of various bitters; principally of horehound, birthwort, the tops and leaves of germander, ground-pine, and centaury, dried, powdered, and sifted. It is now fallen into disuse.

PORTORA'RIUM. (From *porta*, a door; because it is, as it were, the door or entrance of the intestines.) The pylorus, or right orifice of the stomach.

PORTULA'CA. (*a, æ.* f.; from *porto*, to carry, and *lac*, milk: because it increases the animal milk.) 1. The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Digynia.*

2. The pharmacopœial name of the purslane. See *Portulaca oleracea.*

PORTULACA OLERACEA. The systematic name of the eatable purslane. *Andrachne. Allium gallicum.* The plant which is so called in dietetical and medical writings, abounds with a watery and somewhat acid juice, and is often put into soups, or pickled with spices. It is said to be antiseptic and aperient.

PO'RUS. (*us, i.* m.) A pore, or duct. A term used in *Anatomy* and *Botany;* as the pores of the skin; and particularly applied, in botany, to the small puncture-like openings in the inferior surface of the genus *Boletus.*

PO'SCA. Vinegar and water mixed.

POSE. An old English term for the cold in the head, or common catarrh. To pose is still used in the sense of to stupify, and the real meaning of *posie* is a "narcotic charm;" and hence a nosegay of tranquillising odour, inducing repose or sleep.

POSSE'TUM. (*um, i.* n.) Posset. Milk curdled with wine, treacle, or any acid.

POSTE'RIOR. Parts are so named from their relative situation.

POSTERIOR ANNULARIS. *Musculus posterior annularis.* An external interosseal muscle of the hand, that extends and draws the ring-finger inwards.

POSTERIOR AURIS. See *Retrahens auris.*

POSTERIOR INDICIS. *Musculus posterior indicis.* An internal interosseal muscle of the hand, that extends the fore-finger obliquely, and draws it outwards.

POSTERIOR MEDII. An external interosseal muscle of the hand, that extends the middle finger, and draws it outwards.

POSTICUS. Behind: backward.

POTAMOGEI'TON. (*um, i.* n.; from ποταμος, a river, and γειτων, adjacent: so named because it grows about rivers.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Tetragynia.*

POTASH. (*Potassa, æ.* f.; so called from the pots, or vessels, in which it was first made.) Vegetable alkali: so called because it is obtained in an impure state by the incineration of vegetables. *Kali.* An hydrated protoxide of potassium. See *Potassium.*

Table of the saline product of one thousand lbs. of ashes of the following vegetables:—

	Saline products.
Stalks of Turkey wheat or maise,	198 lbs.
Stalks of sun-flower	349 lbs.
Vine branches	162·6
Elm	166
Box	78
Sallow	102
Oak	111
Aspen	61
Beech	219
Fir	132
Fern cut in August	116 {or 125 according to Wildenheim.
Wormwood	748
Fumitory	360
Heath	115 Wildenheim.

On these tables Kirwan makes the following remarks:—

1. That in general weeds yield more ashes, and their ashes much more salt, than woods; and that, consequently, as to salts of the vegetable alkali kind, as potash, pearlash, cashup, &c. neither America, Trieste, nor the northern countries have any advantage over Ireland.

2. That of all weeds fumitory produces more salt, and next to it wormwood. But if we attend only to the quantity of salt in a given weight of ashes, the ashes of wormwood contain most. The *Trifolium fibrinum* also produces more ashes and salt than fern.

The process for obtaining pot and pearlash is given by Kirwan, as follows:—

1. The weeds should be cut just before they seed, then spread, well dried, and gathered clean.

2. They should be burned within doors, on a grate, and the ashes laid in a chest as fast as they a e produced. If any charcoal be visible, it should be picked out, and thrown back into the fire. If the weeds be moist, much coal will be found. A close smothered fire, which has been recommended by some, is very prejudicial.

3. They should be lixiviated with twelve times their weight of boiling water. A drop of the solution of corrosive sublimate will immediately discover when the water ceases to take up any more alkali. The earthy matter that remains is said to be a good manure for clayey soils.

4. The ley thus formed should be evaporated to dryness in iron pans. Two or three at least of these should be used, and the ley, as fast as it is concreted, passed from the one to the other. Thus, much time is saved, as weak leys evaporate more quickly than the stronger. The salt thus produced is of a dark colour, and contains much extractive matter, and, being formed in iron pots, is called potash.

5. This salt should then be carried to a reverberatory furnace, in which the extractive matter is burnt off, and much of the water dissipated: hence it generally loses from ten to fifteen per cent. of its weight. Particular care should be taken to prevent its melting, as the extractive matter would not then be perfectly consumed, and the alkali would form such a union with the earthy parts as could not easily be dissolved. Kirwan adds this

caution, because Dr. Lewis and Dossie have inadvertently directed the contrary. This salt, thus refined, is called pearlash, and must be the same as the Dantzic pearlash.

To obtain this alkali pure, Berthollet recommends, to evaporate a solution of potash, made caustic by boiling with quicklime, till it becomes of a thickish consistence; to add about an equal weight of alkohol, and let the mixture stand some time in a close vessel. Some solid matter, partly crystallised, will collect at the bottom; above this will be a small quantity of a dark-coloured fluid; and on the top another lighter. The latter, separated by decantation, is to be evaporated quickly in a silver basin in a sand-heat. Glass, or almost any other metal, would be corroded by the potash. Before the evaporation has been carried far, the solution is to be removed from the fire, and suffered to stand at rest; when it will again separate into two fluids. The lighter, being poured off, is again to be evaporated with a quick heat; and, on standing a day or two in a close vessel, it will deposit transparent crystals of pure potash. If the liquor be evaporated to a pellicle, the potash will concrete without regular crystallisation. In both cases a high-coloured liquor is separated, which is to be poured off; and the potash must be kept carefully secluded from air.

A perfectly pure solution of potash will remain transparent on the addition of lime-water; show no effervescence with dilute sulphuric acid; and not give any precipitate on blowing air through it by means of a tube.

Pure potash for experimental purposes may most easily be obtained by igniting cream of tartar in a crucible, dissolving the residue in water, filtering, boiling with a quantity of quicklime, and, after subsidence, decanting the clear liquid, and evaporating in a loosely covered silver capsule, till it flows like oil, and then pouring it out on a clean iron plate. A solid white cake of pure hydrate of potash is thus obtained, without the agency of alkohol. It must be immediately broken into fragments, and kept in a well-stoppered phial.

As 100 parts of subcarbonate of potash are equivalent to about 70 of pure concentrated oil of vitriol, if into a measure tube, graduated into 100 equal parts, we introduce the 70 grains of acid, and fill up the remaining space with water, then we have an alkalimeter for estimating the value of commercial pearl-ashes, which, if pure, will require for 100 grains one hundred divisions of the liquid to neutralise them. If they contain only 60 per cent. of genuine subcarbonate, then 100 grains will require only 60 divisions, and so on. When the alkalimeter indications are required in pure or absolute potash, such as constitutes the basis of nitre, then we must use 102 grains of pure oil of vitriol, along with the requisite bulk of water, to fill up the volume of the graduated tube.

The hydrate of potassium, as obtained by the preceding process, is solid, white, and extremely caustic; in minute quantities, changing the purple of violets and cabbage to a green, reddening litmus to purple, and yellow turmeric to a reddish brown. It rapidly attracts humidity from the air, passing into the oil of tartar, *per deliquium* of the chemists; a name, however, also given to the deliquesced subcarbonate. Charcoal applied to the hydrate of potash at a cherry-red heat, gives birth to carburetted hydrogene, and an alkaline subcarbonate; but at a heat bordering on whiteness, carburetted hydrogene, carbonous oxide, and potassium are formed. Several metals decompose the hydrate of potash, by the aid of heat; particularly potassium, sodium, and iron. The fused hydrate of potash consists of 6 deutoxide of potassium + 1·125 water = 7·125, which number represents the compound prime equivalent. It is used in surgery, as the potential cautery for forming eschars; and it was formerly employed in medicine, diluted with broths, as a lithontriptic. In chemistry, it is very extensively employed, both in manufactures and as a re-agent in analysis. It is the basis of all the common soft soaps. The oxides of the following metals are soluble in aqueous potash:—Lead, tin, nickel, arsenic, cobalt, manganese, zinc, antimony, tellurium, tungsten, molybdenum.

The preparations of this alkali that are used in medicine are,—

1. Potassa fusa.
2. Liquor potassæ.
3. Potassa cum calce.
4. Subcarbonas potassæ.
5. Carbonas potassæ.
6. Bicarbonas potassæ.
7. Murias potassæ.
8. Chloras potassæ.
9. Hydriodas potassæ.
10. Sulphas potassæ.
11. Super-sulphas potassæ.
12. Tartras potassæ.
13. Acetas potassæ.
14. Citras potassæ.
15. Oxychloras potassæ.
16. Arsenias potassæ.
17. Sulphuretum potassæ.

Potash, acetate of. See *Potassæ acetas.*

Potash, carbonate of. See *Potassæ carbonas.*

Potash, fused. See *Potassa fusa.*

Potash, hyperoxymuriate of. See *Potassæ chloras.*

Potash, solution of. See *Potassæ liquor.*

Potash, subcarbonate of. See *Potassæ subcarbonas.*

Potash, subcarbonate of, solution of. See *Potassæ subcarbonatis liquor.*

Potash, sulphate of. See *Potassæ sulphas.*

Potash, sulphuret of. See *Potassæ sulphuretum.*

Potash, super-sulphate of. See *Potassæ super-sulphas.*

Potash, supertartrate of. See *Tartarum.*

Potash, tartrate of. See *Potassæ tartras.*

Potash, with lime. See *Potassa cum calce.*

Potassa cum calce. Potash with lime. Formerly called, *Calx cum kali puro*, *Causticum commune fortius*, and *Lapis infernalis sive septicus*. Take of solution of potash three pints; fresh lime, a pound: boil the solution of potash down to a pint, then add the lime, previously slaked by the addition of water, and mix them together intimately. This is in common use with surgeons, as a caustic, to produce ulcerations, and to open abscesses.

Potassa fusa. Fused potash. *Kali purum. Alkali vegetabile fixum causticum.* Take of solution of potash a gallon; evaporate the water, in a clean iron pot, over the fire, until, when the ebullition has ceased, the potash remains in a state of fusion; pour it upon a clean iron plate, into pieces of convenient form. This preparation of potash is violently caustic, destroying the living animal fibre with great energy.

Potassa impura. See *Potash*.

Potassæ acetas. Acetate of potash. Acetated vegetable alkali; formerly called, *Kali acetatum*, *Sal diureticum*, *Terra foliata tartari*, *Sal sennerti*, *Arcanum tartari*, *Tartarus regeneratus*, and *Sal essentiale vini*. Take of subcarbonate of potash, a pound; strong acetic acid, two pints; distilled water, two pints. Having first mixed the acid and water, add it to the subcarbonate of potash, till it ceases to excite effervescence, and filter: evaporate the liquor in a water-bath until ebullition ceases. Then expose it to a heat gradually increased, and again evaporate until a pellicle appears on the surface: remove this pellicle, and dry it on bibulous paper. Continue the evaporation of the liquor, and remove and dry the pellicles in the same manner.

There is some difficulty in obtaining this salt white. In the above process the alkaline carbonate is decomposed by the acetic acid, and the solution of the acetate, thus obtained, carefully evaporated till pellicles begin to form upon it; these swell up, and, when carefully dried, form a white light spongy mass. Acetate of potash is considered a good diuretic, and it is perhaps as good and as uncertain as most medicines of this class. The dose is from ten grains to two scruples every eight hours.

Potassæ arsenias. See *Liquor arsenicalis*.

Potassæ bicarbonas. Bicarbonate of potash. This salt is now in general use for all purposes in which it is desirable to disengage the greatest quantity of carbonic acid, and it is made in considerable quantity for the market.

The *bicarbonate of potash* crystallises in square prisms, the apices of which are quadrangular pyramids. It has a urinous but not caustic taste; changes the syrup of violets green: boiling water dissolves five sixths of its weight, and cold water one fourth; alkohol, even when hot, will not dissolve more than 1-1200th. Its specific gravity is 2·012. When it is very pure and well crystallised it effloresces on exposure to a dry atmosphere, though it was formerly considered as deliquescent. It was thought that the common salt of tartar of the shops was a compound of this carbonate and pure potash; the latter of which, being very deliquescent, attracts the moisture of air till the whole is dissolved. From its smooth feel, and the manner in which it was prepared, the old chemists called this solution *oil of tartar per deliquium*.

The bicarbonate of potash melts with a gentle heat, loses its water of crystallisation, amounting to $\frac{8}{100}$, and gives out a portion of its carbonic acid; though no degree of heat will expel the whole of the acid. Thus, as the carbonate of potash is always prepared by incineration of vegetable substances, and lixiviation, it must be in the intermediate state, or that of a carbonate with excess of alkali: and to obtain the true carbonate we must saturate this salt with carbonic acid, which is best done by passing the acid in the state of gas through a solution of the salt in twice its weight of water; or, if we want the potash pure, we must have recourse to lime, to separate that portion of acid which fire will not expel.

The bicarbonate, usually called *super-carbonate* by the apothecaries, consists of 2 primes of carbonic acid = 5·500, 1 of potash = 6, and 1 of water = 1·125, in all 12·625.

Potassæ carbonas. Carbonate of potash. This preparation, which has been long known by the name of *Kali aëratum*, appeared in the last London Pharmacopœia for the first time. It is made thus:—Take of subcarbonate of potash, made from tartar, a pound; subcarbonate of ammonia, three ounces; distilled water, a pint: having previously dissolved the subcarbonate of potash in the water, add the subcarbonate of ammonia; then, by means of a sand-bath, apply a heat of 180° for three hours, or until the ammonia shall be driven off; lastly, set the solution by, to crystallise. The remaining solution may be evaporated in the same manner, that crystals may again form when it is set by.

This process was invented by Berthollet. The potash takes the carbonic acid from the ammonia, which is volatile, and passes off in the temperature employed. It is, however, very difficult to detach the ammonia entirely. Potash is thus saturated with carbonic acid, of which it contains double the quantity that the pure subcarbonate of potash does; it gives out this proportion on the addition of muriatic acid, and may be converted into the subsalt, by heating it a short time to redness. It is less nauseous to the taste than the subcarbonate; it crystallises, and does not deliquesce. Water, at the common temperature, dissolves one fourth its weight, and at 212°, five sixths; but this latter heat detaches some of the carbonic acid.

The carbonate of potash is now generally used for the purpose of imparting carbonic acid to the stomach, by giving a scruple in solution with a table-spoonful of lemon-juice, in the act of effervescing.

POTASSÆ CHLORAS. Formerly called oxymuriate of potash. This is an excellent alterative and antiscrofulous medicine, and may be given with bark and bitters, in the dose of from ten grains to a scruple three times a day.

POTASSÆ HYDRIODAS. A compound of potash and hydriodic acid, lately used as an external application to scrofulous tumours.

POTASSÆ LIQUOR. Solution of potash. *Aqua kali puri. Lixivium saponarium.* Take of subcarbonate of potash, a pound; lime, newly prepared, half a pound; boiling distilled water, a gallon: dissolve the potash in two pints of the water; add the remaining water to the lime. Mix the liquors while they are hot, stir them together, then set the mixture by in a covered vessel; and after it has cooled, strain the solution through a cotton bag. If any dilute acid dropped into the solution occasion the extrication of bubbles of gas, it will be necessary to add more lime, and to strain it again. A pint of this solution ought to weigh sixteen ounces.

POTASSÆ MURIAS. See *Murias potassæ.*

POTASSÆ NITRAS. See *Nitre.*

POTASSÆ OXYMURIAS. See *Potassæ chloras.*

POTASSÆ SUBCARBONAS. Subcarbonate of potash; formerly called, *Kali præparatum, Sal absinthii, Sal tartari, Sal plantarum,* fixed nitre, and salt of tartar. Take of impure potash, powdered, three pounds; boiling water, three pints and a half: dissolve the potash in water, and filter; then pour the solution into a clean iron pot, and evaporate the water over a moderate fire, until the liquor thickens; then let the fire be withdrawn, and stir the liquor constantly with an iron rod, until the salt concretes into granular crystals.

A purer subcarbonate of potash may be prepared in the same manner from tartar, which must be first burnt until it becomes ash-coloured.

As water at the usual temperature of the air dissolves rather more than its weight of this salt, we have thus a ready mode of detecting its adulterations in general; and as it is often of consequence to know how much alkali a particular specimen contains, this may be ascertained by the quantity of sulphuric acid it will saturate. This salt is deliquescent. It consists of 6 potash + 2·75 carbonic acid = 8·75.

This preparation of potash is in general use to form the citrate of potash for the saline draughts. A scruple is generally directed to be saturated with lemon juice. In this process, the salt, which is composed of potash and carbonic acid, is decomposed. The citric acid having a greater affinity for the potash than the carbonic, seizes it and forms the citrate of potash, whilst the carbonic acid flies off in the form of air. The subcarbonate of potash possesses antacid virtues, and may be exhibited with advantage in convulsions and other spasms of the intestines arising from acidity, in calculous and gouty complaints, leucorrhœa, scrofula, and aphthous affections. The dose is from ten grains to half a drachm.

POTASSÆ SUBCARBONATIS LIQUOR. Solution of subcarbonate of potash; formerly called, *Aqua kali præparati, Lixivium tartari,* and *Oleum tartari per deliquium.* Take of subcarbonate of potash, a pound; distilled water, twelve fluid ounces: dissolve the subcarbonate of potash in the water, and then strain the solution through paper.

POTASSÆ SULPHAS. Formerly called, *Kali vitriolatum, Alkali vegetabile vitriolatum, Sal de duobus, Arcanum duplicatum, Sal polychrestus, Nitrum vitriolatum,* and *Tartarum vitriolatum.* Take of the salt which remains, after the distillation of nitric acid, two pounds; boiling water, two gallons: mix them that the salt may be dissolved; next add as much subcarbonate of potash as may be requisite for the saturation of the acid; then boil the solution, until a pellicle appears upon the surface, and, after straining, set it by, that crystals may form. Having poured away the water, dry the crystals on bibulous paper. The crystals are in hexahedral prisms, terminated by hexagonal pyramids, but susceptible of variations. Its crystallisation by quick cooling is confused. The taste of this salt is bitter, acrid, and a little saline. It is soluble in 5 parts of boiling water, and 16 parts at 60°. In the fire it decrepitates, and is fusible by a strong heat. It is decomposable by charcoal at a high temperature. It may be prepared by direct mixture of its component parts; but the usual and cheapest mode is to neutralise the acidulous sulphate left after distilling nitric acid, the *sal enixen* of the old chemists, by the addition of carbonate of potash. The *sal polychrest* of old dispensatories, made by deflagrating sulphur and nitre in a crucible, is a compound of the sulphate and sulphite of potash.

The virtues of this salt are cathartic, diuretic, and deobstruent; with which intentions it is administered in a great variety of diseases, as constipation, suppression of the lochia, fevers, icterus, dropsies, milk tumours, &c. The dose is from one scruple to half an ounce.

POTASSÆ SULPHURETUM. Sulphuret of potash; formerly called, *Kali sulphuratum,* and *Hepar sulphuris.* Liver of sulphur. Take of washed sulphur, an ounce; subcarbonate of potash, two ounces: rub them together, and put them in a covered crucible, which is to be kept on the fire till they unite. In this process the carbonic acid is drawn off, and a compound formed of potash and sulphur. This preparation has been employed in several cutaneous diseases with advantage, both internally and in the form of bath or ointment. It has also been recommended in diabetes. The dose is from five to twenty grains.

POTASSÆ SUPERARSENIAS. See *Superarsenias potassæ.*

POTASSÆ SUPERSULPHAS. Supersulphate of potash. Take of the salt which remains after

the distillation of nitric acid, two pounds; boiling water, four pints: mix them together, so that the salt may be dissolved, and strain the solution; then boil it to one half, and set it by, that crystals may form. Having poured away the water, dry these crystals upon bibulous paper.

POTASSÆ SUPERTARTRAS. Supertartrate of potash. This is made by purifying the tartar of commerce. See *Tartar*. It consists of tartaric acid and potash, with more of the acid than that which is combined with the alkali, and forms the tartrate. This loose acid renders it very agreeably acidulous to the palate. Dissolved in water, with the addition of a little sugar, and a slice or two of lemon-peel, it forms an agreeable cooling drink by the name of *imperial:* and if an infusion of green balm be used instead of water, it makes one of the pleasantest liquors of the kind with which we are acquainted. It is given internally as a diuretic and purgative; and in the latter character, formed into an electuary with a little jalap and ginger, it is perhaps as certain and as good an hydragogue as we possess.

POTASSÆ TARTRAS. Tartrate of potash; formerly called, *Kali tartarisatum*, *Tartarum solubile*, *Tartarus tartarisatus*, *Sal vegetabilis*, and *Alkali vegetabile tartarisatum*. Take of subcarbonate of potash, sixteen ounces; supertartrate of potash, three pounds; boiling water, a gallon. Dissolve the subcarbonate of potash in the water; next add the supertartrate of potash, previously reduced to powder, gradually, until bubbles of gas shall cease to arise. Strain the solution through paper, then boil it until a pellicle appear upon the surface, and set it by, that crystals may form. Having poured away the water, dry the crystals upon bibulous paper. Diuretic, deobstruent, and eccoprotic virtues are attributed to this preparation.

POTASSIUM. (*um*, *ii*. n.) The metallic basis of potash. If a thin piece of solid hydrate of potash be placed between two discs of platinum, connected with the extremities of a voltaic apparatus of 200 double plates, four inches square, it will soon undergo fusion: oxygene will separate at the positive surface, and small metallic globules will appear at the negative surface. These form the metal potassium, first revealed to the world by Sir H. Davy, in 1807.

If iron turnings be heated to whiteness in a curved gun-barrel, and potash be melted and made slowly to come in contact with the turnings, air being excluded, potassium will be formed, and will collect in the cool part of the tube. This method of procuring it was discovered by Gay Lussac and Thénard in 1808. It may likewise be produced by igniting potash with charcoal, as Curaudau showed the same year.

Potassium is possessed of very extraordinary properties. It is lighter than water; its sp. gr. being 0·865 to water 1·0. At common temperatures, it is solid, soft, and easily moulded by the fingers. At 150° F. it fuses; and in a heat a little below redness it rises in vapour. It is perfectly opake. When newly cut, its colour is splendent white, like that of silver, but it rapidly tarnishes in the air. To preserve it unchanged, it must be enclosed in a small phial, with pure naphtha. It conducts electricity like the common metals. When thrown upon water, it acts with great violence, and swims upon the surface, burning with a beautiful light of a red colour, mixed with violet. The water becomes a solution of pure potash. When moderately heated in the air, it inflames, burns with a red light, and throws off alkaline fumes. Placed in chlorine, it spontaneously burns with great brilliancy.

On all fluid bodies which contain water, or much oxygene or chlorine, it readily acts; and in its general powers of chemical combination, says its illustrious discoverer, potassium may be compared to the alkahest, or universal solvent, imagined by the alchemists.

Potassium combines with oxygene in different proportions. When potassium is gently heated in common air or in oxygene, the result of its combustion is an orange-coloured fusible substance. For every grain of the metal consumed, about $1\frac{7}{10}$ cubic inches of oxygene are condensed. To make the experiment accurately, the metal should be burned in a tray of platina, covered with a coating of fused muriate of potash.

The substance procured by the combustion of potassium at a low temperature was first observed, in October 1807, by Sir H. Davy, who supposed it to be the protoxide; but Gay Lussac and Thénard, in 1810, showed that it was in reality the deutoxide or peroxide. When it is thrown into water, oxygene is evolved, and a solution of the protoxide results, constituting common aqueous potash. When it is fused, and brought in contact with combustible bodies, they burn vividly, by the excess of its oxygene. If it be heated in carbonic acid, oxygene is disengaged, and common subcarbonate of potash is formed.

When it is heated very strongly upon platina, oxygene gas is expelled from it, and there remains a difficultly fusible substance of a grey colour, vitreous fracture, soluble in water without effervescence, but with much heat. Aqueous potash is produced. The above ignited solid is protoxide of potassium, which becomes pure potash by combination with the equivalent quantity of water. When we produce potassium with ignited iron-turnings and potash, much hydrogene is disengaged from the water of the hydrate, while the iron becomes oxidised from the residuary oxygene. By heating together pure hydrate of potash and boracic acid, Sir H. Davy obtained from 17 to 18 of water from 100 parts of the solid alkali.

By acting on potassium with a very small quantity of water, or by heating potassium with fused potash, the protoxide may also be obtained. The proportion of oxygene in the protoxide is determined by the action of potassium upon water. 8 grains of potassium

produce from water about $9\frac{1}{2}$ cubic inches of hydrogene; and from these the metal must have fixed $4\frac{3}{4}$ cubic inches of oxygene. But as 100 cubic inches of oxygene weigh 33·9 gr., $4\frac{3}{4}$ will weigh 1·61. Thus, 9·61 gr. of the protoxide will contain 8 of metal; and 100 will contain 83·25 metal + 16·75 oxygene. From these data the prime of potassium comes out 4·969, and that of the protoxide, 5·969. Sir H. Davy adopts the number 75 for potassium, corresponding to 50 on the oxygene scale.

When potassium is heated strongly in a small quantity of common air, the oxygene of which is not sufficient for its conversion into potash, a substance is formed of a greyish colour, which, when thrown into water, effervesces without taking fire. It is doubtful whether it be a mixture of the protoxide and potassium, or a combination of potassium with a smaller proportion of oxygene than exists in the protoxide. In this case, it would be a suboxide, consisting of two primes of potassium = 10 + 1 of oxygene = 11.

When thin pieces of potassium are introduced into chlorine, the inflammation is very vivid; and when potassium is made to act on chloride of sulphur, there is an explosion. The attraction of chlorine for potassium is much stronger than the attraction of oxygene for the metal. Both of the oxides of potassium are immediately decomposed by chlorine, with the formation of a fixed chloride, and the extrication of oxygene.

The combination of potassium and chlorine is the substance which has been improperly called muriate of potash, and which, in common cases, is formed by causing liquid muriatic acid to saturate solution of potash, and then evaporating the liquid to dryness, and igniting the solid residuum. The hydrogene of the acid here unites to the oxygene of the alkali, forming water, which is exhaled; while the remaining chlorine and potassium combine. It consists of 5 potassium + 4·5 chlorine.

Potassium combines with hydrogene to form potassurated hydrogene, a spontaneously inflammable gas, which comes over occasionally in the production of potassium by the gun-barrel experiment. Gay Lussac and Thénard describe also a solid compound of the same two ingredients, which they call a hydruret of potassium. It is formed by heating the metal a long while in the gas, at a temperature just under ignition. They describe it as a greyish solid, giving out its hydrogene in contact with mercury.

When potassium and sulphur are heated together, they combine with great energy, with disengagement of heat and light, even *in vacuo*. The resulting sulphuret of potassium is of a dark grey colour. It acts with great energy on water, producing sulphuretted hydrogene, and burns brilliantly when heated in the air, becoming sulphate of potash. It consists of two sulphur + 5 potassium, by Sir H. Davy's experiments. Potassium has so strong an attraction for sulphur, that it rapidly separates it from hydrogene. If the potassium be heated in the sulphuretted gas, it takes fire and burns with great brilliancy; sulphuret of potassium is formed, and pure hydrogene is set free.

Potassium and phosphorus enter into union with the evolution of light; but the mutual action is feebler than in the preceding compound. The phosphuret of potassium, in its common form, is a substance of a dark chocholate colour; but when heated with potassium in great excess, it becomes of a deep grey colour, with considerable lustre. Hence it is probable, that phosphorus and potassium are capable of combining in two proportions. The phosphuret of potassium burns with great brilliancy, when exposed to air, and, when thrown into water, produces an explosion, in consequence of the immediate disengagement of phosphuretted hydrogene.

Charcoal which has been strongly heated in contact with potassium, effervesces in water, rendering it alkaline, though the charcoal may be previously exposed to a temperature at which potassium is volatilised. Hence there is probably a compound of the two formed by a feeble attraction.

Of all known substances, potassium is that which has the strongest attraction for oxygene; and it produces such a condensation of it, that the oxides of potassium are denser than the metal itself. Potassium has been skilfully used by Sir H. Davy, and Gay Lussac and Thénard, for detecting the presence of oxygene in bodies. A number of substances, undecomposable by other chemical agents, are readily decomposed by this substance.—*Ure's Chem. Dict.*

Potassium, oxide of. The potash of the shops.

POTATO. (Degeneration of *batatas*, the provincial name of the root in that part of Peru from which it was first obtained.) See *Solanum tuberosum*.

Potato, Spanish. See *Convolvulus.*

POTENTIAL. *Potentialis.* 1. Qualities which are supposed to exist in the body in *potentia* only; by which they are capable, in some measure, of effecting and impressing on us the ideas of such qualities, though not really inherent in themselves: in this sense we say, potential heat, potential cold, &c.

2. In a medical sense it is opposed to actual: hence we say, an actual and potential caustic. A red-hot iron is actually caustic; whereas *potassa pura*, and *nitras argenti*, are potentially so, though cold to the touch.

Potential cautery. See *Potassa fusa*, and *Argenti nitras.*

POTENTI'LLA. (*a, æ.* f.; *à potentia*, from its efficacy.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Polygynia*.

2. The pharmacopœial name of the wild tansy. See *Potentilla anserina.*

POTENTILLA ANSERINA. The systematic name of the silver-weed, or wild tansy. *Ar-*

gentina. *Anserina.* The leaves of this plant, *Potentilla—foliis dentatis, serratis, caule repente, pedunculis unifloris,* of Linnæus, possess mildly astringent and corroborant qualities; but are seldom used, except by the lower orders.

Potentilla reptans. The systematic name of the common cinquefoil, or five-leaved grass. *Pentaphyllum.* The roots of this plant, *Potentilla—foliis quinatis, caule repente, pedunculis unifloris,* of Linnæus, have a bitterish styptic taste. They were used by the ancients in the cure of intermittents; but the medicinal quality of cinquefoil is confined, in the present day, to stop diarrhœas and other fluxes.

POTE'RIUM. (*um, ii.* n.; from ποτηριον, a cup: so named from the shape of its flowers.) The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Polyandria.*

Poterium sanguisorba. The systematic name of the Burnet saxifrage, the leaves of which are often put into cool tankards: they have an astringent quality.

POTSTINE. *Lapis ollaris.* A greenish grey mineral, found abundantly on the shores of the lake Como, in Lombardy, in thick beds of primitive slate, and fashioned into culinary vessels in Greenland. It is a subspecies of rhomboidal mica of Jameson.

POTT, Percival, was born in London, in 1713. He was surgeon to St. Bartholomew's Hospital. He had the merit of chiefly bringing about a great improvement in his profession, availing himself of the resources of nature under a lenient mode of treatment, and exploding the frequent use of the cautery, and other severe methods formerly resorted to. In 1756, he had the misfortune to receive a compound fracture of the leg; but the confinement occasioned by this accident led him to compose his *Treatise on Ruptures;* which was soon followed by an account of the Hernia Congenita. In 1758, he produced a judicious essay on *Fistula Lachrymalis;* and two years after, an elaborate dissertation on *Injuries of the Head;* which was soon followed by *Practical Remarks on Hydrocele,* &c. In 1764, his treatise on *Fistula in Ano* appeared, in which he effected a very great improvement; and in 1768, some remarks *On Fractures and Dislocations,* were added to a new edition of his work on Injuries of the Head. Seven years after this, he published *Chirurgical Observations on Cataract, Polypus of the Nose, Cancer of the Scrotum, Ruptures and Mortification of the lower Extremities:* this was soon succeeded by a *Treatise on the Necessity of Amputation in some Cases;* and by *Remarks on the Palsy of the lower Limbs,* from curvature of the spine. He attained the greatest eminence in his profession. Towards the close of the year 1788, a severe attack of fever terminated his active and valuable life.

POUCH. 1. In *Anatomy, sacculus,* a morbid dilatation of any part of a canal; as the intestine.

2. In *Botany,*—see *Silicula.*

POUPART, Francis, a celebrated French anatomist and physician, born about the year 1670. He published several papers in the Memoirs of the Academy of Sciences, and was author of the *Chirurgie Complète.*

Poupart's ligament. *Ligamentum Poupartii.* See *Obliquus externus abdominis.*

Powder, antimonial. See *Antimonialis pulvis.*

Powder of burnt hartshorn with opium. See *Pulvis cornu usti cum opio.*

Powder, compound, of aloes. See *Pulvis aloes compositus.*

Powder, compound, of chalk. See *Pulvis cretæ compositus.*

Powder, compound, of chalk, with opium. See *Pulvis cretæ compositus cum opio.*

Powder, compound, of cinnamon. See *Pulvis cinnamomi compositus.*

Powder, compound, of contrayerva. See *Pulvis contrayervæ compositus.*

Powder, compound, of ipecacuanha. See *Pulvis ipecacuanhæ compositus.*

Powder, compound, of kino. See *Pulvis kino compositus.*

Powder, compound, of scammony. See *Pulvis scammoneæ compositus.*

Powder, compound, of senna. See *Pulvis sennæ compositus.*

Powder, compound, of tragacanth. See *Pulvis tragacanthæ compositus.*

Power, muscular. See *Irritability,* and *Muscular motion.*

Power, tonic. See *Irritability.*

Præcipitate, red. See *Hydrargyri nitrico-oxidum.*

Præcipitate, white. See *Hydrargyrum præcipitatum album.*

PRÆCO'RDIA. (*a, orum.* n. pl.; from *præ,* before, and *cor,* the heart.) The fore-part of the region of the thorax.

Præfu'rnium. (From *præ,* before, and *furnus,* a furnace.) The mouth of a chemical furnace.

PRÆDISPOSING. (*Prædisponens;* from *prædispono,* to predispose.) *Causa proëgumena.* That which renders the body susceptible of disease. The most frequent predisposing causes of diseases are, the temperament and habit of the body, idiosyncrasy, age, sex, and structure of the part.

PRÆDISPOSITION. *Prædispositio.* That constitution, or state of the solids, or fluids, or of both, which disposes the body to the action of disease.

PRÆMORSUS. (From *præmordeo,* to bite off.) Præmorse: bitten off. In *Botany,* this term is differently applied: the *radix præmorsa* is an abrupt root, naturally, it is supposed, inclined to a taper root, but from some decay or interruption in its descending point it becomes abrupt, or, as it were, bitten off; as in the *Scabiosa succisa,* and *Hedypnois hyrta.*

The old opinion of this formed root is thus described in Gerald's Herbal:—" The great part of the root seemeth to be bitten away:

old fantasticke charmers report, that the divel did bite it for envie, because it is an herbe that hath so many good vertues, and is so beneficial to mankinde."

The *folium præmorsum* is jagged-pointed, very blunt, with various irregular notches; as in *Epidendum præmorsum*, &c.

PRÆPARANS. Preparing.

PRÆPARANTIA VASA. The spermatic vessels of the testicles.

PRÆPUCE. (*Præputium*, *ii*. n.; from *præputo*, to cut off before: because some nations used to cut it off in circumcision.) *Epagogion* of Dioscorides. *Posthe*. The membraneous or cutaneous fold that covers the glans penis of men, and is partly cut off by the operation of circumcision. The clitoris of the female has the same covering in miniature, called *præputium clitorides*.

PRASE. A green leek-coloured mineral, found in the island of Bute, and in Borrodale.

PRASINUS. (From *prase*, the name of a mineral of a green leek colour.) *Prasine*: applied to designate the grass green colour of the purest kind. See *Colour*.

PRA'SIUM. (*um*, *ii*. n.; from πρασια, a square border: so called from its square stalks.) Horehound. See *Marrubium vulgare*.

PRA'SUM. (From πραω, to burn; because of its hot taste.) The leek.

PRAWN. See *Cancer squilla*.

PRA'XIS. (*is*, *is*. f.; from πρασσω, to perform.) The practice of any thing, as of medicine.

PRECIPITANT. See *Precipitation*.

PRECIPITATION. (*Præcipitatio*, *onis*. f.; from *præcipito*, to cast down.) When two bodies are united, for instance, an acid and an oxide, and a third body is added, such as an alkali, which has a greater affinity with the acid than the metallic oxide has, the consequence is, that the alkali combines with the acid, and the oxide, thus deserted, appears in a separate state at the bottom of the vessel in which the operation is performed. This decomposition is commonly known by the name of *precipitation*, and the substance that sinks is named a *precipitate*. The substance, by the addition of which the phænomenon is produced, is denominated the *precipitant*.

PREGNANCY. *Gestatio uterina*. The particular manner in which pregnancy takes place has hitherto remained involved in obscurity, notwithstanding the laborious investigation of the most eminent philosophers of all ages. Although in a state which (with a few exceptions) is natural to all women, it is in general the source of many disagreeable sensations, and often the cause of diseases, which might be attended with the worst consequences if not properly treated.

It is now, however, universally acknowledged, that those women who bear children enjoy, usually, more certain health, and are much less liable to dangerous diseases, than those who are unmarried, or who prove barren.

Signs of pregnancy.— The womb has a very extensive influence, by means of its nerves, on many other parts of the body: hence the changes which are produced on it by impregnation, must be productive of changes on the state of the general system. These constitute the signs of pregnancy.

During the first fourteen or fifteen weeks, the signs of pregnancy are very ambiguous, and cannot be depended on; for, as they proceed from the irritation of the womb on other parts, they may be occasioned by every circumstance which can alter the natural state of that organ.

The first circumstance which renders pregnancy probable, is the suppression of the periodical evacuation, which is generally accompanied with fulness in the breasts, headach, flushings in the face, and heat in the palms of the hands.

These symptoms are commonly the consequences of suppression, and therefore are to be regarded as signs of pregnancy, in so far only as they depend on it.

As, however, the suppression of the periodical evacuation often happens from accidental exposure to cold, or from the change of life in consequence of marriage, it can never be considered as an infallible sign.

The belly, some weeks after pregnancy, becomes flat, from the womb sinking, and hence drawing down the intestines along with it; but this cannot be looked upon as a certain sign of pregnancy, because an enlargement of the womb from any other cause will produce the same effect.

Many women, soon after they are pregnant, become very much altered in their looks, and have peculiar irritable feelings, inducing a disposition of mind which renders their temper easily ruffled, and inciting an irresistible propensity to actions of which, on other occasions, they would be ashamed.

In such cases, the features acquire a peculiar sharpness, the eyes appear larger, and the mouth wider than usual; and the woman has a particular appearance, which cannot be described, but with which women are well acquainted.

These breeding symptoms, as they are called, originate from the irritation produced on the womb by impregnation; and as they may proceed from any other circumstance which can irritate that organ, they cannot be depended on when the woman is not young, or where there is not a continued suppression for at least three periods.

The irritations on the parts contiguous to the womb are equally ambiguous; and therefore the signs of pregnancy, in the first four months, are always to be considered as doubtful, unless every one enumerated be distinctly and unequivocally present.

From the fourth month, the signs of pregnancy are less ambiguous, especially after the womb has ascended into the cavity of the belly. In general, about the fourth month, or a short time after, the child becomes so much enlarged, that its motions begin to be felt by the mother; and hence a sign is fur-

nished at that period called *quickening*. Women very improperly consider this sign as the most unequivocal proof of pregnancy; for though, when it occurs about the period described, preceded by the symptoms formerly enumerated, it may be looked upon as a sure indication that the woman is with child, yet, when there is an irregularity, either in the preceding symptoms or in its appearance, the situation of the woman must be doubtful.

This fact will be easily understood; for, as the sensation of the motion of the child cannot be explained or accurately described, women may readily mistake other sensations for that of quickening. Flatus has often been so pent up in the bowels, that the natural pulsation of the great arteries, of which people are conscious only in certain states of the body, has frequently been mistaken for this feeling.

After the fourth month, the womb rises gradually from the cavity of the pelvis, enlarges the belly, and pushes out the navel: hence the protrusion of the navel has been considered one of the most certain signs of pregnancy in the latter months. Every circumstance, however, which increases the bulk of the belly occasions this symptom; and therefore it cannot be trusted to, unless other signs concur.

The progressive increase of the belly, along with suppression, after having been formerly regular, and the consequent symptoms, together with the sensation of quickening at the proper period, afford the only true marks of pregnancy.

These signs, however, are not to be entirely depended on; for the natural desire which every woman has to be a mother, will induce her to conceal, even from herself, every symptom which may render her situation doubtful, and to magnify every circumstance which can tend to prove that she is pregnant.

Besides quickening and increase of bulk of the belly, another symptom appears in the latter months, which, when preceded by the ordinary signs, renders pregnancy certain beyond a doubt. It is the presence of milk in the breasts. When, however, there is any irregularity in the preceding symptoms, this sign is no longer to be considered of any consequence.

As every practitioner must naturally wish to distinguish pregnancy from disease, the disorders which resemble it should be thoroughly understood, and also their diagnostics. It is, however, necessary to remark, that wherever any circumstance occurs which affords the most distant reason to doubt the case, recourse ought to be had to the advice of an experienced practitioner, and every symptom should be unreservedly described to him.

PREHE'NSIO. (From *prehendo*, to surprise: so named from its sudden seizure.) The catalepsy.

PREHNITE. Of prismatic prehnite there are two subspecies, the *foliated*, and the *fibrous*. The first is of an apple-green colour, found in France, the Savoy, and Tyrol, and beautiful varieties in the interior of southern Africa. The fibrous is of a green colour, and occurs in Scotland.

Premature labour. See *Abortion.*

PRESBYO'PIA. (*a, æ.* f.; from πρεσϐυς, old, and ωψ, the eye: because it is frequent with old men.) That defect of the sight by which objects close are seen confusedly, but at remoter distances distinctly. The proximate cause is a tardy adunation or contraction of the iris.

1. It is sometimes caused, however, by a flatness of the cornea. By so much the cornea is flatter, so much the less and more tardy it refracts the rays into a focus. This evil may arise, 1st, From a want of aqueous or vitreous humour, which is common to the aged; or from some disease. 2d, From a cicatrix, which diminishes the convexity of the cornea. 3d, From a natural conformation of the cornea.

2. Another cause of it is too flat a crystalline lens. This evil is most common to the aged, or it may happen from a wasting of the crystalline lens.

3. It may likewise be produced by too small density of the cornea or humours of the eye. By so much more these humours are thin or rarefied, so much the less they refract the rays of light. Whosoever is affected from this cause is cured in older age; for age induces a greater density of the cornea and lens. From this it is an observed fact, that the *presbyopes* are often cured spontaneously, and throw away their glasses, which younger persons in this disease are obliged to use.

4. A custom of viewing continually remote objects may also give rise to it: hence artificers who are occupied in viewing remote objects are said to contract this malady. The reason of this phænomenon is not very clear.

5. From a multitude of causes aged persons are presbyopes; from a penury of humours, which render the cornea and lens flatter, and the bulb shorter. When in senile age, from dryness, the bulb of the eye becomes flatter and shorter, and the cornea flatter, those who were short-sighted or myopes before, see now without their concave glasses.

6. Another cause is too close a proximity of objects. The focus is shorter of distant, but longer of nearer objects.

7. *Presbyopia* from a coarctated pupil.

The best remedy for supplying the deficient convexity of the cornea, as well as the deficient irritability of the iris, is convex spectacles; adapting their power to the precise demand of the eye, and increasing it as the demand grows more urgent.

PRE'SBYTÆ. See *Presbyopia.*

PRESBY'TIA. (*a, æ.* f.; from πρεσϐυς, old: because it is usual to old people.) See *Presbyopia.*

PRESU'RA. (From πρηθω, to inflame.) Inflammation at the ends of the fingers from cold.

PRIAPEI'A. See *Nicotiana rustica.*

Priapi'scus. (From πριαπος, the penis.) 1. A tent made in the form of a penis.

2. A bougie.

PRIAPISM. (*Priapismus, i.* m.; from Πριαπος, a heathen god.) A continual erection of the penis.

PRI'APUS. (*us, i.* m. Πριαπος, a heathen god, remarkable for the largeness of his genitals, and whose penis is always painted erect.) 1. The penis, or membrum virile.

2. A name of the *nepenthes,* or wonderful plant, from the appendages at the end of the leaves resembling an erected penis.

PRICKLE. See *Aculeus.*

PRICKLY. See *Aculeatus.*

Prickly heat. See *Lichen tropicus.*

PRIDE. See *Pathemata animi.*

PRI'MÆ VIÆ. The first passages. The stomach and the intestinal tube are so called, because they are the first passages of what is taken into the stomach; the lacteals the *secundæ viæ,* because the nourishment next goes into them; and lastly, the blood-vessels, which are supplied by the lacteals, are called *viæ tertiæ.*

PRIMARY. *Primarius.* A term in very general use in *Pathology.* It is applied to diseases, to their symptoms, causes, &c. and denotes priority in opposition to what follows, which is secondary: thus, when inflammation of the diaphragm produces furious delirium, the primary disease is the paraphrenitis; so when gallstones produce violent pain and vomiting, which are followed by jaundice, white fæces, porter-coloured urine, &c. the pain and vomiting are primary symptoms, the jaundice and white stools are secondary, &c.

Primary teeth. See *Teeth.*

Primrose. See *Primula vulgaris.*

PRI'MULA. (*a, æ.* f.; from *primulus,* the beginning: so called because it flowers in the beginning of the spring.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

Primula veris. (From *primulus,* the beginning: so called because it flowers in the beginning of the spring.) *Verbasculum. Herba petri.* The cowslip, paigil, or peagle. The flowers of this plant have a moderately strong and pleasant smell, and a somewhat roughish bitter taste. Vinous liquors, impregnated with their flavour by maceration or fermentation, and strong infusions of them drank as tea, are supposed to be mildly corroborant, antispasmodic, and anodyne. An infusion of three pounds of the fresh flowers in five pints of boiling water is made in the shops into a syrup of a fine yellow colour, and agreeably impregnated with the flavour of the cowslip.

Primula vulgaris. The primrose. The leaves and root of this common plant possess sternutatory properties.

Pri'nceps alexipharmacorum. The angelica was formerly so much esteemed as to obtain this name.

PRINCIPLES. *Principia.* Primary substances. Substances or particles which are composed of two or more elements: thus water, gelatine, sugar, fibrine, &c. are the principles of many bodies. These principles are composed of elementary bodies, as oxygene, hydrogene, azote, &c. which are undecomposable.

PRINGLE, Sir John, was born in Scotland in 1707. He was for a long time attached to the army, and then settled in London. He contributed many papers to the Royal Society, particularly his Experiments on Septic and Antiseptic Substances. In 1752, his *Observations on the Diseases of the Army* first appeared, and rapidly passed through several editions. After quitting the army, he was admitted a licentiate, and his fame as a physician, as well as philosopher, speedily attained a high pitch: he received successively various appointments about the royal family, was elected a fellow of the College, and, in 1766, raised to the dignity of a baronet. He presented to the College of Physicians of Edinburgh, when there for the recovery of his health, ten folio volumes, in manuscript, of *Medical and Physical Observations,* with the restriction that they should not be published, nor lent out of the library. He died in 1782.

PRIONO'DES. (From πριων, a saw.) Serrated: applied in old writings to the sutures of the skull.

PRI'OR. The first. A term applied to some muscles and various parts from their order.

Prior annularis. *Musculus prior annularis.* Fourth *interosseus,* of Winslow. An internal interosseus muscle of the hand. See *Interossei manus.*

Prior indicis. *Extensor tertii internodii indicis,* of Douglas. An internal interosseal muscle of the hand, which draws the forefinger inwards towards the thumb, and extends it obliquely.

Prior medii. *Musculus prior medii. Second interosseus,* of Douglas. An external interosseous muscle of the hand. See *Interossei manus.*

PRISMATIC. *Prismaticus.* Applied, in *Botany,* to parts which differ from a cylindrical shape in the circumference, being angular or prism-shaped; as the calyx of *Pulmonaria.*

PRO RE NATA. A term frequently used in extemporaneous prescriptions, and implies occasionally, as the occasion may require: thus an aperient dose is directed to be taken *pro re nata.*

PROBANG. A flexible piece of whalebone with sponge fixed to the end.

PROBE. (From *probo,* to try; because surgeons try the depth and extent of wounds, &c. with it.) *Stylus.* A surgical instrument, of a long and slender form.

Pro'bole. (Προϐολη, a prominence; from προϐαλλω, to project.) See *Apophysis.*

PROBO'SCIS. (*is, idis.* f.; from προ, before, and βοσκω, to feed.) A snout or trunk, as that of an elephant, by which it feeds itself.

PROCA'RDIUM. (From προ, before,

and καρδια, the stomach or heart.) The pit of the stomach.

PROCATARCTIC. (*Procatarcticus;* from προκαταρχω, to go before.) Occasional: applied to a remote cause of disease; as exposure to cold, unusual exertion, &c.

PROCESS. (*Processus, ûs.* m.; from *procedo,* to go before.) An eminence of a bone; as the spinous and transverse processes of the vertebræ.

PROCESSUS CÆCI VERMIFORMIS. See *Intestine.*

PROCESSUS CAUDATUS. See *Lobulus.*

PROCESSUS CILIARIS. See *Ciliar.*

PROCESSUS MAMILLARES. A name formerly applied to the olfactory nerves.

PROCIDE'NTIA. (*a, æ.* f.; from *procido,* to fall down.) A falling down of any part; thus, *procidentia ani, uteri, vaginæ,* &c. See *Prolapsus.*

PROCO'NDYLUS. (From προ, before, and κονδυλος, the middle joint of the finger.) The first joint of a finger next the metacarpus.

PROCTA'LGIA. (*a, æ.* f.; from πρωκτος, the fundament, and αλγος, pain.) A violent pain of the anus. It sometimes takes place suddenly from exposure to cold, from irritating fæces, but it is mostly symptomatic of some disease, as piles, scirrhus, prurigo, cancer, &c.

PROCTI'CUS. (From πρωκτος, the fundament.) Appertaining to the anus or fundament.

PROCTI'TIS. (*is, idis* f.; from πρωκτος, the anus.) *Clunesia. Cyssotis.* Inflammation of the internal or mucous membrane of the lower part of the rectum. See *Enteritis.*

PROCTOLEUCORRHŒ'A. (*a, æ.* f.; from πρωκτος, the anus, λευκος, white, and ρεω, to flow.) A purging of white mucus.

PROCTORRHŒ'A. (From πρωκτος, the anus, and ρεω, to flow.) A purging of white mucus.

PROCUMBENS. Procumbent: trailing, and a little bent upwards. Applied to stems, when lying upon the ground, and not sending out roots, &c.; as that of the *Lysimachia nemorum.*

PRODUCTIO. See *Apophysis.*

PROEGUMINAL. (*Proeguminalis;* from προηγεομαι, to precede or go before.) Precedent: the same as predisposing; as an hereditary taint or habitual indulgence in high living, which are proegumal causes of gout.

PRŒOTIA. (*a, æ.* f.; from πρωι, premature.) Genital precocity.

PROFLUVIA. Fluxes.

PROFLUVII CORTEX. See *Nerium antidysentericum.*

PROFLUVIUM. (*um, ii.* n.; from *profluo,* to run down.) A flux.

PROFUNDUS. See *Flexor profundus perforans.*

PROFU'SIO. A flow of any of the fluids, not attended by fever; as a loss of blood.

PROGLO'SSIS. (From προ, before, and γλωσσα, the tongue.) The tip of the tongue.

PROGNO'SIS. (*is, is.* f.; from προ, before, and γινωσκω, to know.) The foretelling the event of diseases from particular symptoms. See *Semiotice.*

PROGNOSTIC. (*Prognosticus;* from προγινωσκω, to know beforehand.) Applied to those symptoms which enable the physician to form his judgment of the probable cause or event of a disease. See *Semiotice.*

PROJECTURA. See *Apophysis.*

PROLA'PSUS. (*us, i.* m.; from *prolabor,* to slip down.) A protrusion or falling down of a part of a viscus that is uncovered: applied to the uterus, anus, &c.

PROLAPSUS ANI. A falling down of the lower part or extremity of the bowel. It is a very common occurrence in infancy, and indeed not uncommon at any period of life. It is a prominent protrusion of the internal membrane of the gut, through the sphincter, beyond what is natural; for a small portion always protrudes every time the fæces are expelled, and goes back as the sphincter contracts. In most instances this protruded part is easily returned by gentle pressure with the fingers. Cold and astringent lotions and stimulants mostly effect a cure after removing the apparent causes: if these should fail, clipping off a small portion of the relaxed and protruded membrane will be beneficial, or applying a ligature, if there should be any fear of hæmorrhage. Where such treatment is not deemed improper, an instrument must be contrived to keep the bowel in its place.

PROLEPTICUS. (From προλαμβανω, to anticipate.) Applied to those diseases, the paroxysms of which anticipate each other, or return after less and less intervals of intermission.

PROLIFER. (From *proles,* an offspring, and *fero,* to bear.) Prolific, or proliferous: applied to those stems which shoot out new branches from the summit of the former ones; as in the Scotch fir, *Pinus sylvestris,* and *Hypnum proliferum:* and to blossoms, when one grows out of another, as frequently happens in the genus *Polyanthus.*

PROMALACTE'RIUM. (From προ, before, and μαλασσω, to soften.) The room where the body was softened previous to bathing.

PROMETOPI'DIUM. (From προ, before, and μετωπον, the forehead.) *Prometopis.* The skin upon the forehead.

PROMETO'PIS. See *Prometopidium.*

PROMINENT. *Prominens.* Projecting; standing out beyond the surrounding parts. Besides its general application, it is particularly used, in botanical language, to express the parts of a seed-vessel when it projects beyond the valves, as in many of the tetradynamian plants.

PRONATION. *Pronatio.* The act of turning the palm of the hand downwards. It is performed by rotating the radius upon the ulna, by means of several muscles, which are termed pronators.

PRONA'TOR. (*or, oris.* m.) A name given to two muscles of the hand, the pronator radii quadratus, and pronator radii teres; the

use of which is to perform the opposite action to that of the supinators, viz. pronation.

Pronator quadratus. See *Pronator radii quadratus.*

Pronator radii brevis. See *Pronator radii quadratus.*

Pronator radii quadratus. *Pronator quadratus,* of Douglas and Albinus. *Pronator quadratus sive transversus,* of Winslow. *Pronator radii brevis seu quadratus,* of Cowper. This, which has got its name from its use and its shape, is a small fleshy muscle, situated at the lower and inner part of the fore-arm, and covered by the tendons of the flexor muscles of the hand. It arises tendinous and fleshy from the lower and inner part of the ulna, and runs nearly in a transverse direction, to be inserted into that part of the radius which is opposite to its origin, its inner fibres adhering to the interosseous ligament. This muscle assists in the pronation of the hand, by turning the radius inwards.

Pronator radii teres. *Pronator teres,* of Albinus and Douglas. *Pronator teres, sive obliquus,* of Winslow. A small muscle situated at the upper and anterior part of the fore-arm. It is called *teres,* to distinguish it from the pronator quadratus. It arises tendinous and fleshy from the anterior and inferior part of the outer condyle of the os humeri; and tendinous from the coronoid process of the ulna, near the insertion of the brachialis internus. The median nerve passes between these two portions. From these origins the muscle runs obliquely downwards and outwards, and is inserted, tendinous and fleshy, into the anterior and convex edge of the radius, about the middle of that bone. This muscle, as its name indicates, serves to turn the hand inwards.

Pronerva'tio. (From *pro,* before, and *nervus,* a string.) A tendon or string like the end of a muscle.

PRO'NUS. (*Pronus,* having the face downwards.) The under surface of a leaf.

PROP. See *Fulcrum.*

PROPAGO. (*o, inis.* f.) A slip, layer, or cutting of a vine.

PROPHYLACTIC. (*Prophylacticus;* from προ, and φυλασσω, to defend.) Any means made use of to preserve health, and prevent disease.

Proprieta'tis elixir. See *Tinctura aloes composita.*

PROPRIUS. Proper. Belonging to an individual thing: hence *tunica propria renis,* &c.

PROPTOSIS. (*is, is.* f.; from προπιπτω, to fall down.) *Proptoma.* 1. A protrusion or falling down of any part: applied, like prolapsus, to the uterus, rectum, &c.

2. A relaxation of parts, as the scrotum, breasts, &c.

Propye'ma. (From προ, before, and πυον, pus.) A premature collection of pus.

PRO'RA. (*a, æ.* f.; from πρωρα, the prow of a vessel.) The occiput.

Prosarthro'sis. (From προς, to, and αρθροω, to articulate.) The articulation which has manifest motion.

Prospe'gma. (From προσπηγνυμι, to fix near.) A fixing of humours in one spot.

Pro'stasis. (From προιστημι, to predominate.) An abundance of morbid humours.

PROSTATE. (*Prostatus;* from προ, before, and ιστημι, to stand: because it is situated before the urinary bladder.) Standing before; jutting out.

Prostate gland. *Glandula prostata. Corpus glandulosum. Adenoides.* A very large, heart-like, firm gland, situated between the neck of the urinary bladder and the bulbous part of the urethra. It secretes the lacteal fluid, which is emitted into the urethra by ten or twelve ducts, that open near the verumontanum, during coition. This gland is very liable to inflammation, scirrhus, and cancer.

Prostate inferior muscle. See *Transversus perinei alter.*

PROSTRATUS. Prostrate: applied synonymously with *depressus,* depressed, to a stem which lies naturally remarkably flat, spreading horizontally over the ground; as in *Coldenia procumbens,* and *Coronopus ruelli.*

PROTO'GALA. (*a, æ.* f.; from πρωτος, first, and γαλα, milk.) The first milk after delivery.

PROTOPATHIC. (*Protopathicus;* from πρωτος, first, and παθος, a disease.) Primary disease.

PROTUBERANTIA. 1. A protuberance on any part.

2. An apophysis.

PROXIMATE. *Proximus.* The next in order.

Proximate cause. (*Causa proxima;* so called, because when the exciting cause begins to have effect it is the *proximum,* or next thing that happens.) The proximate cause of a disease may be said to be in reality the disease itself. That only, says Dr. Gaubius, deserves the name of a physical cause which constitutes the disease, that when present the disease exists: while it continues, the disease continues; when changed or removed, the disease is altered or destroyed. It is this which constitutes the proximate cause; and is, in fact, the essence of the disease, the actual source of all its effects. All proximate causes are either diseased actions of simple fibres, or an altered state of the fluids.

PRUI'NA. (*a, æ.* f.; *à perurendo, quod fruges peruent.*) The powder-like appearance after the bloom observed on ripe fruit, especially plums.

PRUNA. (*a, æ.* f.; a live coal: so called by Avicenna from its assuming the colour, and often the oval figure, of the sloe, or fruit of the *Prunus spinosa.—Good.*) The carbuncle.

PRUNE. See *Plum.*

PRUNE'LLA. (*a, æ.* f.; from *pruno,* a burn: because it heals burns.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

2. The pharmacopœial name of the self-heal. See *Prunella vulgaris.*

3. The name used by Paracelsus for sore throat.

Prunella vulgaris. The systematic name of the self-heal or bugle; called also, *Prunella*, *Consolida minor*, and *Symphitum minus*. *Prunella—foliis omnibus ovato-oblongis, serratis, petiolatis*, of Linnæus. It is recommended as an astringent in hæmorrhages and fluxes, as also in gargles against aphthæ and inflammation of the fauces.

Prunelloe. See *Plum*.

PRUNUM. (*um*, *i*. n.; from *prunus*, the tree which bears it.) A plum or prune. *Prunus* is the name of the tree, and *Prunum* is the name of the fruit. See *Plum*.

Prunum gallicum. See *Prunus domestica*.

Prunum sylvestre. See *Prunus spinosa*.

PRU'NUS. (*us*, *i*. f.; the name of the tree which bears the fruit called prunum.) The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Monogynia*.

Prunus armeniaca. Apricots, which are the fruit of this plant, are, when ripe, easily digested, and are considered as a pleasant and nutritious delicacy.

Prunus avium. The systematic name of the black cherry tree. *Prunus—umbellis sessilibus, foliis ovato-lanceolatis, subtus pubescentibus, conduplicatis*, of Linnæus. The flavour of the ripe fruit is esteemed by many; and, if not taken in too large quantities, they are extremely salutary. A gum exudes from the tree, whose properties are similar to those of gum-arabic.

Prunus cerasus. The systematic name of the red cherry-tree. *Prunus—umbellis subpedunculatis, foliis ovato-lanceolatis, glabris, conduplicatis*, of Linnæus. The fruit of this tree, *Cerasa rubra, anglica, sativa*, possess a pleasant, acidulated, sweet flavour, and are proper in fevers, scurvy, and bilious obstructions. Red cherries are mostly eaten as a luxury, and are very wholesome, except to those whose bowels are remarkably irritable.

Prunus domestica. The systematic name of the plum or damson tree. *Prunus—pedunculis subsolitariis, foliis lanceolato-ovatis convolutis, ramis muticis; gemmæ floriferæ aphyllæ*, of Linnæus. Prunes are considered as emollient, cooling, and laxative, especially the French prunes, which are directed in the decoction of senna, and other purgatives; and the pulp is ordered in the *electuarium è sennâ*. The *damson* is only a variety, which, when perfectly ripe, affords a wholesome article for pies, tarts, &c., gently opening the body: but when damsons are not perfectly mature, they produce colicky pains, diarrhœa, and convulsions in children. See *Plum*.

Prunus lauro-cerasus. The systematic name of the poison laurel: called also, common cherry laurel, bay laurel, and Alexandrian laurel. *Lauro-cerasus*. *Prunus—floribus racemosis foliis sempervirentibus dorso biglandulosis*, of Linnæus. The leaves of the lauro-cerasus have a bitter styptic taste, accompanied with a flavour resembling that of bitter almonds, or other kernels of the drupaceous fruits: the flowers also manifest a similar flavour. The powdered leaves, applied to the nostrils, excite sneezing, though not so strongly as tobacco. The kernel-like flavour which these leaves impart being generally esteemed grateful, has sometimes caused them to be employed for culinary purposes, and especially in custards, puddings, blancmange, &c.; and as the proportion of this sapid matter of the leaf to the quantity of the milk is commonly inconsiderable, bad effects have seldom ensued. But as the poisonous quality of this laurel is now indubitably proved, and known to be the prussic acid, which can be obtained in a separate form (see *Prussic acid*), the public ought to be cautioned against its internal use.

The following communication to the Royal Society, by Dr. Madden, of Dublin, contains the first and principal proofs of the deleterious effects of this vegetable upon mankind:—"A very extraordinary accident that fell out here some months ago, has discovered to us a most dangerous poison, which was never before known to be so, though it has been in frequent use among us. The thing I mean is a simple water, distilled from the leaves of the lauro-cerasus: the water is at first milky, but the oil which comes over being in a good measure separated from the phlegm, by passing it through a flannel bag, it becomes as clear as common water. It has the smell of bitter almonds, or peach-kernel, and has been for many years in frequent use among our housewives and cooks, to give that agreeable flavour to their creams and puddings. It has also been much in use among our drinkers of drams; and the proportion they generally use it in has been one part of laurel-water to four of brandy. Nor has this practice, however frequent, ever been attended with any apparent ill consequences, till some time in the month of September 1728, when it happened that one Martha Boyse, a servant, who lived with a person who sold great quantities of this water, got a bottle of it from her mistress, and gave it to her mother. Ann Boyse made a present of it to Frances Eaton, her sister, who was a shopkeeper in town, and who, she thought, might oblige her customers with it. Accordingly, in a few days, she gave about two ounces to a woman called Mary Whaley, who drank about two thirds of what was filled out, and went away. Frances Eaton drank the rest. In a quarter of an hour after Mary Whaley had drunk the water (as I am informed), she complained of a violent disorder in her stomach, soon after lost her speech, and died in about an hour, without vomiting or purging, or any convulsion. The shopkeeper, F. Eaton, sent word to her sister, Ann Boyse, of what had happened, who came to her upon the message, and affirmed that it was not possible the cordial (as she called it) could have occasioned the death of the woman; and, to convince her of it, she filled out about three ounces, and

drank it. She continued talking with F. Eaton about two minutes longer, and was so earnest to persuade her of the liquor's being inoffensive that she drank about two spoonfuls more, but was hardly well seated in her chair when she died without the least groan or convulsion. Frances Eaton, who, as before observed, had drank somewhat more than a spoonful, found no disorder in her stomach, or elsewhere; but to prevent any ill consequences, she took a vomit immediately, and has been well ever since."—Dr. Madden mentions another case, of a gentleman at Kilkenny, who mistook a bottle of laurel-water for a bottle of ptisan. What quantity he drank is uncertain, but he died in a few minutes, complaining of a violent disorder in the stomach. In addition to this, we may refer to the unfortunate case of Sir Theodosius Boughton, whose death, in 1780, an English jury declared to be occasioned by this poison. In this case, the active principle of the lauro-cerasus was concentrated by repeated distillations, and given to the quantity of one ounce; the suddenly fatal effects of which must be still in the recollection of the public. To brute animals this poison is almost instantaneously mortal, as amply appears by the experiments of Madden, Mortimer, Nicholls, Fontana, Langrish, Vater, and others. The experiments conducted by these gentlemen, show that the laurel-water is destructive to animal life, not only when taken into the stomach, but also on being injected into the intestines, or applied externally to different organs of the body. It is remarked by Abbé Fontana, that this poison, even "when applied in a very small quantity to the eyes, or to the inner part of the mouth, without touching the œsophagus, or being carried into the stomach, is capable of killing an animal in a few minutes: whilst, applied in a much greater quantity to wounds, it has so little activity, that the weakest animals, such as pigeons, resist its action."

The poisonous quality of this species of laurel is the prussic acid; and, if we judge from its sensible qualities, an analogous principle seems to pervade many other vegetable substances, especially the kernels of drupaceous fruits: and in various species of the amygdalus, this sapid principle extends to the flowers and leaves. It is of importance to notice, that this is much less powerful in its action upon human subjects than upon dogs, rabbits, pigeons, and reptiles. To poison man, the essential oil of the lauro-cerasus must be separated by distillation, as in the spirituous or common laurel-water; and unless this is strongly embued with the oil, or given in a large dose, it proves innocent. Dr. Cullen observes, that the sedative power of the lauro-cerasus acts upon the nervous system in a different manner from opium and other narcotic substances, whose primary action is upon the animal functions; for the lauro-cerasus does not occasion sleep, nor does it produce local inflammation, but seems to act directly upon the vital powers. Abbé Fontana supposes that this poison destroys animal life, by exerting its effects upon the blood; but the experiments and observations from which he draws this opinion are evidently inconclusive. It may also be remarked, that many of the Abbé's experiments contradict each other. Thus, it appears from the citation given above, that the poison of this vegetable, when applied to wounds, does not prove fatal; but future experiments led the Abbé to assert that the oil of the lauro-cerasus, whether given internally, or applied to the wounds of animals, is one of the most terrible and deadly poisons known. Though this vegetable seems to have escaped the notice of Stoerck, yet it is not without advocates for its medical use. Linnæus informs us, that in Switzerland it is commonly and successfully used in pulmonary complaints. Langrish mentions its efficacy in agues; and as Bergius found bitter almonds to have this effect, we may, by analogy, conclude that this power of the lauro-cerasus is well established. Baylies found that it possessed a remarkable power of diluting the blood, and, from experience, recommended it in all cases of disease supposed to proceed from too dense a state of that fluid: adducing particular instances of its efficacy in rheumatisms, asthmas, and scirrhous affections. Nor does this author seem to have been much afraid of the deleterious quality of lauro-cerasus, as he directs a pound of its leaves to be macerated in a pint of water, of which he gives from thirty to sixty drops three or four times a day.

Prunus padus. The systematic name of the wild cluster, or bird-cherry tree. *Padus.* The bark and berries of this shrub are used medicinally. The former, when taken from the tree, has a fragrant smell, and a bitter, subastringent taste, somewhat similar to that of bitter almonds. Made into a decoction, it cures intermittents, and it has been recommended in the cure of several forms of syphilis. The latter are said to cure the dysentery.

Prunus spinosa. The systematic name of the sloe-tree. *Prunus sylvestris. Agriococcimela. Prunus—pedunculus solitariis, foliis lanceolatis, glabris, ramis spinosis,* of Linnæus. It is sometimes employed in gargles, to tumefactions of the tonsils and uvula, and, from its astringent taste, was formerly much used in hæmorrhages, &c.

PRU'RIGO. (*o, inis.* f.; from *prurio,* to itch.) *Pruritus.* Prurigo is a papulous eruption. As it arises from different causes, or at different periods of life, and exhibits some varieties in its form, it is described by Dr. Willan under the titles of prurigo mitis, prurigo formicans, and prurigo senilis. In these the whole surface of the skin is usually affected; but there are likewise many cases of local prurigo, which will be afterwards noticed according to their respective situations.

1. The *prurigo mitis* originates without any previous indisposition, generally in spring,

or the beginning of summer. It is characterised by soft and smooth elevations of the cuticle, somewhat larger than the papulæ of the lichen, from which they also differ by retaining the usual colour of the skin; for they seldom appear red, or much inflamed, except from violent friction. They are not, as in the other case, accompanied with tingling, but with a sense of itching almost incessant. This is, however, felt more particularly on undressing, and often prevents rest for some hours after getting into bed. When the tops of the papulæ are removed by rubbing or scratching, a clear fluid oozes out from them, and gradually concretes into thin black scabs.

This species of prurigo mostly affects young persons; and its cause may, Dr. Willan observes, in general be referred to sordes collected on the skin, producing some degree of irritation, and also preventing the free discharge of the cutaneous exhalation; the bad consequences of which must necessarily be felt at that season of the year when perspiration is most copious. Those who have originally a delicate or irritable skin, must likewise, in the same circumstances, be the greatest sufferers.

The eruption extends to the arms, breast, back, and thighs, and often continues during two or three months of the summer, if not relieved by proper treatment. When persons affected with it neglect washing the skin, or are uncleanly in their apparel, the eruption grows more inverate, and at length, changing its form, often terminates in the itch. Pustules arise among the papulæ, some filled with lymph, others with pus. The acarus scabiei begins to breed in the furrows of the cuticle, and the disorder becomes contagious. A steady perseverance in tepid lotions of water, and of the warm-bath, is mostly of infinite service. Sulphur, magnesia, soda, nitrate of potash, are useful internally; and also, where there is debility, the internal use of cinchona and the mineral acids.

2. The *Prurigo formicans*, is a much more obstinate and troublesome disease than the foregoing. It usually affects persons of adult age, commencing at all seasons of the year indifferently; and its duration is from four months to two or three years, with occasional short intermissions. The papulæ are sometimes larger, sometimes more obscure, than in the preceding species; but are, under every form, attended with an incessant, almost intolerable itching. They are diffused over the whole body, except the face, feet, and palms of the hands: they appear, however, in greatest number on those parts which, from the mode of dress, are subjected to tight ligatures; as about the neck, loins, and thighs.

The itching is complicated with other sensations, which are variously described by patients. They sometimes feel as if small insects were creeping on the skin; sometimes as if stung all over by ants; sometimes as if hot needles were piercing the skin in divers places. On standing before a fire, or undressing, and more particularly on getting into bed, these sensations become most violent, and usually preclude all rest during the greater part of the night. The prurigo formicans is by most practitioners deemed contagious, and confounded with the itch. In endeavouring to ascertain the justness of this opinion, Dr. Willan has been led to make the following remarks:—1. The eruption is, for the most part, connected with internal disorder, and arises where no source of infection can be traced. 2. Persons affected may have constant intercourse with several others, and yet never communicate the disease to any of them. 3. Several persons of one family may have the prurigo formicans about the same time; but he thinks this should be referred rather to a common predisposition than to contagion, having observed that individuals of a family are often so affected at certain seasons of the year, even when they reside at a distance from each other.

Although the prurigo formicans is never, like the former species, converted into the itch, yet it does occasionally terminate in a pustular disease, not contagious. For the most part it is necessary, in attempting the cure of this species, to attend to, and remove, if possible, some hepatic or other visceral obstruction, by an alterative course of medicine. When there is a state of debility, tonics with mineral acids and nourishing diet must be resorted to. Steel is also serviceable. Chlorine, soda, and bitters, with saline aperients, are, in common cases, of great benefit.

With respect to the external applications, warm water, with a little spirit or liquor ammonia acetatæ, or Harrogate sulphureous water, will frequently allay the itching: all greasy applications are to be avoided.

3. *Prurigo senilis*. This affection does not differ much in its symptoms and external appearances from the prurigo formicans; but has been thought by medical writers to merit a distinct consideration, on account of its peculiar inveteracy. The prurigo is perhaps aggravated, or becomes more permanent in old age, from the dry, condensed state of the skin and cuticle which often takes place at that period. Those who are affected with it in a high degree have little more comfort to expect during life, being incessantly tormented with a violent and universal itching. The state of the skin, in the prurigo senilis, is favourable to the production of an insect, the pediculus humanus, more especially to the variety of it usually termed body-lice.

These insects, it is well known, are bred abundantly among the inhabitants of filthy dwellings, of jails, workhouses, &c., and in such situations prey upon persons of all ages indiscriminately. But in the prurigo senilis they arise, notwithstanding every attention to cleanliness or regimen, and multiply so rapidly that the patient endures extreme distress from their perpetual irritation. The nits or eggs are deposited on the small hairs of the skin, and the pediculi are only found on the skin, or

on the linen, not under the cuticle, as some authors have represented. Warm bathing gives temporary ease in this complaint. The Harrogate water is beneficial. Lotions of nitric acid and oxymuriatic acid are very useful: thirty minims of the former to ten fluid ounces of pure water, and as much muriatic acid in addition when the former fails. Sea-water bathing, and the application of sea water, are also very beneficial. Internally, such medicines must be given as are calculated to meet constitutional defects. Tonics with mineral acids are, in most cases, useful; and, when dyspepsia exists, bitters with the mineral alkali.

In connection with the foregoing series of complaints, Dr. Willan mentions some pruriginous affections which are merely local. He confines his observations to the most troublesome of these, seated in the podex, præputium, urethra, pubes, scrotum, and pudendum muliebre. Itching of the nostrils, eyelids, lips, or of the external ear, being generally symptomatic of other diseases, do not require a particular consideration.

1. *Prurigo podicis.* Ascarides in the rectum excite a frequent itching and irritation about the sphincter ani, which ceases when the cause is removed by proper medicines. A similar complaint often arises, independently of worms, hæmorrhoidal tumours, or other obvious causes, which is mostly found to affect persons engaged in sedentary occupations, and may be referred to a morbid state of secretion in the parts, founded, perhaps, on a diminution of constitutional vigour. The itching is not always accompanied with an appearance of papulæ or tubercles: it is little troublesome during the day-time, but returns every night soon after getting into bed, and precludes rest for several hours. The complaint continues in this form during three or four months, and has then an intermission, till it is produced again by hot weather, fatigue, watching, or some irregularity in diet. The same disease occurs at the decline of life, under a variety of circumstances.

Women, after the cessation of the catamenia, are liable to be affected with this species of prurigo, more especially in summer or autumn. The skin between the nates is rough and papulated, sometimes scaly, and a little humour is discharged by violent friction. Along with this complaint, there is often an eruption of itching papulæ on the neck, breast, and back; a swelling and inflammation of one or both ears, and a discharge of matter from behind them, and from the external meatus auditorius. The prurigo podicis sometimes occurs as a symptom of the lues venerea.

2. The *prurigo præputii* is owing to an altered state of secretion on the glans penis, and inner surface of the præputium. During the heat of summer there is also, in some persons, an unusual discharge of mucus, which becomes acrimonious, and produces a troublesome itching, and often an excoriation of these parts. Washing them with water, or soap and water, employed from time to time, relieves the complaint, and should, indeed, be practised as an ordinary point of cleanliness, where no inconvenience is immediately felt. If the fluid be secreted in too large a quantity, that excess may be restrained by washes made with the liquor plumbi acetatis, or by applying the unguentum plumbi acetatis.

3. *Prurigo urethralis.* A very troublesome itching sometimes takes place at the extremity of the urethra in females, without any manifest cause. It occurs as well in young women as in those who are of an advanced age. On examination, no stricture nor tumour has been found along the course of the urethra. Probably, however, the itching may be occasioned by a morbid state of the neck of the bladder, being in some instances connected with pain and difficulty of making water.

An itching at the extremity of the urethra in men is produced by calculi, and by some diseases of the bladder. In cases of stricture an itching is also felt, but near the place where the stricture is situated. Another cause of it is small broken hairs, which are sometimes drawn in from the pubes, between the præputium and glans, and which afterwards becoming fixed in the entrance of the urethra, occasion an itching, or slight stinging, particularly on motion. Removing the small hairs from the urethra gives immediate relief.

4. *Prurigo pubis.* Itching papulæ often arise on the pubes, and become extremely sore if their tops are removed by scratching. They are occasioned sometimes by neglect of cleanliness, but more commonly by a species of pediculus, which perforates the cuticle, and thus derives its nourishment, remaining fixed in the same situation. These insects are termed by Linnæus, &c. *pediculi pubis:* they do not, however, affect the pubes only, but often adhere to the eyebrows, eyelids, and axillæ. They are often found, also, on the breast, abdomen, thighs, and legs, in persons of a sanguine temperament, who have those parts covered with strong hairs. It is remarkable that they seldom or never fix upon the hairy scalp. The great irritation produced by them on the skin solicits constant scratching, by which they are torn from their attachments; and painful tubercles arise at the places where they had adhered. When the pediculi are diffused over the greater part of the surface of the body, the patient's linen often appears as if sprinkled with drops of blood.

5. *Prurigo scroti.* The scrotum is affected with a troublesome and constant itching from ascarides within the rectum, from friction by violent exercise in hot weather, and very usually from the pediculi pubis. Another and more important form of the complaint appears in old men, sometimes connected with the prurigo podicis, and referable to a morbid state of the skin, or superficial gland of the part. The scrotum, in this case, assumes a brown colour, often also becoming thick,

scaly, and wrinkled. The itching extends to the skin covering the penis, more especially along the course of the urethra; and has little respite, either by day or night.

6. The *Prurigo pudendi muliebris*, is somewhat analogous to the prurigo scroti in men. It is often a symptomatic complaint in the lichen and lepra: it likewise originates from ascarides irritating the rectum; and is, in some cases, connected with a discharge of the fluor albus.

A similar affection arises in consequence of a change of state in the genital organs at the time of puberty, attended with a series of most distressing sensations. Dr. Willan confines his attention to one case of the disorder, which may be considered as idiopathic, and which usually affects women soon after the cessation of the catamenia. It chiefly occurs in those who are of the phlegmatic temperament, and inclined to corpulency. Its seat is the labia pudendi, and entrance to the vagina. It is often accompanied with an appearance of tension or fulness of those parts, and sometimes with inflamed itching papulæ on the labia and mons veneris. The distress arising from a strong and almost perpetual itching in the above situation may be easily imagined. In order to allay it in some degree, the sufferers have frequent recourse to friction, and to cooling applications; whence they are necessitated to forego the enjoyment of society. An excitement of venereal sensations also takes place from the constant direction of the mind to the parts affected, as well as from the means employed to procure alleviation. The complicated distress thus arising renders existence almost insupportable, and often produces a state of mind bordering on phrensy.

Deep ulcerations of the parts seldom take place in the prurigo pudendi; but the appearance of aphthæ on the labia and nymphæ is by no means unusual. From intercourse with females under these circumstances, men are liable to be affected with small ulcerations on the glans, and inside of the præputium, which prove troublesome for a length of time, and often excite an alarm, being mistaken for chancres.

Women, after the fourth month of their pregnancy, often suffer greatly from the prurigo pudendi, attended with aphthæ. These, in a few cases, have been succeeded by extensive ulcerations: such instances are, however, extremely rare. The complaint has, in general, some intervals or remissions; and the small ulcers usually disappear soon after delivery, whether at the full time or by a miscarriage.

PRURI'TUS. (*us, ûs.* m.; from *prurio*, to itch.) See *Prurigo*.

Prussian alkali. See *Alkali, phlogisticated.*

Prussian blue. See *Blue, Prussian.*

PRUSSIATE. A salt formed by the union of the prussic acid, or colouring matter of Prussian blue, with a salifiable basis: thus, *prussiate of potash*, &c.

PRUSSIC. (*Prussicus;* from the compound called Prussian blue, from which it is obtained.) Belonging to Prussian blue.

PRUSSIC ACID. *Acidum prussicum.* Cyanic acid. Hydrocyanic acid.

This acid is obtained from its compound with iron, which has been long known and used as a pigment, by the name of Prussian blue, before its nature was understood. Scheele's method of obtaining it is this:—Mix four ounces of Prussian blue with two of red oxide of mercury, prepared by nitric acid, and boil them in twelve ounces by weight of water, till the whole becomes colourless: filter the liquor, and add to it one ounce of clean iron filings, and six or seven drachms of sulphuric acid. Draw off by distillation about a fourth of the liquor, which will be prussic acid; though, as it is liable to be contaminated with a portion of sulphuric, to render it pure, it may be rectified by re-distilling it from carbonate of lime.

This prussic acid has a strong smell of peach-blossoms, or bitter almonds; its taste is at first sweetish, then acrid, hot, and virulent, and excites coughing; it has a strong tendency to assume the form of gas; it has been decomposed in a high temperature, and by the contact of light, into carbonic acid, ammonia, and carburetted hydrogene. It does not completely neutralise alkalies, and is displaced even by the carbonic acid; it has no action upon metals, but unites with their oxides, and forms salts for the most part insoluble; it likewise unites into triple salts with these oxides and alkalies: the oxygenated muriatic acid decomposes it.

The peculiar smell of the prussic acid could scarcely fail to suggest its affinity with the deleterious principle that rises in the distillation of the leaves of the lauro-cerasus, bitter kernels of fruits, and some other vegetable productions; and Scrader, of Berlin, has ascertained the fact, that these vegetable substances do contain a principle capable of forming a blue precipitate with iron; and that with lime they afford a test of the presence of iron equal to the prussiate of that earth. The prussic acid appears to come over in the distilled oil.

This acid, when compared with the other animal products, is distinguished by the great quantity of nitrogene it contains, by its small quantity of hydrogene, and especially by the absence of oxygene.

When this acid is kept in well-closed vessels, even though no air be present, it is sometimes decomposed in less than an hour. It has been occasionally kept fifteen days without alteration; but it is seldom that it can be kept longer, without exhibiting signs of decomposition. It begins by assuming a reddish-brown colour, which becomes deeper and deeper; and it gradually deposits a considerable carbonaceous matter, which gives a deep colour to both water and acids, and emits a strong smell of ammonia. If the bottle containing the prussic acid be not hermetically sealed, nothing remains but a dry charry mass,

which gives no colour to water. Thus a prussiate of ammonia is formed at the expense of a part of the acid, and a nitrogenuret of carbon.

The base of prussic acid, divested of its acidifying hydrogene, should be called *prussine*. Gay Lussac styles it *cyanogene*, because it is the principle which generates blue; or, literally, the blue-maker. See *Prussine*.

From the experiments of Magendie, it appears that the pure hydrocyanic acid is the most violent of all poisons. When a rod dipped into it is brought in contact with the tongue of an animal, death ensues before the rod can be withdrawn. If a bird be held a moment over the mouth of a phial containing this acid, it dies. In the Annales de Chimie for 1814 we find this notice: — M. B., Professor of Chemistry, left by accident on a table a flask containing alkohol impregnated with prussic acid; the servant, enticed by the agreeable flavour of the liquid, swallowed a small glass of it. In two minutes she dropped down dead, as if struck with apoplexy. The body was not examined.

"Scharinger, a professor at Vienna," says Orfila, "prepared, six or seven months ago, a pure and concentrated prussic acid: he spread a certain quantity of it on his naked arm, and died a little time thereafter."

Dr. Magendie has, however, ventured to introduce its employment into medicine. He found it beneficial against phthisis and chronic catarrhs. His formulæ is the following: —

Mix one part of the pure prussic or hydrocyanic acid of Gay Lussac with $8\frac{1}{2}$ of water by weight. To this mixture he gives the name of medicinal prussic acid.

Of this he takes	1 gros. or	59 grs. Troy.
Distilled water,	1 lb.	or 7560 grs.
Pure sugar,	$1\frac{1}{2}$ oz.	or $708\frac{3}{4}$ grs.

And mixing the ingredients well together, he administers a table-spoonful every morning and evening. A well-written report of the use of the prussic acid in certain diseases, by Dr. Magendie, was communicated by Dr. Granville to Mr. Brande, and is inserted in his fourth volume of the Journal of Science.

The hydrocyanates are all alkaline, even when a great excess of acid is employed in their formation, and they are decomposed by the weakest acids.— See also, *Prunus lauro-cerasus*.

PRUSSINE. Cyanogene. This is obtained by decomposing the prusside or cyanide of mercury by heat.

When the simple mercurial prusside is exposed to heat in a small glass retort, or tube, shut at one extremity, it soon begins to blacken. It appears to melt like an animal matter, and then the prussine is disengaged in abundance. This gas is pure from the beginning of the process to the end, provided always that the heat be not very high; for if it were not sufficiently intense to melt the glass, a little azote would be evolved. Mercury is volatilised with a considerable quantity of prusside; and there remains a charry matter of the colour of soot, and as light as lampblack. The prusside of silver gives out likewise prussine when heated; but the mercurial prusside is preferable to every other.

Prussine or cyanogene is a permanently elastic fluid. Its smell, which it is impossible to describe, is very strong and penetrating. Its solution in water has a very sharp taste. The gas burns with a bluish flame mixed with purple. Its sp. gr., compared to that of air, is 1·8064. This principle has been attentively examined by chemists, and its compounds also; and in the first volume of the Journal of Science and the Arts, Sir H. Davy has stated some interesting particulars relative to prussine.

PSALLOI'DES. (From ψαλλος, a stringed instrument, and ειδος, a likeness: because it appears as if stringed like a dulcimer.) The inner surface of the fornix of the brain.

PSALTE'RIUM. (*um, ii.* n.; a harp: because it is marked with lines that give it the appearance of a harp.) *Lyra.* The medullary body that unites the posterior crura of the fornix of the brain.

PSAMMI'SMUS. (From ψαμμος, sand.) An application of hot sand to any part of the body.

PSAMMO'DES. (From ψαμμος, sand.) Sand-like. Applied to urine which deposits a sandy sediment.

PSELLI'SMUS. (*us, i.* m.; from ψελλιζω, to have a hesitation of speech.) Defect of speech, in which the articulation is imperfect or depraved. Stammering and hesitation of speech, and the mispronunciation of words, are generally arranged by nosologists under this head. See *Lallatio, Lambdacismus,* &c.

PSELLO'TIS. See *Psellismus.*

PSEUDA'CORUS. (From ψευδης, false, and ακορον, the acorus plant: because it resembled and was substituted for that plant.) See *Iris pseudacorus.*

PSEUDES. (Ψευδης, false.) Spurious. The word *pseudo* is prefixed to the name of several diseases, because they resemble them, but are not those diseases; as *Pseudo-pneumonia, Pseudo-phrenitis.* It is also prefixed to many substances which are only fictitious imitations; as *Pseudamomum,* a spurious kind of amomum, &c. See *False.*

PSEUDOBLE'PSIS. (*is, is.* f.; from ψευδης, false, and βλεψις, sight.) Imaginary vision of objects, characterised by depraved sight, creating objects, or representing them different from what they are. Species: —

Imaginary objects floating before the sight, or real objects appearing with imaginary qualities: constituting two varieties. The most common of ocular spectres is *dark spots,* the *muscæ volitantes* of writers. They are seen in full light, and may often be seen to change their form with the motions of the eye. Another form is that of a *network,* which is sometimes permanent, sometimes transitory. A third appearance is *sparks,* or scintillations. The eye is also affected with an imaginary sense of dazzling, sometimes the ocular spec-

tres assume an iridescent appearance, or exhibit in succession all the colours of the rainbow.

The other variety of false sight, in which real objects appear changed in their natural qualities, affords an *error of form*, in which objects appear too large, too small, cut in half, or some way distorted; or an *error of motion*, in consequence of which they seem to be dancing, nodding, or in rapid succession; or *error of number*, and then they appear double, triple, or otherwise increased or multiplied; or *error of colour*, in which case one hue is mistaken for another, as red for green, or green for yellow, or every hue appears alike.

Exposure to cold, spasmodic affections, or structural disease of some part, have produced these affections, but the causes are not well known. Where no organic disease is known to exist, and debility or an opposite condition of the optic nerves, blood-vessels, or iris is suspected, blisters, local bleeding, or stimulating applications should be resorted to.

The appearances constituting false sight are mostly symptomatic or sympathetic, and accompany inflammation of or about the eyes and brain; also fevers, hysteria, syncope, lethargy, apoplexy, &c.

PSEUDOCYESIS. (*is, is.* f.; from ψευδης, false, and κυησις, pregnancy.) False conception.

PSEUDŒSTHESIA. (*a, æ.* f.; from ψευδος, false, and αισθαγομαι, to feel.) Imaginary or false feeling, or imaginary sense of touch, in organs which have no existence. This is frequently mentioned by persons who have suffered amputation; who, for a long time after the loss of the separated limb, have still a sense of its forming a part of the body, and suffer in idea the same kind of pain or other inconvenience they endured before its removal. It proceeds from that close sympathy which prevails between the extremities of the living fibres in all organs whatever. A like imaginary sensation is frequently complained of in hypochondriacism, and various mental affections.

PSEUDOMELA'NTHIUM. (*um, i.* n.; from ψευδης, false, and *melanthium*, the name of a plant.) See *Agrostemma githago.*

PSEUDOPYRE'THRUM. (*um, i.* n.; from ψευδης, false, and *pyrethrum*: so called because when the flowers are chewed they impart a warmth somewhat like that of pyrethrum root.) See *Achillæa ptarmica.*

PSI'DIUM. (*um, i.* n.; altered by Linnæus from ψιδιας of the ancient Greeks.) The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Monogynia.*

Psidium pomiferum. The systematic name of the apple guava. This plant, and the *pyriferum*, bear fruits, the former like apples, the latter like pears. The apple kind is most cultivated in the Indies, on account of the pulp having a fine acid flavour, whereas the pear species is sweet, and therefore not so agreeable in warm climates. Of the inner pulp of either the inhabitants make jellies; and of the outer rind they make tarts, marmalades, &c. The latter they also stew and eat with milk, and prefer them to any other stewed fruits. They have an astringent quality, which exists also in every part of the tree, and abundantly in the leaf-buds, which are occasionally boiled with barley and liquorice, as an excellent drink against diarrhœas. A simple decoction of the leaves, used as a bath, is said to cure the itch, and most cutaneous eruptions.

Psidium pyriferum. The guava pear-tree. See *Psidium pomiferum.*

Psilo'thra. (From ψιλοω, to denudate.) Applications to remove the hair.

Psilo'thrum. (From ψιλοω, to depilate: so called because it was used to remove the hair.) The white bryony.

Psimmy'thium. (From ψιω, to smooth: so called because of its use as a cosmetic.) Cerusse, or white lead.

PSO'Æ. (Ψοαι, the loins.) *Alopeces. Nefrometræ. Neurometeres.* 1. The loins.

2. The name of two pair of muscles in the loins.

PSO'AS. (From ψοαι, the loins.) Belonging to the loins.

Psoas abscess. See *Lumbar abscess.*

Psoas magnus. *Psoas, seu lumbaris internus*, of Winslow. This is a long, thick, and very considerable muscle, situated close to the fore-part and sides of the lumbar vertebræ. It arises from the bodies of the last vertebræ of the back, and of all the lumbar vertebræ laterally, as well as from the anterior surfaces of their transverse processes, by distinct tendinous and fleshy slips, that are gradually collected into one mass, which becomes thicker as it descends, till it reaches the last of the lumbar vertebræ, where it grows narrower again, and, uniting its outer and posterior edge (where it begins to become tendinous) with the iliacus internus, descends along with that muscle under the ligamentum Fallopii, and goes to be inserted tendinous at the bottom of the trochanter minor of the os femoris, and fleshy into the bone a little below that process. Between the tendon of this muscle and the ischium we find a considerable bursa mucosa. This muscle, at its origin, has some connection with the diaphragm, and likewise with the quadratus lumborum. It is one of the most powerful flexors of the thigh forwards, and may likewise assist in turning it outwards. When the inferior extremity is fixed, it may help to bend the body forwards; and in an erect posture it greatly assists in preserving the equilibrium of the trunk upon the upper part of the thigh.

Psoas parvus. This muscle, which was first described by Riolanus, is situated upon the psoas magnus, at the anterior part of the loins. The psoas parvus arises thin and fleshy from the side of the uppermost vertebra of the loins, and sometimes also from the

lower edge of the last vertebra of the back, and from the transverse processes of each of these vertebræ: it then extends over part of the psoas magnus, and terminates in a thin flat tendon, which is inserted into that part of the brim of the pelvis where the os pubis joins the ilium. From this tendon a great number of fibres are sent off, which form a thin fascia, that covers parts of the psoas magnus and iliacus internus, and gradually loses itself on the fore-part of the thigh. In the human body this muscle is very often wanting; but in a dog, according to Douglas, it is never deficient. Riolanus was of opinion, that it occurs oftener in men than in women. Winslow asserts just the contrary; but the truth seems to be, that it is as often wanting in one sex as in the other. Its use seems to be to assist the psoas magnus in bending the loins forwards; and when we are lying upon our back, it may help to raise the pelvis.

Psoas sive lumbaris internus. See *Psoas magnus.*

Psophos. (Ψοφος, *crepitus.*) A crackling: applied to the windy swelling of the flesh, and the grating of bones.

PSO'RA. (*a, æ.* f. Ψωρα.) The itch. See *Scabies.*

PSORA'LEA. (*a, æ.* f.; from ψωραλεος, scabby: because the calyx, and other parts of the plant, are more or less besprinkled with glandular dots, giving a scurfy roughness.) The name of a genus of plants. Class, *Diadelphia*; Order, *Decandria.*

Psoralea pentaphylla. The systematic name of the Chexicum contrayerva, *Contrayerva nova*, which is by many as much esteemed as the Dorstenia. It was introduced into Europe soon after the true plant, from Guiana as well as Mexico.

PSORI'ASIS. (*is, is.* f.; from ψωρα, the itch.) The disease to which Dr. Willan gives this title is characterised by a rough and scaly state of the cuticle, sometimes continuous, sometimes in separate patches, of various sizes, but of an irregular figure, and for the most part accompanied with rhagades or fissures of the skin. From the lepra it may be distinguished, not only by the distribution of the patches, but also by its cessation and recurrence at certain seasons of the year, and by the disorder of the constitution with which it is usually attended. Dr. Willan gives the following varieties: —

1. *Psoriasis guttata.* This complaint appears in small, distinct, but irregular patches of laminated scales, with little or no inflammation round them. The patches very seldom extend to the size of a sixpence. They have neither an elevated border, nor the oval or circular form by which all the varieties of lepra are distinguished; but their circumference is sometimes angular, and sometimes goes into small serpentine processes. The scale formed upon each of them is thin, and may be easily detached, leaving a red shining base. The patches are often distributed over the greatest part of the body, but more particularly on the back part of the neck, the breasts, arms, loins, thighs, and legs. They appear also upon the face, which rarely happens in lepra. In that situation they are red, and more rough than the adjoining cuticle, but not covered with scales. The psoriasis guttata often appears on children in a sudden eruption, attended with a slight disorder of the constitution, and spreads over the body within two or three days. In adults it commences with a few scaly patches on the extremities, proceeds very gradually, and has a longer duration than in children. Its first occurrence is usually in the spring season, after violent pains in the head, stomach, and limbs. During the summer it disappears spontaneously, or may be soon removed by proper applications, but it is apt to return again early in the ensuing spring, and continues so to do for several successive years. When the scales have been removed, and the disease is about to go off, the small patches have a shining appearance, and they retain a dark red, intermixed with somewhat of a bluish colour, for many days, or even weeks, before the skin is restored to its usual state. In the venereal disease there is an eruption which very much resembles the psoriasis guttata, the only difference being a slighter degree of scaliness, and a different shade of colour in the patches, approaching to a livid red, or very dark rose colour. The patches vary in their extent, from the section of a pea to the size of a silver penny, but are not exactly circular. They rise at first very little, if at all, above the cuticle. As soon, however, as the scales appear on them, they become sensibly elevated; and sometimes the edge or circumference of the patch is higher than the little scales in its centre. This eruption is usually seen upon the forehead, breast, between the shoulders, or in the inside of the fore-arms, in the groins, about the inside of the thighs, and upon the skin covering the lower part of the abdomen. The syphilitic psoriasis guttata is attended with, or soon followed by, an ulceration of the throat. It appears about six or eight weeks after a chancre has been healed by an ineffectual course of mercury. A similar appearance takes place, at nearly the same period, in some cases where no local symptoms had been noticed. When a venereal sore is in a discharging state, this eruption, or other secondary symptoms, often appear much later than the period above mentioned. They may also be kept back three months, or even longer, by an inefficient application of mercury. If no medicine be employed, the syphilitic form of the psoriasis guttata will proceed during several months, the number of the spots increasing, and their bulk being somewhat enlarged, but without any other material alteration.

2. The *Psoriasis diffusa* spreads into large patches, irregularly circumscribed, reddish, rough, and chappy, with scales interspersed. It commences, in general, with numerous

minute asperities, or elevations of the cuticle, more perceptible by the touch than by sight. Upon these small distinct scales are soon after formed, adhering by a dark central point, while their edges may be seen white and detached. In the course of two or three weeks all the intervening cuticle becomes rough and chappy, appears red, and raised, and wrinkled, the lines of the skin sinking into deep furrows. The scales which form among them are often slight, and repeatedly exfoliate. Sometimes, without any previous eruption of papulæ, a large portion of the skin becomes dry, harsh, cracked, reddish, and scaly, as above described. In other cases, the disorder commences with separate patches of an uncertain form and size, some of them being small, like those in the psoriasis guttata, some much larger. The patches gradually expand till they become confluent, and nearly cover the part or limb affected. Both the psoriasis guttata and diffusa likewise occur as a sequel of the lichen simplex. This transition takes place more certainly after frequent returns of the lichen. The parts most affected by psoriasis diffusa are the cheeks, chin, upper eyelids, and corners of the eyes, the temples, the external ear, the neck, the fleshy parts of the lower extremities, and the fore-arm, from the elbow to the back of the hand, along the supinator muscle of the radius. The fingers are sometimes nearly surrounded with a loose scaly incrustation; the nails crack and exfoliate superficially. When limited to the back of the hand, where it often appears in bakers, it is called the *bakers' itch.* The scaly patches likewise appear, though less frequently, on the forehead and scalp, on the shoulders, back, and loins, on the abdomen and instep. This disease occasionally extends to all the parts above mentioned at the same time; but, in general, it affects them successively, leaving one place free, and appearing in others; sometimes again returning to its first situation. The psoriasis diffusa is attended with a sensation of heat, and with a very troublesome itching, especially at night. It exhibits small, slight, distinct scales, having less disposition than the lepra to form thick crusts. The chaps, or fissures of the skin, which usually make a part of this complaint, are very sore and painful, but seldom discharge any fluid. When the scales are removed by frequent washing, or by the application of unguents, the surface, though raised and uneven, appears smooth and shining; and the deep furrows of the cuticle are lined by a slight scaliness. Should any portion of the diseased surface be forcibly excoriated, there issues out a thin lymph, mixed with some drops of blood, which slightly stains and stiffens the linen, but soon concretes into a thin dry scab; this is again succeeded by a white scaliness, gradually increasing, and spreading in various directions. As the complaint declines, the roughness, chaps, scales, &c. disappear, and a new cuticle is formed, at first red, dry, and shrivelled, but which, in two or three weeks, acquires the proper texture. The duration of the psoriasis diffusa is from one to four months. If, in some constitutions, it does not then disappear, but becomes, to a certain degree, permanent, there is, at least, an aggravation or extension of it, about the usual periods of its return. In other cases, the disease, at the vernal returns, differs much as to its extent, and also with respect to the violence of the preceding symptoms. The eruption is, indeed, often confined to a single scaly patch, red, itching, and chapped, of a moderate size, but irregularly circumscribed. This solitary patch is sometimes situated on the temple, or upper part of the cheek, frequently on the breast, the calf of the leg, about the wrist, or within and a little below the elbow joint, but especially at the lower part of the thigh, behind. It continues in any of these situations several months, without much observable alteration. The complaint, denominated with us the bakers' itch, is an appearance of psoriasis diffusa on the back of the hand, commencing with one or two small, rough, scaly patches, and finally extending from the knuckles to the wrist. The rhagades, or chaps and fissures of the skin, are numerous about the knuckles and ball of the thumb, and where the back of the hand joins the wrist. They are often highly inflamed and painful, but have no discharge of fluid from them. The back of the hand is a little raised or tumefied, and, at an advanced period of the disorder, exhibits a reddish, glossy surface, without crusts or numerous scales. However, the deep furrows of the cuticle are, for the most part, whitened by a slight scaliness. This complaint is not general among bakers: that it is only aggravated by their business, and affects those who are otherwise disposed to it, may be collected from the following circumstances:—1. It disappears about Midsummer, and returns in the cold weather at the beginning of the year. 2. Persons constantly engaged in the business, after having been once affected with the eruption, sometimes enjoy a respite from it for two or three years. 3. When the business is discontinued, the complaint does not immediately cease. The grocers' itch has some affinity with the bakers' itch, or tetter; but, being usually a pustular disease at its commencement, it properly belongs to another genus. Washerwomen, probably from the irritation of soap, are liable to be affected with a similar scaly disease on the hands and arms, sometimes on the face and neck, which, in particular constitutions, proves very troublesome, and of long duration.

3. The *Psoriasis gyrata* is distributed in narrow patches or stripes, variously figured: some of them are nearly longitudinal; some circular, or semicircular, with vermiform appendages; some are tortuous or serpentine; others like earth-worms or leeches: the furrows of the cuticle being deeper than usual, make the resemblance more striking. By

giving to them an annulated appearance. There is a separation of slight scales from the diseased surface, but no thick incrustations are formed. The uniform disposition of these patches is singular. A large circular one is sometimes situated on each breast above the papillæ; and two or three others, of a serpentine form, in analogous situations along the sides of the chest. The back is often variegated in like manner, with convoluted tetters, similarly arranged on each side of the spine. They likewise appear, in some cases, on the arms and thighs, intersecting each other in various directions. A slighter kind of this complaint affects delicate young women and children in small scaly circles or rings, little discoloured: they appear on the cheeks, neck, or upper part of the breast, and are mostly confounded with the herpetic, or pustular ringworm. The psoriasis gyrata has its remissions and returns, like the psoriasis diffusa: it also exhibits, in some cases, patches of the latter disorder on the face, scalp, or extremities, while the trunk of the body is chequered with the singular figures above described.

4. *Psoriasis palmaria.* This very obstinate species of tetter is nearly confined to the palm of the hand. It commences with a small, harsh, or scaly patch, which gradually spreads over the whole palm, and sometimes appears in a slighter degree on the inside of the fingers and wrist. The surface feels rough from the detached and raised edges of the scaly laminæ; its colour often changes to brown, or black, as if dirty; yet the most diligent washing produces no favourable effect. The cuticular furrows are deep, and cleft at the bottom longitudinally, in various places, so as to bleed on stretching the fingers. A sensation of heat, pain, and stiffness in the motions of the hand, attend this complaint. It is worse in winter or spring, and occasionally disappears in autumn or summer, leaving a soft, dark red cuticle; but many persons are troubled with it for a series of years, experiencing only very slight remissions. Every return or aggravation of it is preceded by an increase of heat and dryness, with intolerable itching. Shoemakers have the psoriasis palmaria locally, from the irritation of the wax they so constantly employ. In braziers, tinmen, silversmiths, &c. the complaint seems to be produced by handling cold metals. A long predisposition to it, from a weak, languid, hectical state of the constitution, may give effect to different occasional causes. Dr. Willan has observed it in women after lying-in: in some persons it is connected or alternates with arthritic complaints. When the palms of the hands are affected as above stated, a similar appearance often takes place on the soles of the feet; but with the exception of rhagades or fissures, which seem less liable to form there, the feet being usually kept warm and covered. Sometimes, also, the psoriasis palmaria is attended with a thickness of the præputium, with scaliness and painful cracks. These symptoms at last produce a phimosis, and render connubial intercourse difficult or impracticable; so great, in some cases, is the obstinacy of them, that remedies are of no avail, and the patient can only be relieved by circumcision. This affection of the præputium is not exactly similar to any venereal appearance; but rhagades or fissures, and indurated patches within the palm of the hand, take place in syphilis, and somewhat resemble the psoriasis palmaria. The venereal patches are, however, distinct, white, and elevated, having nearly the consistence of a soft corn. From the rhagades there is a slight discharge, very offensive to the smell. The soles of the feet are likewise, in this case, affected with the patches, not with rhagades. When the disease yields to the operation of mercury, the indurated portions of cuticle separate, and a smooth new cuticle is found formed underneath. The fingers and toes are not affected with the patches, &c. in venereal cases.

5. *Psoriasis labialis.* The psoriasis sometimes affects the lip without appearing on any other part of the body. Its characteristics are, as usual, scaliness, intermixed with chaps and fissures of the skin. The scales are of a considerable magnitude, so that their edges are often loose, while the central points are attached, a new cuticle gradually forms beneath the scales, but is not durable. In the course of a few hours it becomes dry, shrivelled, and broken; and, while it exfoliates, gives way to another layer of tender cuticle, which soon in like manner perishes. These appearances should be distinguished from the light chaps and roughness of the lips produced by very cold or frosty weather, but easily removed. The psoriasis labialis may be a little aggravated by frost or sharp winds, yet it receives no material alleviation from an opposite temperature. It is not, indeed, confined within any certain limit, or period of duration, having, in several instances, been protracted through all the seasons. The under lip is always more affected than the upper; and the disease takes place more especially in those persons whose lips are full and prominent.

6. *Psoriasis scrotalis.* The skin of the scrotum may be affected in the psoriasis diffusa like other parts of the surface of the body; but sometimes a roughness and scaliness of the scrotum appears as an independent complaint, attended with much heat, itching, tension, and redness. The above symptoms are succeeded by a hard, thickened, brittle texture of the skin, and by painful chaps or excoriations, which are not easy to be healed. This complaint is sometimes produced under the same circumstances as the prurigo scroti, and appears to be in some cases a sequel of it. A species of the psoriasis scrotalis likewise occurs in the lues venerea, but merits no particular attention, being always combined with other secondary symptoms of the disease.

7. *Psoriasis infantilis.* Infants between the ages of two months and two years are occasionally subject to the dry tetter. Irregular

scaly patches, of various sizes, appear on the cheeks, chin, breast, back, nates, and thighs. They are sometimes red, and a little rough or elevated; sometimes excoriated, then again covered with a thin incrustation; and, lastly, intersected by chaps or fissures. The general appearances nearly coincide with those of the psoriasis diffusa; but there are several peculiarities in the tetters of infants which require a distinct consideration.

8. The *Psoriasis inveterata* is characterised by an almost universal scaliness, with a harsh, dry, and thickened state of the skin. It commences with a few irregular though distinct patches on the extremities. Others appear afterwards on different parts, and becoming confluent, spread at length over all the surface of the body, except a part of the face, or sometimes the palms of the hands, and soles of the feet. The skin is red, deeply furrowed or wrinkled, stiff and rigid, so as somewhat to impede the motion of the muscles, and of the joints. So quick, likewise, is the production and separation of scales, that large quantities of them are found in the bed on which a person affected with the disease has slept. They fall off in the same proportion by day, and being confined within the linen, excite a troublesome and perpetual itching.

The same general plan of treatment is applicable to the different modifications of psoriasis, the period of its duration and the degree of irritability being carefully attended to. In the commencement of the eruption, when it appears suddenly, and the constitution is obviously disordered, a moderate antiphlogistic treatment must be pursued. A gentle purgative should be administered, and the diet made light, by abstracting every thing stimulant. This regimen, indeed, is requisite throughout the course of the disease, which is immediately aggravated in sympathy with irritation of the stomach, whether by spices, fermented liquors, pickles, or vegetable acids; whence the disuse of these articles contributes materially to its cure. But if the constitutional disturbance has subsided, the use of the fixed alkali, combined with sulphur lotum, or with an infusion of cinchona, together with tepid washing with simple water, or milk and water, will gradually remove the complaint. If the scaly patches have extended over a considerable part of the body, it must be viewed in a similar light with the lepra, and the remedies recommended for the first and second species of that disease must be resorted to. The shooting and burning pain and itching, in the early and more inflammatory stages of psoriasis, induce the patient to seek anxiously for relief from local external applications; but he is mortified to find that even the mildest substances prove irritants, and aggravate his distress. A decoction of bran, a little cream, or oil of almonds, sometimes produce ease; but any admixture, even of the oxide of zinc, or preparations of lead, with these liniments, is commonly detrimental. But the more local and less inflammatory eruption of psoriasis is considerably alleviated by local expedients. The palmar variety is deprived of its dryness and itching by exposure to the vapour of hot water, and by the application of the unguentum hydrargyri nitratis, diluted with the unguentum cetacei or ceræ, according to the degree of irritation in the skin. The scrotal and ophthalmic varieties are also relieved by the same application, or the unguentum hydrargyri præcipitati albi: but great care is requisite, in the former case, to keep the parts clean by frequent ablution, and to prevent attrition. In the psoriasis of the lips, nothing acrid can be borne; and much of the cure depends upon securing the parts from irritation, even from heat and cold, by a constant covering of some mild ointment or plaster. In all these cases, some of the internal remedies above mentioned must be at the same time employed, according to the period and other circumstances of the disease.

PSORIC. (*Psoricus;* from ψωρα, the itch.) Appertaining to the itch, or *psora*.

PSOROPHTHA'LMIA. (*a, æ.* f.; from ψωρα, the itch, and οφθαλμος, an eye.) Psorophthalmy. An inflammation of the eyelids, attended with ulcerations, which itch very much. The cause is an acrimony secreted by the glands of the eyelids. See *Ophthalmitis.*

PSOROPHTHALMIC. *Psorophthalmicus.* An affection of the eye, characterised principally by an itching. See *Psorophthalmia.*

Psychago'gicus. (From ψυχη, the mind, and αγω, to move.) Having the power of recovering the mind; as volatiles and stimulants, which recover in syncope or apoplexy.

PSYCHO'TRIA. (*a, æ.* f.; from ψυχοτροφον, an ancient name for an herb loving shade.) The name of a genus of the Class, *Pentandria;* Order, *Monogynia.*

Psychotria emetica. See *Callicocca.*

PSYCHROLU'TRUM. (From ψυχος, cold, and λουο, to wash.) A cold bath.

Psy'cticus. (From ψυχω, to refrigerate.) Having a cooling property: applied to refrigerating medicines.

PSYDRA'CIUM. (*um, ii.* n.; from ψυχος, cold.) A species of pustule. See *Pustule.*

PSY'LLIUM. (*um, ii.* n.; from ψυλλος, a flea: so called because it was thought to destroy fleas.) See *Plantago psyllium.*

PTA'RMICA. (*a, æ.* f.; from πταιρω, to sneeze: so called because it irritates the nose, and provokes sneezing.) Sneezewort. See *Achillæa ptarmica.*

PTE'RIS. (*is, idis.* f.; from πτερον, a wing: so called from the likeness of its leaves to wings.) The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Filices.*

Pteris aquilina. The systematic name of the common brake, or female fern. *Filix. Filix fœmina.* The plant which is thus called in the pharmacopœias, is not the *Polypodium filix fœmina*, but the *Pteris—frondibus supradecompositis, foliolis pinnatis, pinnis lanceolatis,*

infimis, pinnatifidis, superioribus minoribus, of Linnæus. The root is esteemed as an anthelmintic, and is supposed to be as efficacious in destroying the tapeworm as the root of the male fern.

PTEROCA'RPUS. (*us, i.* m.; from πτερον, a wing, and καρπος, fruit.) The name of a genus of plants in the Linnæan system. Class, *Diadelphia;* Order, *Decandria.*

Pterocarpus santalinus. The systematic name of the red saunders tree. *Santalum rubrum.* There is some reason to believe that several red woods, capable of communicating this colour to spirituous liquors, are sold as red saunders; but the true officinal kind appears, on the best authority, to be of this tree, which is extremely hard, of a bright garnet-red colour, and bears a fine polish. It is only the inner substance of the wood that is used as a colouring matter, and the more florid red is the most esteemed. On being cut, it is said to manifest a fragrant odour, which is more especially observed in old trees. According to Lewis, this wood is of a dull red, almost blackish colour on the outside, and a deep brighter red within; its fibres are now and then curled, as in knots. It has no manifest smell, and little or no taste; even of extracts made from it with water, or with spirit, the taste is not considerable.

To watery liquors it communicates only a yellowish tinge, but to rectified spirit a fine deep red. A small quantity of an extract made with this menstruum, tinges a large one of fresh spirit of the same colour; though it does not, like most other resinous bodies, dissolve in expressed oils. Of distilled oils, there are some, as that of lavender, which receive a red tincture from the wood itself, and from its resinous extract, but the greater number do not. Red saunders has been esteemed as a medicine; but its only use attaches to its colouring property. The juice of this tree, like that of some others, affords a species of sanguis draconis.

PTERY'GIUM. (*um, ii.* n. Πτερυξ, a wing.) 1. In *Pathology,* a membraneous excrescence which grows upon the internal canthus of the eye chiefly, and expands itself over the albugina and cornea towards the pupil. It appears to be an extension or promulgation of the fibres and vessels of the caruncula lachrymalis, or semilunar membrane, appearing like a wing. It is sometimes a pellucid pellicle, thin, of a cineritious colour, and unpainful, growing out from the caruncula lachrymalis. In other cases it is thick, of a red colour, attended with fulness of the vessels on the white of the eye, and stretches over the cornea like fasciculi of vessels. This was called *pannus:* this pannus is occasionally of various colours, painful and cancerous. The *pterygium pingue,* or *pinguicula,* is a small portion, like lard or fat, soft, without pain, and of a light yellow colour, which commonly is situated in the external angle of the eye, and rarely extends to the cornea; but often remains through life.

2. In *Botany,* a wing. See *Ala.*

PTERYGO. Names compounded of this word belong to muscles which are connected with the pterygoid process of the sphenoid bone; as *pterygo-pharyngeus,* &c.

Pterygo-pharyngeus. See *Constrictor pharyngeus superior.*

Pterygo-staphilinus externus. See *Levator palati.*

PTERYGOID. (*Pterygoides, Pterygoideus;* from πτερυξ, a wing, and ειδος, resemblance.) Resembling the wing of a bird.

Pterygoid process. A wing-like process of a bone. See *Sphenoides os.*

Pterygoide'um os. See *Sphenoides os.*

Pterygoideus externus. (*Pterygoideus,* from its belonging to the processus pterygoides.) *Pterygoideus minor,* of Winslow. *Musculus alaris externus.* A muscle placed, as it were, horizontally along the basis of the skull, between the pterygoid process and the condyle of the lower jaw. It usually arises by two distinct heads, one of which is thick, tendinous, and fleshy, from the outer wing of the pterygoid process of the os sphenoides, and from a small part of the os maxillare adjoining to it; the other is thin and fleshy, from a ridge in the temporal process of the sphenoid bone, just behind the slit that transmits the vessels to the eye. Sometimes this latter origin is wanting, and, in that case, part of the temporal muscle arises from this ridge. Now and then it affords a common origin to both these muscles. From these origins the muscle forms a strong fleshy belly, which descends almost transversely outwards and backwards, and is inserted, tendinous and fleshy, into a depression in the forepart of the condyloid process of the lower jaw, and into the anterior surface of the capsular ligament that surrounds the articulation of that bone. All that part of this muscle, which is not hid by the pterygoideus internus, is covered by a ligamentous expansion, which is broader than that belonging to the pterygoideus internus, and originates from the inner edge of the glenoid cavity of the lower jaw, immediately before the styloid process of the temporal bone, and extends obliquely downwards, forwards, and outwards, to the inner surface of the angle of the jaw. When these muscles act together, they bring the jaw horizontally forwards. When they act singly, the jaw is moved forwards, and to the opposite side. The fibres that are inserted into the capsular ligament, serve likewise to bring the moveable cartilage forwards.

Pterygoideus internus. *Pterygoideus major,* of Winslow. This muscle arises tendinous and fleshy from the whole inner surface of the external ala of the pterygoid process, filling all the space between the two wings; and from that process of the os palati that makes part of the pterygoid fossa. From thence growing larger, it descends obliquely downwards, forwards, and outwards, and is inserted, by tendinous and fleshy fibres, into the inside of the lower jaw, near its angle. This muscle

covers a great part of the *pterygoideus externus;* and along its posterior edge we observe a ligamentous band, which extends from the back part of the styloid process to the bottom of the angle of the lower jaw. The use of this muscle is to raise the lower jaw, and to pull it a little to one side.

Pterygoideus major. See *Pterygoideus internus.*

Pterygoideus minor. See *Pterygoideus externus.*

PTILO'SIS. (From πτιλος, bald.) See *Madarosis.*

PTI'SANA. (*a, æ.* f.; from πτισσω, to decorticate, bruise, or pound.) A ptisan. 1. Barley deprived of its husks, pounded, and made into balls.

2. A drink is so called by the French, made mostly of farinaceous substances; as barley, rice, grits, and the like, boiled with water, and sweetened to the palate.

PTO'SIS. (*is, is.* f.; from πιπτω, to fall.) A falling down of any viscus.

PTYALAGOGUE. (*Ptyalagogus;* from πτυαλον, spittle, and αγω, to excite.) A medicine, or any thing which promotes a discharge of the saliva or causes salivation.

PTYALI'SMOS. See *Ptyalism.*

PTYALISM. (*Ptyalismus, i.* m.; from πτυαλιζω, to spit.) A ptyalism: salivation, or increased secretion of saliva from the mouth.

An increased and involuntary flow of saliva may be caused in a variety of ways. Fits of anger, and many excitements of the mind, will cause it; chewing sialagogues; the sight, smell, or even thought of agreeable food; it is a common effect of mercury, and is symptomatic of many diseases of the mouth and neighbouring parts. Its species are,

1. *Salivation from sialagogues.* — There are numerous plants which stimulate the salivary glands, so as to cause a very considerable salivation, but particularly the root of the *Anthemis pyrethrum,* or pellitory of Spain; the leaves of the *Nicotiana tabacum,* or tobacco; the root of the *Daphne mezereum;* the *Pimpinella saxifragra,* or smaller burnet saxifrage; the *Imperatoria ostruthrum,* or master-wort. The increased flow of saliva which they cause generally ceases after an hour, and does not return unless they are used again.

2. *Mercurial ptyalism.* — In whatever mode introduced into the system, quicksilver generally produces salivation, and that after a short time, and even from a small quantity. The discontinuance of mercury is the cure: it soon subsides: but it is often attended with much inconvenience; as a high degree of irritation, not only of the mouth and fauces, but of the system generally. The common course of symptoms is this: the mouth feels uncommonly hot, and there is a coppery or metallic taste; the lingual and sublingual glands swell; aphthous vesicles appear, and terminate in minute and offensive ulcerations; the tongue swells; the throat becomes sore; feverishness and sleeplessness supervene, and are often present from an early period of the disease; and, in habits of great irritability, the surface of the body is, in particular parts or wholly, reddened with a peculiar erythematic inflammation, continuous or in patches, to which the names of *hydrargyria* and *erythema mercuriale* have been given by some writers. See *Eczema.* It is not yet clearly determined by what means mercury produces this singular effect on the salivary glands.

In attempting the cure of mercurial salivation, the attention is to be directed to the local state of the fauces, and the general state of the system. The use of all mercurials is to be avoided, both externally and internally. The patient is to be moved into a pure air, and warmth is to be guarded against, as well as exposure to cold: but there is no reason why the person should not be exposed to pure and open air in the summer time. The bowels are to be kept soluble with saline aperients. Acidulated gargles of barley-water, with nitre, citric acid, and the like, will often be sufficient, or very dilute compound infusion of roses; but the best of all gargles by far is the chlorate of soda or lime, so diluted as not to produce more than just a sensible sting in the mouth.

3. *Symptomatic salivation.* — This is produced by dentition, small-pox, scarlatina, palsy, and some diseases of the mouth; and requires the gargles just mentioned, and the remedies calculated to relieve the disease of which it is symptomatic.

4. *Critical salivation.* — This occurs sometimes in fevers, and is relieved by the gargles before enumerated, and by bark and wine.

5. *Chronic ptyalism.* — The long use of tobacco causes this sometimes; and it is an attendant on old age and idiotism.

PTY'ALUM. (From πτυω, to spit up.) The saliva or mucus from the bronchia.

Ptyasmago'gus. (From πτυασμα, sputum, and αγω, to expel.) A promoting the secretion of saliva.

PU'BES. (*es, is.* f.) 1. In *Anatomy,* the external part of the organs of generation of both sexes, which, after puberty, is covered with hair.

2. In *Botany,* the down or pubescence on leaves, seeds, &c. of some plants. See *Pubescence.*

Pubes seminis. See *Pappus.*

PUBESCENCE. *Pubescentia.* Under this term is included all kinds of down, hairs, and bristle-like bodies found on the surface of the leaves, stems, pods, &c. of plants. They differ considerably in form and texture, but consist of small slender bodies, which are either soft and yielding to the slightest impression, or rigid and comparatively unyielding: the former are, properly speaking, *pili,* or hairs; the latter bristles, *setæ;* and therefore, under these two heads, every kind of pubescence may be arranged. See *Pilus,* and *Seta.*

PUBESCENS. Pubescent: clothed with a soft wool, or hair. Applied to the stigma of the genus *Vicia.*

Pubis os. A separate bone of the fœtal pelvis. See *Innominatum os.*

PUDENDA'GRA. (*a, æ.* f.; from *pudenda*, the private parts, and *αγρα*, a seizure.) Gout in, or any disease of, the private parts.

PUDE'NDUM. (*um, i.* n.; from *pudor*, shame.) The parts of generation.

Pudendum muliebre. The female parts of generation.

PUDICAL. (*Pudicus;* from *pudor*, shame.) Belonging to the *pudenda.*

Pudical artery. *Arteria pudica.* Pudendal artery. A branch of the internal iliac, distributed on the organs of generation.

Pueri'lis morbus. The epilepsy.

PUERPERAL. *Puerperalis.* Appertaining to child-bearing; as puerperal convulsions, fever, &c.

Puerperal fever. (*Febris puerperalis*, or child-bed fever: so called because it soon follows delivery.) This disease was long considered as depending on the uterus, but there is now no question that it originates in the peritonæum, and that the uterus is seldom affected. Dissections show an inflamed condition of that membrane, not merely of that part which covers the uterus, but mostly of remoter parts, and also of the mesentery.

The disease mostly takes place about the third day after delivery. It commences with the common symptoms of severe febrile incursion, in combination with tenseness and tenderness of the belly; and very frequently a rigor announces the attack: the muscles of the back and hip are in great pain, and the breathing mostly becomes short and laborious. The flow of the milk and of the lochia are suspended; the stomach is sometimes troubled with sickness; and there is mostly frequent discharges of offensive porraceous suburra, and a troublesome diarrhœa affects the bowels. To account for the inflammation of the peritonæum, it is only necessary to call to mind the readiness with which, in particular constitutions, or states of excitement from various external and internal causes, inflammation often takes place in interior cavities, and the rapidity with which it spreads over every part of them. Mr. John Hunter was of opinion that the inflammation proceeded from a want of disposition in the uterus to recover itself after labour, whence the peritonæum, as a cavity, must necessarily be affected: at other times from a too sudden emptying of the abdomen; whence the peritonæum cannot always recover itself so as to be properly adapted to its new condition. But neither of these two causes are likely to produce the disease under consideration: for the uterus is perpetually exhibiting a morbid enlargement, without a disposition to recover itself; and the abdomen sudden evacuations, while no such fever ensues. A particular temperament, or a peculiar condition of the body at the time, must therefore co-operate; and, in the puerperal state, there is general febrile excitement, which necessarily follows upon the very great change that takes place upon delivery, and the transfer of accumulated action from one organ to another. Another accessory is also frequently found in the constitution of the atmosphere; for whatever change is most calculated to produce fever from a morbid excitement of the abdominal viscera, cannot fail to co-operate in the production of this disease from a local cause. A tendency to peritoneal or puerperal fever occurs more frequently in the autumn season than at any other time; and at this season there is great reason to believe that many auxiliaries may unite and produce a contagious miasm, which may act on women thus predisposed to its production.

The treatment of this disease varies, and depends entirely on the state of the system and the type of the fever. To lay down or adopt one plan of cure is truly empirical. When the patient is not reduced, and the local inflammation produces a strong, not diminished, arterial action, and there is no reason to suppose a contagious miasm was the cause of it, the accompanying fever is to be considered of an inflammatory type; and general and local bleeding, with purgatives and antiphlogistic diet, must be resorted to: the inflammation that will yield to these means must be subdued speedily, before any morbid secretion takes place; for after that happens, the bleeding will increase it, and the patient will perish: so that the abstraction of blood must immediately follow the establishment of the disease, and its repetition, with the exhibition of calomel purgatives, must be employed to as great an extent as the indications will allow. Eighteen or twenty ounces of blood should be drawn from the arm as soon as possible, and repeated within twelve hours, if necessary, and the strength will allow: but if venæsection have not taken place before the third day, the debility will have gained so high an ascendancy, and the symptoms put on so decided a nervous or typhoid complexion, that little benefit is to be gained from it. The bowels should at the same time be moved by five or six grains of the submuriate of mercury in some thick vehicle, and two or three grains repeated every six hours, until the tension and soreness of the belly have abated. Leeches are to be applied to those parts which are the most tense or sore. When no relief results, and the indications do not call for depletion, the volatile saline sudorifics are to be administered at regular intervals, and opium to be administered freely to procure rest and assuage pain.

It happens not unfrequently that the patient is so weak and delicate that more would be risked by general blood-letting than even by leaving the case to nature. And it also happens, occasionally, that the stomach and bowels are from the first in a very high degree of irritation, with violent purging and vomiting, and will not bear purgatives. It is here proper to yield to circumstances, and let the general rule admit of particular exceptions. Instead of the lancet, leeches must be depended on; and, in this manner, twelve ounces of

blood should be removed, and small doses of opium given, combined with the submuriate of mercury: such a combination will often be found to allay the irritation of the stomach and bowels. Anodyne fomentations, flannels wrung out of hot water, and sprinkled with camphorated spirit and the like, are serviceable, if so managed as not to chill the patient. When the debility or appearance of typhus-febrile action is observed, either in the progress of a decidedly opposite state in the commencement, or from the very beginning of the disease, which is frequently the case, the inflammation of the peritonæum has in the first case proceeded to the effusion of a subpuriform or serous fluid, and, in the latter, is of a nature not to be benefited by the antiphlogistic plan; then, in both cases, the strength of the patient is to be supported, and the effect of the puerperal miasm resisted, by saline and cordial diaphoretics, as acetate of ammonia, citrate of ammonia, camphire, the compound powder of ipecacuanha, cordial confection, dilute brandy or wine, and the like.

PUFFBALL. See *Lycoperdon.*

PUGI'LLUS. (*us, i.* m., and *um, i.* n.; from *pugnus,* the fist.) A pugil or handful.

PULE'GIUM. (*um, ii.* n.; from *pulex,* a flea: because the smell of its leaves, burnt, destroys fleas.) See *Mentha pulegium.*

Pulegium cervinum. Hart's pennyroyal. The *Mentha cervina,* of Linnæus.

PULICA'RIA. (*a, æ.* f.; from *pulex,* a flea: so named because it was thought to destroy fleas if hung in a chamber.) See *Plantago psyllium.*

PU'LMO. (*o, onis.* m. Πνευμων: Atticè πλευμων, *unde, per metathesin, pulmo.*) The lung. See *Lung.*

PULMONA'RIA. (*a, æ.* f.; from *pulmo,* the lung: so called because of its virtues in affections of the lungs.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* Lungwort.

Pulmonaria arborea. See *Lichen pulmonarius.*

Pulmonaria lutea. See *Hypochæris.*

Pulmonaria maculata. See *Pulmonaria officinalis.*

Pulmonaria officinalis. The systematic name of the spotted lung-wort. Jerusalem cowslips. Jerusalem sage. *Pulmonaria maculata. Symphytum maculosum.* This plant is rarely found to grow wild in England; but is very commonly cultivated in gardens, where its leaves become broader, and approach more to a cordate shape. The leaves, which are the part medicinally used, have no peculiar smell; but, in their recent state, manifest a slightly astringent and mucilaginous taste: hence it seems not wholly without foundation that they have been supposed to be demulcent and pectoral. They have been recommended in hæmoptoes, tickling coughs, and catarrhal defluxions upon the lungs. The name pulmonaria, however, seems to have arisen rather from the speckled appearance of these leaves resembling that of the lungs, than from any intrinsic quality which experience discovered to be useful in pulmonary complaints.

PULMONARY. *Pulmonalis.* Belonging to the lungs.

Pulmonary artery. The pulmonary artery, *arteria pulmonalis,* arises from the right ventricle of the heart, and soon divides into the right and left, which ramify throughout the lungs, and form a beautiful network on the air vesicles, where they terminate in the veins, *venæ pulmonales,* whose branches at length form four trunks, which empty themselves into the left auricle of the heart.

Pulmonary consumption. See *Phthisis.*

Pulmonary vein. See *Pulmonary artery.*

Pulmo'nicus. (From *pulmo,* the lungs.) Of or belonging to the lungs.

PULMONI'TIS. (*is, idis.* f.; from *pulmo,* the lung.) An inflammation of the lungs. See *Pneumonitis.*

PULPO'SUS. Pulpy: soft.

Pulsati'lla nigricans. (From *pulso,* to beat about: so called from its being perpetually agitated by the air.) See *Anemone pratensis.*

PULSE. *Pulsus.* The beating of the heart and arteries. The pulse is generally felt at the wrist, by pressing the radial artery with the fingers. The action depends upon the impulse given to the blood by the heart: hence physicians feel the pulse to ascertain the quickness or tardiness of the blood's motion, the strength of the heart, &c. See *Circulation.*

PULSILE'GIUM. (*um, ii.* n.; from *pulsus,* the pulse, and *lego,* to tell.) An instrument for measuring the pulse.

Pulvi'nar. (From *pulvis,* dust or chaff, with which they are filled.) *Pulvinarium.* A medicated cushion.

PU'LVIS. (*is, eris.* m.) A powder. This form of medicine is either coarse or very fine, simple or compound. In the compounded powders the intimate and complete admixture of the several ingredients, and more especially in those to which any of the more active substances, as opium, scammony, &c. are added, cannot be too strongly recommended; and for this purpose it may be proper to pass them, after they are mixed mechanically, through a fine sieve.

Pulvis aloes compositus. Compound powder of aloes. Formerly called *pulvis aloes cum guaiaco.* Take of extract of spiked aloe, an ounce and half; guaiacum resin, an ounce; compound powder of cinnamon, half an ounce: powder the extract of aloe and guaiacum resin separately; then mix them with the compound powder of cinnamon. The dose is from gr. x. to ℈j. It is a warm, aperient, laxative powder, calculated for the aged, and those affected with dyspeptic gout, attended with costiveness and spasmodic complaints of the stomach and bowels.

Pulvis aloes cum canella. A cathartic, deobstruent powder, possessing stimulating and aloetic properties; omitted in the last

London Pharmacopœia, as rather suited to the purpose of extemporaneous prescription.

PULVIS ALOES CUM FERRO. This possesses aperient and deobstruent virtues; and is mostly given in chlorosis and constipation. In the London Pharmacopœia this prescription is omitted for the same reason as pulvis aloes cum canellâ.

PULVIS ALOES CUM GUAIACO. See *Pulvis aloes compositus*.

PULVIS ANTIMONIALIS. See *Antimonialis pulvis*.

PULVIS AROMATICUS. See *Pulvis cinnamomi compositus*.

PULVIS CEPHALICUS. There are many powders prepared under this name, and most of them contain some agreeable aromatic, and many some asarabacca.

PULVIS CERUSSÆ COMPOSITUS. This is mostly used in the form of collyrium, lotion, or injection, as a mucilaginous sedative.

PULVIS CHELARUM CANCRI COMPOSITUS. An antacid and astringent powder, mostly given to children with diarrhœa and acidity of the primæ viæ.

PULVIS CINNAMOMI COMPOSITUS. Compound powder of cinnamon. Formerly called, *pulvis aromaticus, species aromatica*, and *species diambræ sine odoratis*. Take of cinnamon bark, two ounces; cardamom-seeds, an ounce and half; ginger root, an ounce; long pepper, half an ounce: rub them together, so as to make a very fine powder. The dose is from five to ten grains. An elegant stimulant, carminative, and stomachic powder.

PULVIS COBBII. *Pulvis tunguinensis*. This once celebrated powder consists of sixteen grains of musk, and forty-eight grains of cinnabar. It is directed to be mixed in a gill of arrack.

PULVIS CONTRAYERVÆ COMPOSITUS. Take of contrayerva root, powdered, five ounces; prepared shells, a pound and a half: mix. A febrifuge diaphoretic, mostly given in the dose of from one to two scruples in slight febrile affections.

PULVIS CORNU USTI CUM OPIO. Powder of burnt hartshorn with opium. *Pulvis opiatis*. Take of hard opium, powdered, a drachm; hartshorn, burnt and prepared, an ounce; cochineal, powdered, a drachm: mix. This preparation affords a convenient mode of exhibiting small quantities of opium, ten grains containing one of the opium. It is absorbent and anodyne.

PULVIS CRETÆ COMPOSITUS. Compound powder of chalk. *Pulvis è bolo compositus sine opio. Species è scordio sine opio. Diascordium*, 1720. Take of prepared chalk, half a pound; cinnamon bark, four ounces; tormentil root, acacia gum, of each three ounces; long pepper, half an ounce: reduce them separately into a very fine powder, and then mix. The dose is from ℨss. to ℨj. An astringent, carminative, and stomachic powder, exhibited in the cure of diarrhœa, pyrosis, and diseases arising from acidity of the bowels, inducing much pain.

PULVIS CRETÆ COMPOSITUS CUM OPIO. Compound powder of chalk with opium. *Pulvis e bolo compositus cum opio. Species e cordio cum opio*. Take of compound powder of chalk, six ounces and a half; hard opium, powdered, four scruples: mix. The dose from one scruple to two. The above powder, with the addition of opium, in the proportion of one grain to two scruples.

PULVIS IPECACUANHÆ COMPOSITUS. Compound powder of ipecacuanha. Take of ipecacuanha root, powdered, hard opium, powdered, of each a drachm; sulphate of potash, powdered, an ounce: mix. A diaphoretic powder, similar to that of Dr. Dover, which gained such repute in the cure of rheumatisms, and other diseases arising from obstructed perspiration and spasm. The dose is from five grains to a scruple.

PULVIS KINO COMPOSITUS. Compound powder of kino. Take of kino, 15 drachms; cinnamon bark, half an ounce; hard opium, a drachm: reduce them separately to a very fine powder, and then mix. The proportion of opium this astringent contains is one part to twenty. The dose is from five grains to a scruple.

PULVIS MYRRHÆ COMPOSITUS. A stimulant, antispasmodic, and emmenagogue powder, mostly exhibited in the dose of from fifteen grains to two scruples, in uterine obstructions and hysterical affections.

PULVIS OPIATUS. See *Pulvis cornu usti cum opio*.

PULVIS SCAMMONEÆ COMPOSITUS. Compound powder of scammony. *Pulvis comitis Warwicensis*. Take of scammony gum resin, hard extract of jalap, of each two ounces; ginger-root, half an ounce: reduce them separately to a very fine powder, and then mix. From ten to fifteen grains or a scruple are exhibited as a stimulating cathartic.

PULVIS SCAMMONII CUM ALOE. A stimulating cathartic, in the dose of from ten to fifteen grains.

PULVIS SCAMMONII CUM CALOMELANE. A vermifugal cathartic, in the dose of from ten to fifteen grains.

PULVIS SENNÆ COMPOSITUS. Compound powder of senna. *Pulvis diasennæ*. Take of senna leaves, supertartrate of potash, of each two ounces; scammony gum resin, half an ounce; ginger root, two drachms: reduce the scammony gum resin separately, the rest together, to a very fine powder, and then mix. The dose is from one scruple to one drachm. A saline stimulating cathartic.

PULVIS TRAGACANTHÆ COMPOSITUS. Compound powder of tragacanth. *Species diatragacanthæ frigidiæ*. Take of tragacanth, powdered, acacia gum, powdered, starch, of each an ounce and half; refined sugar, three ounces: powder the starch and sugar together; then add the tragacanth and acacia gum, and mix the whole. Tragacanth is very difficultly reduced to powder. The dose is from ten grains to a drachm. A very useful demulcent powder, which may be given in coughs, diarrhœas, strangury, &c.

PUMICE. A mineral, of which there are three species, the glossy, common, and porphyritic, found in the Lipari islands, and Hungary.

PUMPION. See *Cucurbita*.

PUNCTA'TUS. Dotted: applied to parts of plants, &c.; as the petals of the *Melanthium capense*, and the receptacle of the *Leontodon taraxacum*.

PU'NCTUM. (*um, i.* n.; from *pungo*, to prick.) A point: the opening or commencement of a duct of the eye has received this name, because its projection gives it the appearance of a spot.

Punctum aureum. Formerly, when a hernia of the intestines was reduced by an incision made through the skin and membrana adiposa, quite down to the upper part of the spermatic vessels, a golden wire was fixed and twisted, so as to prevent the descent of any thing down the tunica vaginalis.

Punctum lachrymale. Lachrymal point. Two small orifices, one of which is conspicuous in each eyelid, at the extremity of the tarsus, near the internal canthus, are called *puncta lachrymalia*.

PU'NICA. (*a, æ.* f.) The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Monogynia*.

Punica granatum. The systematic name of the pomegranate. *Granatum*. *Punica—foliis lanceolatis, caule arboreo*, of Linnæus. The rind of the fruit, and the flowers called *Balaustine flowers*, are the parts directed for medicinal use. In their smell there is nothing remarkable, but to the taste they are very astringent, and have successfully been employed as such in diseases, both internal and external.

PUNICEUS. (From *punica*, the pomegranate, the flowers of which are of a peculiar colour.) Puniceal, or of a fine bright red colour, like that of the flowers of the pomegranate. See *Colour*.

PUPIL. (*Pupilla, æ.* f.; from *pupa*, a babe: because it reflects the diminished image of the person who looks upon it, like a puppet.) The round opening in the middle of the iris, in which we see ourselves in the eye of another.

Pupil, closed. See *Synizesis*.

PUPILLA'RIS. (From *pupilla*, the pupil.) Of or belonging to the pupil.

Pupillaris membrana. See *Membrana pupillaris*.

Pupillæ velum. See *Membrana pupillaris*.

PURGAME'NTUM. A purge.

PURGATIVE. Whatever increases the peristaltic motion of the bowels, so as to considerably increase the alvine evacuations. See *Cathartic*.

Purging-flax. See *Linum catharticum*.

Purging-nut. See *Jatropha curcas*.

PURIFORM. (*Puriformis*; from *pus*, and *forma*, resemblance.) Like unto the secretum called pus.

PURPURA. (*a, æ.* f. Πορφυρα, the name of a shell of a purple colour: hence *purpura*, a purple colour.) An efflorescence consisting of small, distinct, purple specks and patches, attended with general debility, but not always with fever, which are caused by an extravasation of the vessels under the cuticle. It is divided into the five following species:—

1. *Purpura simplex.* This has the appearance of petechiæ, without much disorder of the constitution, except languor, pain in the limbs, and a sallow complexion. The petechiæ are most numerous on the breast, inside of the arms and legs, and are of various sizes, and commonly circular. There is no itching or other sensation attending the petechiæ.

2. *Purpura hæmorrhagica* is considerably more severe: the petechiæ are of larger size, and interspersed with vibices and ecchymoses, resembling the marks left by the strokes of a whip, or by violent bruises. They appear first on the legs, and afterwards on the thighs, arms, and trunk of the body; the hands being more rarely spotted with them, and the face generally free. They are of a bright red colour when they first appear, but soon become purple or livid; and when about to disappear they change to a brown or yellowish hue: the cuticle over them appears smooth and shining, but is not sensibly elevated; in a few cases, however, it has been seen raised into a sort of vesicle, containing black blood. This more particularly happens in the spots which appear on the tongue, gums, and palate, and inside of the cheeks and lips, where the cuticle is extremely thin: the gentlest pressure on the skin, even feeling the pulse, will often produce a purple blotch, like that which is left after a severe bruise.

The same state of habit which gives rise to these effusions under the cuticle, produces likewise copious discharges of blood, especially from the internal parts: they are often very profuse, and suddenly prove fatal; but in other cases they are less copious; sometimes returning every day at stated periods, and sometimes less frequently, and at regular intervals; and sometimes there is a slow and almost incessant oozing of blood. The bleeding occurs from the gums, nostrils, throat, inside of the cheeks, tongue, and lips, and sometimes from the lining membrane of the eyelids, the urethra, and external ear; and also from the internal cavities of the lungs, stomach, bowels, uterus, kidneys, and bladder.

This disease is often preceded by great lassitude, faintness, and pains in the limbs; but not unfrequently it appears suddenly in the midst of apparent good health. It is always accompanied with extreme debility and depression of spirits; the pulse is commonly feeble, and sometimes quickened; and heat, flushing, perspiration, and other symptoms of febrile irritation, occasionally attend. When the disease has continued for some time, the patient becomes sallow, and much emaciated; and some degree of œdema appears on the lower extremities, which afterwards extends

to other parts of the body. This disease is extremely uncertain in its duration: in some instances it has terminated in a few days, while in others it has continued, not only for many months, but even for years.

The causes of this disease are by no means clearly ascertained: it occurs at every period of life, and in both sexes, but especially in women and in boys before the age of puberty, particularly those who are employed in sedentary occupations, and who live in close and crowded situations. It has sometimes occurred as a sequæla of small-pox, and of measles, and sometimes in the third or fourth week of puerperal confinement. It is supposed that some local visceral obstruction is the cause of the disease in different instances, as artificial bleeding and purging tend greatly to relieve it. The ancient physicians attributed the hæmorrhages from the nose, gums, and other parts, to the morbid enlargement of the spleen.

In the slighter degrees of purpura occurring in children who are ill-fed and nursed, and who reside in close places, or in women shut up in similar situations, and debilitated by anxiety of mind, want of proper food, and by fatigue, the use of tonics, with the mineral acids, and wine, will doubtless be adequate to the cure of the disease, especially where exercise in the open air can be employed at the same time. But when it occurs in adults, especially those who already have the benefit of exercise in the air of the country, and who have suffered no privation with respect to diet, when it is accompanied with a white and loaded tongue, a quick and somewhat small though sharp pulse, occasional chills and heats, and other symptoms of feverishness, however moderate, and if there be at the same time fixed internal pains, a dry cough, and an irregular state of the bowels (symptoms which may be presumed to indicate some local congestion), then the administration of tonic medicines, particularly wine, cinchona, and other warmer tonics, will be found inefficacious, if not decidedly injurious. In such cases, free and repeated doses of medicines containing the submuriate of mercury, and regulated by their effects on the symptoms of the complaint, and by the appearance of the excretions from the intestines, will be found most beneficial.

If the pains are fixed, the marks of febrile irritation considerable, and the spontaneous hæmorrhage not profuse, local or general blood-letting may be employed with great benefit, especially in robust adults. When the urgency of hæmorrhagic tendency has been diminished by these means, the constitution rallies, though not rapidly, with the assistance of the mineral acids, and cinchona or cascarilla, or some preparation of iron, together with moderate exercise and nutritious diet.

3. *Purpura urticans* is distinguished by commencing in the form of rounded and reddish elevations of the cuticle, resembling wheals, which are not accompanied, like the wheals of urticaria, by any sensation of tingling and itching. These tumours gradually dilate; but within one or two days they subside to the level of the surrounding cuticle, and their hue becomes darker, and at length livid. They are most common on the legs, where they appear with petechiæ, but also appear on the arms, thighs, breast, &c.

It usually occurs in summer and autumn, and lasts from three to five weeks. Some œdema of the extremities usually accompanies it, and it is occasionally preceded by a stiffness and weight of the limbs. The same rules of treatment apply to this as to the preceding varieties of the disease.

4. *Purpura senilis* appears principally along the outside of the fore-arm, in elderly women, in successive dark purple blotches, of an irregular form, and various magnitude: each of these continues from a week to ten days, when the extravasated blood is absorbed.

Tonics or any other expedient do not appear to exert any influence over the eruption.

5. *Purpura contagiosa*, is an eruption of petechia which occasionally accompanies typhoid fevers: where they occur in close situations, they are merely symptomatic, and are very rarely seen.

Purpura alba. *Purpura rubra.* Many writers term the miliary fever, when the pustules are white, *purpura alba*; and, when they are red, *purpura rubra*.

Purpura scorbutica. Petechial eruptions in scurvy.

PURPUREUS. Purple: applied to designate the colour called purple. See *Colour*.

PURPURIC. (*Purpuricus*: so called from its colour.) Of or belonging to the acid so called.

Purpuric acid. *Acidum purpuricum.* The excrements of the *Boa constrictor* serpent contain lithic acid. Dr. Prout found that, on digesting this, or the same acid from urinary calculi, in dilute nitric acid, an effervescence takes place, and the lithic acid is dissolved, forming a beautiful purple liquid. The excess of nitric acid being neutralised with ammonia, and the whole concentrated by slow evaporation, the colour of the solution becomes of a deeper purple; and dark red granular crystals, sometimes of a greenish hue externally, soon begin to separate in abundance. These crystals are a compound of ammonia with the acid principle in question. The ammonia was displaced by digesting the salt in a solution of caustic potash, till the red colour entirely disappeared. This alkaline solution was then gradually dropped into dilute sulphuric acid, which, uniting with the potash, left the acid principle in a state of purity.

This acid principle is likewise produced from lithic acid by chlorine, and also, but with more difficulty, by iodine. Dr. Prout, the discoverer of this new acid, has, at the suggestion of Dr. Wollaston, called it purpuric acid, because its saline compounds have for the most part a red or purple colour.

This acid, as obtained by the preceding

process, usually exists in the form of a very fine powder, of a slightly yellowish or cream colour; and when examined with a magnifier, especially under water, appears to possess a pearly lustre. It has no smell nor taste. Its specific gravity is considerably above water. It is scarcely soluble in water. One tenth of a grain, boiled for a considerable time in 1000 grains of water, was not entirely dissolved. The water, however, assumed a purple tint, probably, Dr. Prout thinks, from the formation of a little purpurate of ammonia. Purpuric acid is insoluble in alkohol and æther. The mineral acids dissolve it only when they are concentrated.

PURSLANE. See *Portulaca*.

PURULENT. (*Purulens*; from *pus*.) Having the appearance of pus.

PUS. (*us, uris.* n.; pl. *pura.* Πύος.) Matter. A whitish, bland, cream-like fluid, heavier than water, found in abscesses, or on the surface of sores. It is distinguished, according to its nature, into laudable or good pus, scrofulous, serous, and ichorous pus, &c.

Pus taken from an healthy ulcer, near the source of circulation, as on the arm or breast, readily separates from the surface of the sore, the granulations underneath being small, pointed, and of a florid red colour, and has the following properties: it is nearly of the consistence of cream; is of a white colour; has a mawkish taste; and, when cold, is inodorous; but, when warm, has a peculiar smell. Examined in a microscope, it is found to consist of two parts,—of globules, and a transparent colourless fluid; the globules are probably white, at least they appear to have some degree of opacity. Its specific gravity is greater than that of water. It does not readily go into putrefaction. Exposed to heat, it evaporates to dryness, but does not coagulate. It does not unite with water in the heat of the atmosphere, but falls to the bottom; yet, if kept in a considerable degree of heat, it rises and diffuses itself through the water, and remains mixed with it, even after having been allowed to cool, the globules being decomposed.

Pus varies in its appearance, according to the different circumstances which affect the ulcer that forms it; such as the degree of violence of the inflammation, also its nature, whether healthy or unhealthy; and these depend upon the state of health, and strength of the parts yielding pus. These changes arise more from indolence and irritability than from any absolute disease; many specific diseases, in healthy constitutions, producing no change in the appearance of the matter from their specific quality. Thus, the matter from a gonorrhœa, from the small-pox pustules, or the chicken-pock, has the same appearance, and seems to be made up of similar parts, consisting of globules floating in a transparent fluid, like common pus; the specific properties of each of these poisons being superadded to those of pus. Matter from a cancer may be considered as an exception; but a cancerous ulcer is never in a healthy state.

In indolent ulcers, whether the indolence arises from the nature of the parts, or the nature of the inflammation, the pus is made of globules and flaky particles, floating in a transparent fluid; and globules and flakes are in different proportions, according to the degree of indolence: this is particularly observable in scrofulous abscesses, preceded by a small degree of inflammation. That this flaky appearance is no part of true pus, is well illustrated by observing, that the proportion it bears to the globules is greatest where there is the least inflammation: and in those abscesses that sometimes occur, which have not been preceded by any inflammation at all, the contents are wholly made up of a curdy or flaky substance of different degrees of consistence, which is not considered to be pus, from its not having the properties stated in the definition of that fluid.

The constitution and part must be in health to form good pus; for very slight changes in the general health are capable of producing an alteration in it, and even of preventing its being formed at all, and substituting in its place coagulating lymph.

This happens most readily in ulcers in the lower extremities, owing to their distance from the source of the circulation rendering them weaker. And it is curious to observe the influence that distance alone has upon the appearance of pus.

The cases in which pus is formed are, properly speaking, all reducible to one, which is, the state of parts consequent to inflammation. For, as far as we yet know, observes Sir E. Home, pus has in no instance been met with unless preceded by inflammation; and although, in some cases, a fluid has been formed independent of preceding inflammation, it differs from pus in many of its properties.

In considering the time required for the formation of pus, it is necessary to take notice of the periods which are found, under different circumstances, to intervene between a healthy or natural state of the parts, and the presence of that fluid after the application of some irritating substance to the skin.

In cases of wounds made into muscular parts, where blood-vessels are divided, the first process which takes place is the extravasation of red blood; the second is the exudation of coagulating lymph, which afterwards becomes vascular; and the third, the formation of matter, which last does not in common take place in less than two days: the precise time will, however, vary exceedingly, according to the nature of the constitution, and the state of the parts at the time.

If an irritating substance is applied to a cuticular surface upon which it raises a blister, pus will be formed in about twenty-four hours. See also *Abscess*.

PUSTULA ORIS. See *Aphthæ*.

PUSTULE. (*Pustula*, a little pustule; from *pus*, matter.) An elevation of the cuti-

cle, sometimes globate, sometimes conoidal in its form, and containing pus or lymph, which is in general discoloured.

Pustules are various in their size, but the diameter of the largest seldom exceeds two lines. There are many different kinds of pustules, properly distinguished in medical authors, by specific appellations; as,

1. *Phlyzacium*, a small pustule containing pus, and raised on a hard, circular, inflamed base of a vivid red colour. It is succeeded by a thick, hard, dark-coloured scab.

2. *Psydracium*, according to Dr. Willan, a minute pustule, irregularly circumscribed, producing but a slight elevation of the cuticle, and terminating in a laminated scab. Many of these pustules usually appear together, and become confluent. When mature, they contain pus; and, after breaking, discharge a thin watery humour. Pustules originate from an inflammation of the skin, and the consequent partial effusion of purulent matter under the cuticle, by which the latter is elevated into small circumscribed tumours. Sometimes several of these elevations arise upon a common inflamed surface; but most frequently, the inflammation of the base of each is distinct and circumscribed. They often terminate in a scabby incrustation, varying in hardness according to the various tenacity of the contained fluid, and sometimes in superficial ulceration. The genera impetigo, porrigo, ecthyma, variola, and scabies, which Dr. Willan includes under the order of pustulæ, have nothing in common in their character, except the appearance of pustules in some stage of their progress; for some are contagious and others not, some are acute and others chronic.

PUTA'MEN. (*en, inis.* n.; from *puto*, to cut.) The bark or paring of any vegetable; as the walnut. See *Juglans regia.*

Putamineæ. The name of an order in Linnæus's Fragments of a Natural Method, embracing those which have an outer shell, or putamen, over a hard fruit; as in *Capparis*, and *Merisoma.*

PUTREFACTION. (*Putrefactio*; from *putrefacio*, to become rotten, to dissolve.) Putrid fermentation. Putrefactive fermentation. The spontaneous decomposition of such animal and vegetable matters as exhale a fœtid smell. The solid and the fluid matters are resolved into gaseous compounds and vapours, which escape and unite an earthy residuum. The requisites to this process are, 1. A certain degree of humidity. 2. The access of atmospheric air. 3. A certain degree of heat: hence the abstraction of the air and water, or humidity, by drying, or its fixation by cold, by salt, sugar, spices, &c. will counteract the process of putrefaction, and favour the preservation of food, on which principle some patents have been obtained. See *Fermentation.*

Putrid fever. See *Typhus.*

PYLO'RIC. (*Pyloricus*; from *pylorus.*) Belonging to the pylorus.

Pyloric artery. *Arteria pylorica.* A branch of the hepatic artery.

PYLO'RUS. (*us, i.* m.; from πυλη, an entrance, and ουρος, a guard: because it guards, as it were, the entrance of the bowels.) The inferior aperture of the stomach, which opens into the intestines.

Pyopoe'tic. (From πυον, pus, and ποιεω, to make.) Suppurative.

Pyorrhœ'a. (From πυον, pus, and ρεω, to flow.) A purulent discharge.

Pyotu'ria. (From πυον, pus, and ουρον, urine.) *Pyuria.* Purulent urine.

PYRAMIDAL. (*Pyramidalis*: so called from its form.) Of a pyramidal figure.

Pyramidalia corpora. See *Corpus pyramidale.*

PYRAMIDA'LIS. (From πυραμις, a pyramid.) A muscle in the front of the belly. Fallopius, who is considered as the first accurate describer of this muscle, gave it the name of *pyramidalis*, from its shape: hence it is called *pyramidalis Fallopii*, by Douglas. But Vesalius seems to have been acquainted with it, and to have described it as a part of the rectus. It is called *pyramidalis vel succenturiatus*, by Cowper. It is a very small muscle, situated at the bottom of the forepart of the rectus, and is covered by the same aponeurosis that forms the anterior part of the sheath of that muscle. It arises, by short, tendinous fibres, from the upper and forepart of the os pubis. From this origin, which is seldom more than an inch in breadth, its fibres ascend somewhat obliquely, to be inserted into the linea alba, and inner edge of the rectus, commonly at about the distance of two inches from the pubes, and frequently at a greater or less distance, but always below the umbilicus. In some subjects the pyramidalis is wanting on one or both sides; and when this happens, the internal oblique is usually found to be of greater thickness at its lower part. Now and then, though rarely, there are two at one side, and only one at the other; and Sabatier has even seen two on each side. Fallopius, and many others after him, have considered it as the congener of the internal oblique; but its use seems to be to assist the lower part of the rectus.

Pyramidalis faciei. See *Levator labii superioris alæque nasi.*

PYRENEITE. A greyish black coloured mineral found in the Pyrenees.

Pyrenoi'des. (From πυρην, a kernel, and ειδος, likeness: so called from its kernel-like shape.) Kernel-shaped: applied to the odontoid process of the second vertebra.

Pyrete'rium. (From πυρ, fire, and τηρεω, to keep.) The fire-hole of a furnace.

PYRE'THRUM. (*um, i.* n.; from πυρ, fire, because of the hot taste of its root.) See *Anthemis pyrethrum.*

Pyrethrum sylvestre. See *Achillea.*

PYRETIC. (*Pyreticus*; from πυρ, fire.) Appertaining to fever.

PYRETOLOGY. (*Pyretologia, æ.* f.; from πυρετος, fever, and λογος, a discourse.) A discourse or doctrine on fevers.

PYRE'XIA. (*a, æ.* f.; from $\pi\upsilon\rho$, fire.) Fever.

PYREXIÆ. Febrile diseases. The first class of Cullen's Nosology; characterised by frequency of pulse after a cold shivering, with increase of heat, and especially, among other impaired functions, a diminution of strength.

PYREXIAL. (*Pyrexialis;* from *pyrexia*, fever.) Febrile. Appertaining to fever.

PYRIFORM. (*Pyriformis;* from *pyrus*, the pear, and *forma*, likeness.) Pear-like; pear-shaped.

PYRIFO'RMIS. (From *pyrus*, a pear, and *forma*, a shape: shaped like a pear.) A small radiated muscle of the pelvis, situated under the glutæus maximus, along the inferior edge of the glutæus minimus. *Periformis, seu iliacus externus,* of Douglas and Cowper. Spigelius was the first who gave a name to this muscle, which he called *pyriformis*, from its supposed resemblance to a pear. It is the *pyriformis sive pyramidalis*, of Winslow. It arises by three and sometimes four tendinous and fleshy origins, from the anterior surface of the second, third, and fourth pieces of the os sacrum, so that this part of it is within the pelvis. From these origins the muscle grows narrower, and passing out of the pelvis, below the niche in the posterior part of the ilium, from which it receives a few fleshy fibres, is inserted by a roundish tendon, of an inch in length, into the upper part of the cavity, at the root of the trochanter major. The use of this muscle is to assist in moving the thigh outwards, and moving it a little upwards.

PYRI'TES. (From $\pi\upsilon\rho$, fire: so called because it strikes fire with steel.) Native compounds of metal with sulphur.

PYRITES ARSENICALIS. A sulphuret of iron with arsenic.

PYRMONT. The name of a village in the circle of Westphalia, in Germany, in which is a celebrated mineral spring. Pyrmont water, *Aqua pyrmontana*, is of an agreeable, though strongly acidulated taste, and emits a large portion of gas, which affects the persons who attend at the well, and also those who drink the fluid, with a sensation somewhat resembling that produced by intoxication. A general view of the analysis of this water will show that it stands the first in rank of the highly carbonated chalybeates, and contains such an abundance of carbonic acid, as not only to hold dissolved a number of carbonic salts, but to show all the properties of this acid uncombined, and in its most active form. Pyrmont water is likewise a strong chalybeate, with regard to the proportion of iron; and it is besides a very hard water, containing much selenite and earthy carbonates. The diseases to which this mineral water may be advantageously applied, are the same as those for which the Spa, and others of the acidulated chalybeates, are resorted to, that is, in all cases of debility that require an active tonic that is not permanently heating; as various disorders in the alimentary canal, especially bilious vomiting, and diarrhœa, and complaints that originate from obstructed menstruation. At Pyrmont, the company generally drink this water by glassfuls, in a morning, to the quantity of two, three, or more English pints. Its common operation is by urine; but, if taken copiously, it generally proves laxative; and when it has not this effect, and that effect is wanted, they commonly mix, with the first glass drank in the morning, from one to five or six drachms of some purging salts.

PYRO-ACETIC. (*Pyro-aceticus:* so called because it is an acetic acid obtained by the aid of fire.) Appertaining to the acid so called.

PYRO-ACETIC ACID. *Acidum pyro-aceticum.* Pyro-acetic spirit. The acid which is obtained by the destructive distillation of the acetates, from which a modified vinegar escapes.

PYRO-CITRIC. (*Pyro-citricus:* so called, because it is a peculiar citric acid obtained by the assistance of fire.) Of or belonging to this peculiar acid.

PYRO-CITRIC ACID. *Acidum pyro-citricum.* An acid obtained by distilling citric acid: not applied to any medicinal use.

PYROGOM. A variety of diopside.

PY'ROLA. (*a, æ.* f.; from *pyrus*, a pear: so named because its leaves resembles those of the pear-tree.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

2. The pharmacopœial name of the winter-green. See *Pyrola rotundifolia.*

PYROLA ROTUNDIFOLIA. The systematic name of the round-leaved winter-green. This elegant little plant, common in our woods, is now forgotten in the practice of medicine. It possesses gently astringent qualities, and has a somewhat bitter taste.

PYROLA UMBELLATA. The exotic species is a strong diuretic. The leaves are infused in boiling water, and the tea drank rather freely.

PYROLIGNOUS. (*Pyrolignosus;* from $\pi\upsilon\rho$, fire, and *lignum*, wood, and so called because it is a distillation from wood by means of fire.) Of or belonging to a peculiar acid so called.

PYROLIGNOUS ACID. *Acidum pyrolignosum.* In the destructive distillation of any kind of wood, an acid is obtained, which was formerly called *acid spirit of wood*, but now pyrolignous acid. Fourcroy and Vauquelin showed that this acid was merely the acetic, contaminated with empyreumatic oil and bitumen. See *Acetic acid.*

Under *Acetic acid* will be found a full account of the production and purification of pyrolignous acid.

PYROLITHIC. (*Pyrolithicus;* from $\pi\upsilon\rho$, fire, and $\lambda\iota\theta o\varsigma$, a stone.) Of or belonging to a peculiar acid so called.

PYROLITHIC ACID. When uric acid concretions are distilled in a retort, silvery white plates sublime. These are pyrolithate of ammonia. When their solution is poured into that of subacetate of lead, a pyrolithate of lead

falls, which, after proper washing, is to be shaken with water, and decomposed by sulphuretted hydrogene gas. The supernatant liquid is now a solution of pyrolithic acid, which yields small acicular crystals by evaporation.

PYROMALIC. (*Pyromalicus*; from πυρ, fire, and malic acid: so called because it is procured by distilling malic acid in a retort.) Of or belonging to the peculiar acid so called.

Pyromalic acid. *Acidum pyromalicum.* When malic or sorbic acid, for they are the same, is distilled in a retort, an acid sublimate, in white needles, appears in the neck of the retort, and an acid liquid distils into the receiver. This liquid, by evaporation, affords crystals, constituting a peculiar acid, to which the above name has been given.

PYROMUCIC. (*Pyromucicus*; from πυρ, fire, and mucic acid.) Of or belonging to the peculiar acid so called.

Pyromucic acid. *Acidum pyromucicum.* Pyromucous acid. This acid is one of the products of the distillation of mucic acid.

Pyromucous acid. See *Pyromucic acid.*

PYROPE. A subspecies of dodecahedral garnet, of a dark blood-red colour. It comes from Saxony, and is highly esteemed as a gem.

PYROMETER. (*Pyrometrum*, *i.* n.; from πυρ, fire, and μετρον, measure.) To measure those higher degrees of heat to which the thermometer cannot be applied, there have been other instruments invented by different philosophers: these are called *pyrometers.* The most celebrated instrument of this kind, and which has been adopted into general use, is that invented by the late ingenious Mr. Wedgwood.

PYROPHORUS. An artificial product, which takes fire or becomes ignited on exposure to the air. It is prepared from alum by calcination, with the addition of various inflammable bodies.

PYROPHYSALITE. See *Physalite.*

PYRO'SIS. (*is*, *is.* f.; from πυροω, to burn.) A disease called in Scotland the water-brash; in England, black-water: known by a burning pain in the stomach, attended with copious eructation, generally of a watery insipid fluid. See *Cardialgia.*

PYROSMALITE. A liver-coloured mineral, which comes from Wermeland.

PYROTARTARIC. (*Pyrotartaricus*; from πυρ, fire, and *tartaricus*, the acid of tartar.) Of or belonging to the peculiar acid so called.

Pyrotartaric acid. *Acidum pyrotartaricum.* Into a coated glass retort introduce tartar, or rather tartaric acid, till it is half full, and fit to it a tubulated receiver. Apply heat, which is to be gradually raised to redness. Pyrotartaric acid of a brown colour, from impurity, is found in the liquid products, which is to be purified by evaporation, solution, and filtration, several times.

Pyrotartarous acid. See *Pyrotartaric.*

Pyrote'chnia. (From πυρ, fire, and τεχνη, an art.) Chemistry, or that art by which the properties of bodies are examined by fire.

Pyro'tica. (From πυροω, to burn.) Caustics.

PYROXENE. See *Augite.*

PY'RUS. The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Pentagynia.*

Pyrus communis. The pear-tree. The fruit is analogous to that of the apple, but more delicately flavoured. Its juice, when fermented, forms perry. Pears, when ripe, are easy of digestion, when not taken in excess.

Pyrus cydonia. The systematic name of the quince-tree. The fruit is termed *Cydonium malum*, or quince. The tree which affords this fruit is the *Pyrus—foliis integerrimis, floribus solitariis*, of Linnæus. Quince seeds are directed by the London College to be made into a decoction, which is recommended in aphthous affections, and excoriations of the mouth and fauces.

Pyrus malus. The systematic name of the apple-tree. The common crab-tree is the parent of all the vast variety of apples at present cultivated. Apples, in general, when ripe, afford a pleasant and easily digestible fruit for the table; but, when the stomach is weak, they are very apt to remain unaltered for some days, and to produce dyspepsia. Sour fruits are to be considered as unwholesome, except when boiled or baked, and rendered soft and mellow with the addition of sugar.

Pyu'lcum. (From πυον, pus, and ελκω, to draw.) An instrument to extract the pus from the cavity of any sinuous ulcer.

Pyu'ria. See *Pyoturia.*

Pyxaca'ntha. (From πυξος, box, and ακανθα, a thorn.) The barberry, or thorny box-tree.

PY'XIS. (*is*, *idis.* f.; so called because it was made with the πυξος, or box-tree.) Properly a box; but, from its resemblance, the cavity of the hip-bone, or acetabulum, has been sometimes so called.

Q.

Q. P. An abbreviation of *quantum placet*, as much as you please.

Q. S. The contraction for *quantum sufficit*, a sufficient quantity.

Q. V. An abbreviation of *quantum vis*, as much as you will.

QUADRANGULAR. *Quadrangularis.* Four-cornered: often used to express form

of muscles, leaves, &c. The receptacle of the *Dorstenia houstonii*, and *contrayerva*, is quadrangular.

QUADRA'TUS. (From *quadrate*, square: so called from its figure.) Square-figured.

Quadrates. See *Depressor labii inferioris.*

Quadratus femoris. A muscle of the thigh, situated on the outside of the pelvis. It is a flat, thin, and fleshy muscle, but not of the shape its name would seem to indicate. It is situated immediately below the gemini. It arises tendinous and fleshy from the external surface and lower edge of the tuberosity of the ischium, and is inserted by short tendinous fibres into a ridge which is seen extending from the basis of the trochanter major to that of the trochanter minor. Its use is to bring the os femoris outwards.

Quadratus genæ. See *Platisma-myoides.*

Quadratus labii inferioris. See *Depressor labii inferioris.*

Quadratus lumborum. *Quadratus, seu lumbaris externus*, of Winslow. A muscle situated within the cavity of the abdomen. This is a small, flat, and oblong muscle, that has got the name of *quadratus*, from its shape, which is that of an irregular square. It is situated laterally, at the lower part of the spine. It arises tendinous and fleshy from about two inches from the posterior part of the spine of the ilium. From this broad origin it ascends obliquely inwards, and is inserted into the transverse processes of the four superior lumbar vertebræ, into the lower edge of the last rib, and, by a small tendon that passes up under the diaphragm, into the side of the last vertebra of the back. When this muscle acts singly, it draws the loins to one side: when both muscles act, they serve to support the spine, and perhaps to bend it forwards. In laborious respiration, the quadratus lumborum may assist in pulling down the ribs.

Quadratus maxillæ inferioris. See *Platysma-myoides.*

Quadratus radii. See *Pronator radii quadratus.*

Quadridenta'tus. (From *quadra*, from *quatuor*, four, and *dens*, a tooth.) Four-toothed.

Quadrifi'dus. (From *quadra*, and *findo*, to cleave.) Four-clefted.

Quadri'ga. (From *quatuor*, four, and *jugum*, a yoke.) A bandage which resembles the trappings of a four-horse cart.

Quadriloba'tus. (From *quadra*, and *lobatus*, lobed.) Four-lobed.

Quadrilocula'ris. (From *quadra*, and *locularis*, having cells.) Quadrilocular, or four-celled.

Quadripa'rtitus. (From *quadra*, and *partitus*, divided.) Quadripartite; having four divisions.

Quadriva'lvus. Quadrivalve, or having four valves.

QUA'RTAN. (*Quartanus*, fourth.) Applied to a fourth-day ague. Of this species of ague there are several varieties noticed by authors. The most frequent of these are,—1. The double quartan, with two paroxysms, or fits, on the first day, none on the second and third, and two again on the fourth day. 2. The double quartan, with a paroxysm on the first day, another on the second, but none on the third. 3. The triple quartan, with three paroxysms every fourth day. 4. The triple quartan, with a slight paroxysm every day, every fourth paroxysm being similar. See *Ague.*

QUARTATION. An operation in assaying, by which the quantity of one thing is made equal to a fourth part of the quantity of another thing.

QUARTZ. The name of a genus of minerals, which Jameson divides into two species, rhomboidal quartz, and indivisible quartz.

The *rhomboidal* contains 14 subspecies:—1. Amethyst. 2. Rock crystal. 3. Milk quartz, which is of a rose-red and milk-white colour. It is found in Bavaria. 4. Common quartz, of many colours, and is one of the most abundant minerals in nature. 5. Prase. 6. Cat's-eye. 7. Fibrous quartz, of a greenish or yellowish white colour, found on the banks of the Moldau, in Bohemia. 8. Iron flint. 9. Hornstone. 10. Flinty slate. 11. Flint. 12. Calcedony. 13. Heliotrope. 14. Jasper.

The *indivisible* quartz has nine subspecies:—1. Floatstone. 2. Quartz, or siliceous sinter, of which there are three kinds, the common, opaline, and pearly. 3. Hyalite. 4. Opal. 5. Menilite. 6. Obsidian. 7. Pitchstone. 8. Pearlstone. 9. Pumicestone.

QUA'SSIA. (*a*, *æ*. f.; from a slave of the name of *Quassi*, who first used it with uncommon success as a secret remedy in the malignant endemic fevers which frequently prevailed at Surinam.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Monogynia.*

2. The pharmacopœial name of the bitter quassia. See *Quassia amara.*

Quassia amara. The systematic name of the bitter quassia tree. *Quassia—floribus hermaphroditis, foliis impari-pinnatis, foliolis oppositis, sessilibus, petiolo articulato alato, floribus racemosis*, of Linnæus. The root, bark, and wood of this tree are all comprehended in the catalogues of the Materia Medica. The tree is a native of South America, particularly of Surinam, and also of some of the West India islands.

The roots are perfectly ligneous: they may be medically considered in the same light as the wood, which is now most generally employed, and seems to differ from the bark in being less intensely bitter: the latter is, therefore, thought to be a more powerful medicine. Quassia has no sensible odour; its taste is that of a pure bitter, more intense and durable than that of almost any other known substance; it imparts its virtues more completely to watery than to spirituous menstrua, and its infusions are not blackened by the addition of sulphate of iron. The watery

extract is from a sixth to a ninth of the weight of the wood, the spirituous about a twenty-fourth. Quassia, as before observed, derived its name from a negro named Quassi, who employed it with uncommon success as a secret remedy in the malignant endemic fevers which frequently prevailed at Surinam. In consequence of a valuable consideration, this secret was disclosed to Daniel Rolander, a Swede, who brought specimens of the quassia wood to Stockholm, in the year 1756; and, since then, the effects of this drug have been generally tried in Europe, and numerous testimonies of its efficacy published by many respectable authors. Various experiments with quassia have likewise been made, with a view to ascertain its antiseptic powers; from which it appears to have considerable influence in retarding the tendency to putrefaction; and this, Professor Murray thinks, cannot be attributed to its sensible qualities, as it possesses no astringency whatever; nor can it depend upon its bitterness, as gentian is much bitterer, yet less antiseptic. The medicinal virtues ascribed to quassia are those of a tonic, stomachic, antiseptic, and febrifuge. It has been found very effectual in restoring digestion, expelling flatulencies, and removing habitual costiveness, produced from debility of the intestines, and common to a sedentary life. Dr. Lettsom, whose extensive practice gave him an opportunity of trying the effects of quassia in a great number of cases, says: "In debility, succeeding febrile diseases, the Peruvian bark is most generally more tonic and salutary than any other vegetable hitherto known; but in hysterical atony, to which the female sex is so prone, the quassia affords more vigour and relief to the system than the other, especially when united with the vitriolum album, and still more with the aid of some absorbent." In dyspepsia, arising from hard drinking, and also in diarrhœas, the Doctor exhibited the quassia with great success. But, with respect to the tonic and febrifuge qualities of quassia, he says: "I by no means subscribe to the Linnæan opinion, where the author declares, 'me quidem judice chinchinam longe superat.'" It is very well known that there are certain peculiarities of the air, and idiosyncrasies of constitution, unfavourable to the exhibition of Peruvian bark, even in the most clear intermissions of fever; and writers have repeatedly noticed it. But this is comparatively rare. About midsummer, 1785, Dr. Lettsom met with several instances of low remittent and nervous fevers, wherein the bark uniformly aggravated the symptoms, though given in intermissions the most favourable to its success, and wherein quassia or snake-root was successfully substituted. In such cases he mostly observed, that there was great congestion in the hepatic system, and the debility at the same time discouraged copious evacuations. And in many fevers, without evident remissions to warrant the use of the bark, whilst at the time increasing debility began to threaten the life of the patient, the doctor found that quassia or snake-root, singly or combined, upheld the vital powers, and promoted a critical intermission of fever, by which an opportunity was afforded for the bark to effect a cure. It may be given in infusion, or in pills made from the watery extract: the former is generally preferred, in the proportion of three or four scruples of the wood to twelve ounces of water.

Quassia simarouba. The systematic name of the simarouba quassia. *Simarouba. Simaraba. Euonymus. Quassia —floribus monoicis, foliis abrupte pinnatis, foliolis alternis subpetiolatis petiolo nudo, floribus paniculatis,* of Linnæus. The bark of this tree, which is met with in the shops, is obtained from the roots; and, according to Dr. Wright, of Jamaica, it is rough, scaly, and warted: the inside, when fresh, is a full yellow, but when dried, paler: it has but little smell; the taste is bitter, but not disagreeable. It is esteemed, in the West Indies, in dysenteries and other fluxes, as restoring tone to the intestines, allaying their spasmodic motions, promoting the secretions by urine and perspiration, and removing lowness of spirits attending those diseases. It is said also that it soon disposes the patient to sleep; takes off the gripes and tenesmus, and changes the stools to their natural colour and consistence.

Qua'trio. (From *quatuor*, four: so called because it has four sides.) The astragalus.

Queen of the meadow. See *Spiræa ulmaria.*

Quercera. See *Epialus.*

QUE'RCULA. (A diminutive of *quercus*, the oak: so called because it has leaves like the oak.) See *Teucrium chamædrys.*

QUE'RCUS. (*us, ûs.* m.; from *quero*, to enquire: because divinations were formerly given from oaks by the Druids.) The oak.

1. The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Polyandria.*

2. The pharmacopœial name of the oak. See *Quercus robur.*

Quercus cerris. The systematic name of the tree which affords the excrescence called *Galla, Galla maxima orbiculata,* and *Nux galla,* or gall-nut. By the name of gall-nut is usually denoted any protuberance, tubercle, or tumour, produced by the puncture of insects on plants and trees of different kinds. These galls are of various forms and sizes, and no less different with regard to their internal structure. Some have only one cavity, and others a number of small cells, communicating with each other. Some of them are as hard as the wood of the tree they grow on, whilst others are soft and spongy; the first being termed gall-nuts, and the latter berry-galls, or apple-galls.

The gall-nut used in medicine is thus produced: — The *cynips quercus folii,* an insect of the fly-kind, deposits its eggs in the leaves and other tender parts of the tree. Around each puncture an excrescence is presently formed, within which the egg is hatched, and

the worm passes through all the stages of its metamorphosis, until it becomes a perfect insect, when it eats its way out of its prison. The best oak-galls are heavy, knotted, and of a bluish colour, and are obtained from Aleppo. They are nearly entirely soluble in water, with the assistance of heat. From 500 grains of Aleppo galls, Sir Humphrey Davy obtained, by infusion, 185 grains of solid matter, which, on analysis, appeared to consist of *tannin*, 130; mucilage, and matter rendered insoluble by evaporation, 12; gallic acid, with a little extractive matter, 31; the remainder, calcareous earth and saline matter, 12. Another sort comes from the south of Europe, of a light brownish or whitish colour, smooth, round, easily broken, less compact, and of a much larger size. The two sorts differ only in size and strength, two of the blue galls being supposed equivalent in this respect to three of the others.

Oak-galls are supposed to be the strongest astringent in the vegetable kingdom. Both water and spirit take up nearly all their virtue, though the spirituous extract is the strongest preparation. The powder is, however, the best form; and the dose is from a few grains to half a drachm.

They are not much used in medicine, though they are said to be beneficial in intermittents. Dr. Cullen has cured agues, by giving half a drachm of the powder of galls every two or three hours during the intermission; and by it alone, or joined with chamomile flowers, has prevented the return of the paroxysms. But the Doctor states the amount of his results only to be this:—"that, in many cases, the galls cured the intermittents; but that it failed also in many cases in which the Peruvian bark afterwards proved successful." A fomentation, made by macerating half an ounce of bruised galls in a quart of boiling water for an hour, has been found useful for the piles, the prolapsus ani, and the fluor albus, applied cold. An injection, simply astringent, is made by diluting this fomentation, and used in gleets and leucorrhœa. The camphorated ointment of galls has been found also serviceable in piles, after the use of leeches; and is made by incorporating half a drachm of camphire with one ounce of hog's lard, and adding two drachms of galls in very fine powder. In fact, galls may be employed for the same purposes as oak-bark, and are used under the same forms.

Quercus esculus. The Italian oak; the acorns of which are, in times of scarcity, said to afford a meal of which bread is made.

Quercus marina. Sea oak. See *Fucus vesiculosus*.

Quercus phellos. The systematic name of the willow-leaved oak, the acorns of which are much sweeter than chestnuts, and much eaten by the Indians. They afford, by expression, an oil little inferior to oil of almonds.

Quercus robur. The oak-tree. *Balanos. Quercus—foliis oblongis, glabris sinuatis, lobis rotundis, glandibus oblongis*, of Linnæus. This valuable tree is indigenous to Britain. Its astringent effects were sufficiently known to the ancients, but it is the bark which is now directed for medicinal use by our pharmacopœias. Oak-bark manifests to the taste a strong astringency, accompanied with a moderate bitterness. Like other astringents, it has been recommended in agues, and for restraining hæmorrhages, alvine fluxes, and other immoderate evacuations. A decoction of it has likewise been advantageously employed as a gargle, and as a fomentation or lotion in *procidentia recti et uteri*.

The fruit of this tree was the food of the first ages; but when corn was cultivated, acorns were neglected. They are of little use with us, except for fattening hogs and other cattle and poultry. Among the Spaniards, the acorn, or *glans iberica*, is said to have long remained a delicacy, and to have been served up in the form of a dessert. In dearths, acorns have been sometimes dried, ground into meal, and baked as bread. Bartholin relates, that they are used in Norway for this purpose. The inhabitants of Chio held out a long siege without any other food; and in a time of scarcity in France, A. D. 1709, they recurred to this food. But they are said to be hard of digestion, and to occasion headaches, flatulency, and colics. In Smoland, however, many instances occur in which they have supplied a salutary and nutritious food. With this view they are previously boiled in water and separated from their husks, and then dried and ground; and the powder is mixed with about one half or one third of corn flour. A decoction of acorns is reputed good against dysenteries and colics; and a pessary of them is said to be useful in immoderate fluxes of the menses. Some have recommended the powder of acorns in intermittent fever; and, in Brunswick, they mix it with warm ale, and administer it for producing a sweat in cases of erysipelas. Acorns, roasted and bruised, have restrained a violent diarrhœa. For other medical uses to which they have been applied, see Murray's Appar. Medic. vol. i. page 100.

From some late reports of the Academy of Sciences at Petersburgh, we learn that acorns are the best substitute for coffee that has been hitherto known. To communicate to them the oily properties of coffee, the following process is recommended:—When the acorns have been toasted brown, add fresh butter in small pieces to them, while hot in the ladle, and stir them with care: cover the ladle and shake it, that the whole may be well mixed. The acorns of the Holm oak are formed at Venice into cups about one inch and a half in diameter, and somewhat less in depth. They are used for dressing leather, and instead of galls for dyeing woollen cloth black.

Quercus suber. The systematic name of the cork-tree. *Suber*. The fruit of this tree is much more nutritious than our acorns, and is sweet, and often eaten, when roasted, in some parts of Spain. The bark, called cork, when burnt, is applied as an astringent ap-

plication to bleeding piles, and to allay the pain usually attendant on hæmorrhoids, when mixed with an ointment. Pessaries and other chirurgical instruments are also made of this useful bark. By the action of nitric acid, cork becomes acidified. See *Suberic acid.*

QUESNAY, Francis, was born in 1694. He left several works, which display much research and observation. Besides the essays in favour of bleeding in many diseases, his preface to the Memoirs of the Academy of Surgery gained him considerable applause: as likewise his Researches into the Progress of Surgery in France.

Quick-grass. See *Triticum repens.*

Quick-lime. See *Lime.*

QUICKSILVER. See *Mercury.*

Quid pro quo. These words are applied the same as *succedaneum,* when one thing is made use of to supply the defect of another.

QUIESCENT. *Quiescens.* At rest.

Quiescent affinity. See *Affinity.*

QUINA. (*a, æ.* f.; so called by the French because obtained from Peruvian bark, which they call *Quinquina.*) Quinine: the alkali obtained from the bark of the *Cinchona cordifolia.* It was for some time, and still is, with many, called *quinina,* and *quinia*: but now, *euphoniæ gratiâ, quina* is preferred.

Quina quina. See *Cinchona.*

Quinæ sulphas. Sulphate of quinine. A saline compound of the sulphuric acid and the alkali which is peculiar to the yellow bark. It is made in the same way as the sulphate of cinchonine. See *Cinchonine.* This is a most excellent medicine, in which all the properties of the Peruvian barks are concentrated; so that whatever they have been known to do may be effected by this elegant medicine. The best way of exhibiting it is in the compound infusion of roses; but it may be given in any other vehicle, somewhat acidulated by that acid; or in pill or powder. See *Ague.*

QUINCE. See *Pyrus cydonia.*

Quince, Bengal. See *Erateva marmelos.*

QUINCY. See *Cynanche.*

QUINIA. See *Quina.*

QUININA. See *Quina.*

Quinine, sulphate of. See *Quinæ sulphas.*

QUINQUEFO'LIUM. (*um, i.* n.; from *quinque,* five, and *folium,* a leaf: so called because it has five leaves on each foot-stalk.) See *Potentilla reptans.*

Quinquina. See *Cinchona.*

QUOTIDIAN. See *Ague.*

R.

R. or ℞. This letter is placed at the beginning of a prescription, as a contraction of *Recipe,* take: thus, ℞ *Magnes.* ʒj. signifies, Take a drachm of magnesia. "In ancient times, such was the supposed importance," says Dr. Paris, in his most excellent work on pharmacology, "of planetary influence, that it was usual to prefix a symbol of the planet under whose reign the ingredients were to be collected; and it is not, perhaps, generally known, that the character which we at this day place at the head of our prescriptions, and which is understood and supposed to mean *recipe,* is a relic of the astrological symbol of Jupiter, as may be seen in many of the older works on pharmacy."

RABBIT. See *Lepus cuniculus.*

RA'BIES. (*es, ei.* f.; from *rabio,* to be mad.) Madness: generally applied to that disease of a dog, under which the saliva has the property of producing hydrophobia in man. See *Hydrophobia.*

Rabies canina. See *Hydrophobia.*

RACE'MUS. (*us, i.* m.; from *ramus.*) A raceme, cluster, or bunch. A species of inflorescence, consisting of a cluster of flowers, rather distant from each other, each on its own proper stalk, the tops of the lower ones not coming near to the tops of the upper ones, as in a corymb, and all connected by one common stalk; as a bunch of currants. It is therefore a kind of pedunculated spike.

From the *division* of the common stalk, it is denominated,

1. *Simple,* not having any branches; as in *Ribes rubrum,* and *Acer pseudo-platanus.*
2. *Compound,* being branched; as in *Vitis vinifera.*
3. *Conjugate,* two clusters from the end of the common peduncle.
4. *Aggregate,* several being gathered together; as in *Actæa racemosa.*
5. *Unilateral,* the proper stalks of the flowers proceeding from one side only of the common stalk; as in *Pyrola secunda.*
6. *Second,* the proper stalks of the flowers come from every part of the common stalk, yet they all look to one side only; as in *Andromeda racemosa, Teucrium scorodonia,* &c.

From the *direction* of the racemus,—

7. *Erectus*; as in *Chenopodium album, Ribes alpinum,* and *Astragalus austriacus.*
8. *Pendulus*; as in *Cytisus laburnum.*
9. *Laxus,* easily bent; as in *Celosia trigynia,* and *Solanum carolinense.*
10. *Strictus,* bent with difficulty; as in *Ononus cernua.*

From its *vesture,*—

11. *Nudus;* as in *Vaccinium legustrinum.*

12. *Pilosus;* as in *Ribes nigrum.*

13. *Foliatus;* as in *Chenopodium ambrosioides.*

14. *Bracteatus;* as in *Andromeda racemosa.*

Rachialgia. See *Rhachialgia.*

Rachitis. See *Rhachitis.*

Racka'sira balsamum. See *Balsamum rackasira.*

RACO'SIS. (*is, is.* f.; from ῥακος, a rag.) A ragged excoriation of the relaxed scrotum.

RADCLIFFE, John, born at Wakefield, Yorkshire, in 1650. He went to Oxford at the age of 15; and having determined upon the medical profession, he passed rapidly through the preliminary studies, though with very little profoundness of research. He removed to London in 1684, and his success was unusually rapid. His death happened in 1714. He was buried in St. Mary's church at Oxford. He founded a noble library and infirmary at that university; and also endowed two travelling medical fellowships, with an annual income of 300*l.* attached to each. It does not appear that he ever attempted to write; and, indeed, he is believed to have been very little conversant with books; yet the universal reputation which he acquired and maintained, notwithstanding his capricious conduct, seemed to sanction the testimony of Dr. Mead, that "he was deservedly at the head of his profession, on account of his great medical penetration and experience."

RADI'AL. (*Radialis;* from *radius,* the name of a bone.) Belonging to the radius.

Radial artery. *Arteria radialis.* A branch of the humeral artery that runs down the side of the radius.

Radialis externus brevior. See *Extensor carpi radialis brevior.*

Radialis externus longior. See *Extensor carpi radialis longior.*

Radialis externus primus. See *Extensor carpi radialis longior.*

Radialis internus. See *Flexor carpi radialis.*

Radialis secundus. See *Extensor carpi radialis brevior.*

RADIATUS. Radiate. Applied to a sort of compound flower, in which the florets of the centre differ in form from those in the circumference: thus the flower of the *Bellis perennis,* or daisy, is a radiate flower.

RADICAL. (*Radicalis;* from *radix,* the root or base.) 1. In *Chemistry,* applied to that which is considered as constituting the distinguishing part of an acid, by its union with the acidifying principle or oxygene, which is common to all acids. Thus sulphur is the radical of the sulphuric and sulphurous acids. It is sometimes called the base of the acid; but base is a term of more extensive application.

2. In *Botany,* applied to leaves. *Folia radicalia* are such as spring from the root, like those of the cowslip.

Radical vinegar. See *Acetum.*

RADICANS. A botanical term, applied to a stem which clings to any other body for support, and strikes root by means of fibres which do not imbibe nourishment; as the ivy, *Hedera helix.*

RADI'CULA. (*a, æ.* f.; diminutive of *radix,* a root.) 1. A radicle, rootlet, or little root. It probably means the fibres which come from the main root, and which are the most essential to the life of the plant, they only imbibing the nourishment.

2. Applied to the origin of vessels and nerves.

3. The common radish is so sometimes called. See *Raphanus sativus.*

RADISH. See *Cochlearia armoracia.*

Radish, garden. See *Raphanus sativus.*

Radish, horse. See *Cochlearia armoracia.*

RA'DIUS. (*us, ii.* m.) 1. In *Anatomy,* a bone of the fore-arm, which has got its name from its supposed resemblance to the spoke of a wheel, or to a weaver's beam; and sometimes, from its supporting the hand, it has been called *manubrium manus.* Like the ulna, it is of a triangular figure, but it differs from that bone, in growing larger as it descends, so that its smaller part answers to the larger part of the ulna, and *vice versâ.* Of its two extremities, the uppermost and smallest is formed into a small rounded head, furnished with cartilage, and hollowed at its summit, for an articulation with the little head at the side of the pully of the os humeri. The round border of this head, next the ulna, is formed for an articulation with the lesser sigmoid cavity of that bone. This little head of the radius is supported by a neck, at the bottom of which, laterally, is a considerable tuberosity, into the posterior half of which is inserted the posterior tendon of the biceps, while the anterior half is covered with cartilage, and surrounded with a capsular ligament, so as to allow this tendon to slide upon it as upon a pully. Immediately below this tuberosity, the body of the bone may be said to begin. We find it slightly curved throughout its whole length, by which means a greater space is formed for the lodgment of muscles, and it is enabled to cross the ulna without compressing them. Of the three surfaces to be distinguished on the body of the bone, the external and internal ones are the broadest and flattest. The anterior surface is narrower and more convex. Of its angles, the external and internal ones are rounded; but the posterior angle, which is turned towards the ulna, is formed into a sharp spine, which serves for the attachment of the interosseous ligament, of which mention is made in the description of the ulna. This strong ligament, which is a little interrupted above and below, serves not only to connect the bones of the fore-arm to each other, but likewise to afford a greater surface for the lodgment of muscles. On the forepart of the bone, and at about one third of its length from its upper end, we observe a channel for vessels, slanting obliquely up-

wards. Towards its lower extremity, the radius becomes broader, of an irregular shape, and somewhat flattened, affording three surfaces, of which the posterior one is the smallest; the second, which is a continuation of the internal surface of the body of the bone, is broader and flatter than the first; and the third, which is the broadest of the three, answers to the anterior and external surface of the body of the bone. On this last we observe several sinuosities, covered with a thin layer of cartilage, upon which slide the tendons of several muscles of the wrist and fingers. The lowest part of the bone is formed into an oblong articulating cavity, divided into two by a slight transverse rising. This cavity is formed for an articulation with the bones of the wrist. Towards the anterior and convex surface of the bone, this cavity is defended by a remarkable eminence, called the *styloid* process of the radius, which is covered with a cartilage that is extended to the lower extremity of the ulna; a ligament is likewise stretched from it to the wrist. Besides this large cavity, the radius has another much smaller one, opposite its styloid process, which is lined with cartilage, and receives the rounded surface of the ulna. The articulation of the radius with the lesser sigmoid cavity of the ulna is strengthened by a circular ligament which is attached to the two extremities of that cavity, and from thence surrounds the head of the radius. This ligament is narrowest, but thickest at its middle part. But, besides this ligament, which connects the two bones of the fore-arm with each other, the ligaments which secure the articulation of the radius with the os humeri are common both to it and the ulna, and therefore cannot well be understood till both these bones are described. These ligaments are a capsular and two lateral ligaments. The capsular ligament is attached to the anterior and posterior surface of the lower extremity of the os humeri, to the upper edges and sides of the cavities, we remarked, at the bottom of the pully and little head, and likewise to some part of the condyles: from thence it is spread over the ulna, to the edges of the greater sigmoid cavity, so as to include in it the end of the olecranon, and of the coronoid process; and it is likewise fixed round the neck of the radius, so as to include the head of that bone within it. The lateral ligaments may be distinguished into external and internal, or, according to Winslow, into *brachio-radialis* and *brachio-cubitalis*. They both descend laterally from the lowest part of each condyle of the os humeri, and, from their fibres spreading wide as they descend, have been compared to a goose's foot. The internal ligament, or brachio-cubitalis, which is the longest and thickest of the two, is attached to the coronoid process of the ulna. The external ligament, or brachio-radialis, terminates in the circular ligament of the radius. Both these ligaments adhere firmly to the capsular ligament, and to the tendons of some of the adjacent muscles. In considering the articulation of the fore-arm with the os humeri, we find that when both the bones are moved together upon the os humeri, the motion of the ulna upon the pully allows only of flexion and extension: whereas, when the palm of the hand is turned downwards or upwards, or, in other words, in pronation and supination, we see the radius moving upon its axis, and in these motions its head turns upon the little head of the os humeri at the side of the pully, while its circular edge rolls in the lesser sigmoid cavity of the ulna. At the lower end of the fore-arm the edge of the ulna is received into a superficial cavity at the side of the radius. This articulation, which is surrounded by a loose capsular ligament, concurs with the articulation above, in enabling the radius to turn with great facility upon its axis; and it is chiefly with the assistance of this bone that we are enabled to turn the palm of the hand upwards or downwards, the ulna having but a very inconsiderable share in these motions.

2. In *Botany*, the marginal part of the corolla of compound flowers: thus, in the daisy, the marginal white flowrets form the rays or radius, and the yellow central ones the discus or disk. See *Discus*.

The radii of a peduncle of a compound umbel are the *common stalks* or spokes of the umbel, and *pedicelli* are the stalks of the flowrets.

RA'DIX. (*ix, icis. f.*) A root. I. In *Botany*, that part of a plant which imbibes its nourishment, producing the herbaceous part and the fructification, and which consists of the *caudex*, or body, and *radicles*.—*Linnæus*.

That part of the plant by which it attaches itself to the soil in which it grows, or to the substance on which it feeds, and is the principal organ of nutrition.—*Keith*.

In all plants the primary root is a simple elongation of that part which, during the germination of the seed, is first protruded, and is denominated the radicle; and, as the plant continues to grow, the root gradually assumes a determinate form and structure, which differs materially in different plants, but always is found similar in all the individuals of the same species. From the figure, duration, direction, and insertion, roots are variously arranged.

From its *figure*, a root is called,

1. *Fusiform*, spindle-shaped, of an oblong, tapering form, pointed at its extremity; as in *Daucus carota*, the carrot; *Beta vulgaris*, beet; *Pastinaca sativa*, parsnip, &c.

2. *Ramose*, branched, which consists of a *caudex*, or main root, divided into lateral branches, which are again subdivided; so that it resembles in its divisions the stem and branches inverted. Most trees, shrubs, and many herbaceous plants, have this form of root.

3. *Fibrose*, fibrous, consisting wholly of small radicles; as the *Hordeum vulgare*, common barley, and most grasses.

4. *Præmorse,* abrupt, or truncated, appearing as if bitten off close to the top; as in *Scabiosa succisa,* the devil's bite; *Plantago major,* larger plaintain; *Hieracium præmorsum,* &c.

5. *Globose,* having the caudex round, or subrotund, sending off radicles in many places; as in *Cyclamen europeum,* sow-bread; *Brassica rapa,* turnip, &c.

6. *Tuberose,* furnished with farinaceous tubers; as in *Solanum tuberosum,* the potato; *Helianthus tuberosus,* Jerusalem artichoke, &c.

7. *Pendulous,* consisting of tubers connected to the plant by thin or filiform portions; as in *Spiræa filipendula,* common dropwort; *Pæonia officinalis,* pæony, &c.

8. *Granulate,* formed of many small globules; as in *Saxifraga granulata,* meadow saxifrage, &c.

9. *Articulate,* articulated, or jointed, apparently formed of distinct pieces, united, as if one piece grew out of another, with radicles proceeding from each joint; as in *Oxalis acetosella,* woodsorrel; *Asarum canadense,* wild ginger, &c.

10. *Dentate,* toothed, which has a fleshy caudex, with teeth-like prolongations; as in *Ophrys corallorhiza.*

11. *Squamose,* scaly, covered with fleshy scales; as in *Lathræa squamaria,* toothwort, &c.

12. *Fascicular,* bundled, or fasciculate; as in *Ophrys nidus avis,* &c.

13. *Hollow;* as in *Fumaria cava.* There are other distinctions of modern botanists derived from the form; as conical, subrotund, napiform, placentiform, filiform, capillary, tufted, funiliform, geniculate, contorted, moniliform, &c.

From the *direction,* roots are distinguished into,—

14. *Perpendicular,* which descend in a straight direction; as in *Daucus carota, Beta vulgaris, Scorzonera hispanica,* &c.

15. *Horizontal,* which is extended under the earth transversely; as in *Laserpitium pruthenium,* &c.

16. *Oblique,* descending obliquely; as in *Iris germanica,* &c.

17. *Creeping,* descending transversely, but here and there sending off new plants; as in *Sambucus ebulus, Glycyrrhiza glabra, Ranunculus repens,* &c.

The *duration* affords,—

18. *Annual,* yearly, which perishes the same year with the plant; as *Draba verna,* and all annuals.

19. *Biennial,* which vegetates the first year, flowers the next, and then perishes; as the *Œnothera biennis, Beta vulgaris,* &c.

20. *Perennial,* which lives for many years; as trees and shrubs.

Roots are also distinguished from their *situation* into,—

21. *Terrene,* earth-root, which grow only in the earth; as the roots of most plants.

22. *Aquatic,* water-root, which grow only in the water, and perish when out of it; as *Trapa natans, Nymphæa alba.*

23. *Parasitic,* parasitical, which inserts the root into another plant; as in *Epidendrum vanilla,* &c.

24. *Arrhize,* which does not insert radicles, but coheres to other plants by an anastomosis of vessels; as in *Viscum album, Horanthus europæus,* &c.

II. In *Anatomy,* the term radix is applied to some parts which are inserted into others, as the root of a plant is in the earth; as the fangs of the teeth, the origin of some of the nerves, &c.

Radix bengale. See *Cassumuniar.*

Radix brasiliensis. See *Callicocca ipecacuanha.*

Radix dulcis. See *Glycyrrhiza.*

Radix indiana. See *Callicocca ipecacuanha.*

Radix rosea. See *Rhodiola.*

Radix rubra. See *Rubia tinctorum.*

Radix ursina. See *Æthusa meum.*

RA'DULA. (From *rado,* to scrape off.) A wooden spatula, or scraper.

RAGWORT. See *Senecio Jacobæa.*

RAIA. (*a, æ.* f.) The name of a genus of fishes of the order *Chondropterygia.* There are many species, all inhabitants of the sea. The following are sometimes eaten as food:—

Raia batis. The skate. This flat fish grows to a great size, weighing from 50 to 200 pounds. It is considered as more difficult of digestion than the more tender-fibred fishes; but, when kept a certain time, it becomes very tender, and is considered a wholesome and delicate fish.

Raia clavata. The thornback. Very inferior to the skate, but eaten by the lower orders.

Raia oxyrinchus. The sharp-nosed ray. Found in abundance in the Mediterranean. It is a wholesome fish, easy of digestion, and is often salted and sent into the interior of Germany.

Raia torpedo. The torpedo or electric ray. This inhabits the Mediterranean sea, but is caught about Torbay and Waterford. The touch of this fish conveys an electric shock. It is hard of digestion, and seldom eat.

RAISIN. See *Vitis vinifera.*

Rama'lis vena. (From *ramale,* a dead bough.) Applied to the vena portæ, from its numerous ramifications, which resemble a bough stripped of its leaves.

RAMAZZINI, Bernardin, was born at Carpi, in Italy, in 1633. He wrote several works in the Latin language, remarkable for the elegance of their style, and other merits. The principal of these is entitled *De Morbis Artificum Diatriba,* giving an account of the diseases peculiar to different artists and manufacturers.

RAME'NTUM. (*um, i.* n.; *à radendo.*) A species of pubescence of plants, consisting of hairs in form of flat, strap-like portions, resembling shavings, seen on the leaves of some of the genus *Bigonia.* See *Pilus.*

Ra'mex. (From *ramus,* a branch: from

its protruding forwards, like a bud.) An obsolete term for a rupture.

RAMOSI'SSIMUS. Much branched. Applied to a stem which is repeatedly subdivided into a great many branches, without order; as those of the apple, pear, and gooseberry tree.

RAMOUS. *Rameus. Ramosus.* Branched. Of or belonging to a bough or branch: applied to branch leaves, which are so distinguished, because they sometimes differ from those of the main stem; as is the case in *Melampyrum arvense:* and also to a leaf-stalk when it comes directly from the main branch; as in *Eugenia malaccensis.*

RAMULUS. A little branch, or the branch of a branch.

RAMUS. (*us, i.* m.) A branch, or primary division of a stem into lateral stems. In the language of botanists, rami, or branches, are denominated,—

1. *Opposite,* when they go off, or pair opposite to each other, as they do in *Mentha arvensis.*

2. *Alternate,* one after another, alternately; as in *Althæa officinalis.*

3. *Verticillate,* when more than two go from the stem in a whorled manner; as in *Pinus abies.*

4. *Scattered,* without any order.

5. *Erect,* rising close to the stem; as in *Populus dilatata.*

6. *Patent,* or *expanding,* descending from the stalk at an obtuse angle; as in *Galium mollugo,* and *Cistus italicus.*

7. *Very spreading,* descending at a right angle; as in *Ammania ramosior.*

8. *Brachiate,* the opposite spreading branches crossing each other; as in *Pisonia aculeata,* and *Panisteria brachiata.*

9. *Deflex,* arched, with the apex downwards; as in *Pinus larix.*

10. *Reflex,* hanging perpendicularly from the trunk; as in the *Salix babylonica.*

11. *Retroflex,* turned backwards; as in *Solanum dulcamara.*

12. *Fastigiate,* forming a kind of pyramid; as in *Chrysanthemum corymbosum.*

13. *Vergate,* twig-like, long and weak; as in *Salix vermialis.*

RA'NA. The name of a genus of animals. Class, *Amphibia;* Order, *Reptilia.* The frog.

Rana esculenta. The French frog. The flesh of this species of frog, very common in France, is highly nutritious and easily digested.

RANCID. Oily substances are said to have become rancid, when, by keeping, they acquire a strong offensive smell, and altered taste.

RANCIDITY. *Rancíditas.* The change which oils undergo by exposure to air, which is probably an effect analogous to the oxidation of metals.

RANI'NUS. (From *rana,* a frog.) Ranine. 1. Appertaining to a frog.

2. The name of an artery, called also *Arteria ranina.* Sublingual artery. The second branch of the external carotid.

RA'NULA. (*a, æ.* f.; from *rana,* a frog: so called from its resemblance to a frog, or because it makes the patient croak like a frog.) *Batrachos. Hypoglossus. Hypoglossum. Rana.* An inflammatory or indolent tumour, under the tongue. These tumours are of various sizes and degrees of consistence, seated on either side of the frænum. Children, as well as adults, are sometimes affected with tumours of this kind: in the former, they impede the action of sucking; in the latter, of mastication, and even speech. The contents of them are various: in some they resemble the saliva; in others, the glairy matter found in the cells of swelled joints. Sometimes it is said that a fatty matter has been found in them; but, from the nature and structure of the parts, we are sure that this can seldom happen; and, in by far the greatest number of cases, we find that the contents resemble the saliva itself. This, indeed, might naturally be expected, for the cause of these tumours is universally to be looked for in an obstruction of the salivary ducts. Obstructions here may arise from a cold, inflammation, violent fits of the tooth-ache, attended with swelling in the inside of the mouth; and, in not a few cases, we find the ducts obstructed by a stony matter, seemingly separated from the saliva, as the calculous matter is from the urine; but where inflammation has been the cause, we always find matter mixed with the other contents of the tumour. As these tumours are not usually attended with much pain, they are sometimes neglected, till they burst of themselves, which they commonly do when arrived at the bulk of a large nut. As they were produced originally from an obstruction in the salivary duct, and this obstruction cannot be removed by the bursting of the tumour, it thence happens that they leave an ulcer extremely difficult to heal, nay, which cannot be healed at all till the cause is removed.

RANUNCULOI'DES. (From *ranunculus,* and εἶδος, resemblance: so named from its resemblance to the ranunculus.) See *Caltha palustris.*

RANU'NCULUS. (*us, i.* m.; diminutive of *rana,* a frog: because it is found in fenny places, where frogs abound.) The name of a genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Polygynia.*

The great acrimony of most of the species of ranunculus is such, that, on being applied to the skin, they excite itching, redness, and inflammation, and even produce blisters, tumefaction, and ulceration of the part. On being chewed, they corrode the tongue; and, if taken into the stomach, bring on all the deleterious effects of an acrid poison. The corrosive acrimony which this family of plants possesses was not unknown to the ancients, as appears from the writings of Dioscorides; but its nature and extent had never been investigated by experiments, before those instituted by C. Krapf, at Vienna, by which we learn that the most virulent of the Linnæan species

are the bulbosus, sceleratus, acris, arvensis, thora, and illyricus.

The effects of these were tried either upon himself or upon dogs, and show that the acrimony of the different species is often confined to certain parts of the plant, manifesting itself either in the roots, stalks, leaves, flowers, or buds; the expressed juice, extract, decoction, and infusion of the plants, were also subjected to experiments. In addition to these species mentioned by Krapf, we may also notice the R. flammula, and especially the R. alpestris, which, according to Haller, is the most acrid of this genus. Curtis observes, that even pulling up the ranunculus acris, the common meadow species, which possesses the active principle of this tribe in a very considerable degree throughout the whole herb, and carrying it to some little distance, excited a considerable inflammation in the palm of the hand in which it was held. It is necessary to remark, that the acrimonious quality of these plants is not of a fixed nature; for it may be completely dissipated by heat; and the plant, on being thoroughly dried, becomes perfectly bland. Krapf attempted to counteract this venomous acrimony of the ranunculus by means of various other vegetables, none of which were found to answer the purpose, though he thought that the juice of sorrel, and that of unripe currants, had some effect in this way; yet these were much less availing than water; while vinegar, honey, sugar, wine, spirit, mineral acids, oil of tartar, and other sapid substances, manifestly rendered the acrimony more corrosive. It may be also noticed, that the virulency of the most of the plants of this genus depends much upon the situation in which they grow, and is greatly diminished in the cultivated plant.

Ranunculus abortivus. The systematic name of a species of ranunculus, which possesses acrid and vesicating properties.

Ranunculus acris. The systematic name of the meadow crow-foot. *Ranunculus pratensis.* This and some other species of ranunculus have, for medical purposes, been chiefly employed externally as a vesicatory, and are said to have the advantage of a common blistering plaster, in producing a quicker effect, and never causing a strangury; but, on the other hand, it has been observed, that the ranunculus is less certain in its operation, and that it sometimes occasions ulcers, which prove very troublesome and difficult to heal. Therefore their use seems to be applicable only to certain fixed pains, and such complaints as require a long-continued topical stimulus, or discharge from the part, in the way of an issue, which, in various cases, has been found to be a powerful remedy.

Ranunculus albus. The plant which bears this name in the pharmacopœias is the *Anemone nemorosa*, of Linnæus. See *Anemone nemorosa.*

Ranunculus bulbosus. Bulbous-rooted crow-foot. The roots and leaves of this plant, *Ranunculus—calycibus retroflexis, pedunculis sulcatis, caule erecto multifloro, foliis compositis*, of Linnæus, have no considerable smell, but a highly acrid and fiery taste. Taken internally, they appear to be deleterious, even when so far freed from the caustic matter by boiling in water, as to discover no ill quality to the palate. The effluvia, likewise, when freely inspired, are said to occasion headaches, anxieties, vomiting, &c. The leaves and roots, applied externally, inflame and ulcerate, or vesicate the parts, and are liable to affect also the adjacent parts to a considerable extent.

Ranunculus ficaria. The systematic name of the pilewort. *Chelidonium minus. Scrophularia minor. Chelidonia rotundifolia minor. Cursuma hæmorrhoidalis herba. Ranunculus vernus.* Lesser celandine, and pilewort. The leaves and root of this plant, *Ranunculus—foliis cordatis angulatis petiolatis, caule unifloro*, of Linnæus, are used medicinally. The leaves are deemed antiscorbutic, and the root reckoned a specific, if beat into cataplasms, and applied to the piles.

Ranunculus flammula. The systematic name of the smaller water crow-foot, or spearwort. *Surrecta alba.* The roots and leaves of this common plant, *Ranunculus—foliis ovatis-lanceolatis, petiolatis, caule declinato*, of Linnæus, taste very acrid and hot, and when taken in a small quantity, produce vomiting, spasms of the stomach, and delirium. Applied externally, they vesicate the skin. The best antidote, after clearing the stomach, is cold water acidulated with lemon-juice, and then mucilaginous drinks.

Ranunculus palustris. Water crow-foot. See *Ranunculus sceleratus.*

Ranunculus pratensis. Meadow crow-foot. See *Ranunculus acris.*

Ranunculus sceleratus. The systematic name of the marsh crow-foot. *Ranunculus palustris.* The leaves of this species of crow-foot are so extremely acrid, that the beggars in Switzerland are said, by rubbing their legs with them, to produce a very fœtid and acrimonious ulceration.

RA'PA. (*a, æ.* f.) See *Brassica rapa.*

RAPE. See *Brassica rapa.*

RAPHA'NIA. (*a, æ.* f.; from *raphanus*, the radish, or charlock: because the disease is said to be produced by eating the seeds of a species of raphanus.) *Convulsio ab ustilagine. Convulsio raphania. Eclampsia typhodes. Convulsio soloniensis. Necrosis ustilaginea.* Cripple disease. A genus of disease in the class *Neuroses*, and order *Spasmi*, of Cullen; characterised by a spasmodic contraction of the joints, with convulsive motions, and a most violent pain returning at various periods. It begins with cold chills and lassitude, pain in the head, and anxiety about the præcordia. These symptoms are followed by spasmodic twitchings in the tendons of the fingers and of the feet, discernible to the eye, heat, fever, stupor, delirium, sense of suffocation, aphonia, and horrid convulsions of the limbs. After these, vomiting and diarrhœa come on, with a discharge of worms, if there are any. About

the eleventh or the twentieth day, copious sweats succeed, or purple exanthemata, or tabes, or rigidity of all the joints.

RAPHANISTRUM. The trivial name of a species of raphanus.

RA'PHANUS. (*us, i.* m. Ραφανος παρα το ραδιως φαινεσθαι: from its quick growth.) 1. A genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliculosa.*

2. The radish. See *Raphanus sativus.*

RAPHANUS HORTENSIS. See *Raphanus sativus.*

RAPHANUS NIGER. See *Raphanus sativus.*

RAPHANUS RUSTICANUS. See *Cochlearia armoracia.*

RAPHANUS SATIVUS. The systematic name of the radish-plant. *Raphanus hortensis. Radicula. Raphanus niger.* The radish. The several varieties of this plant are said to be employed medicinally in the cure of calculous affections. The juice, made into a syrup, is given to relieve hoarseness. Mixed with honey or sugar, it is administered in pituitous asthma; and, as antiscorbutics, their efficacy is generally acknowledged.

RAPHANUS SYLVESTRIS. See *Lepidium sativum.*

RA'PHE. (*e, es.* f. Ραφη, a suture.) A suture. Applied to parts which appear as if they were sewed together; as the *Raphe scroti, cerebri,* &c.

RAPHE CEREBRI. The longitudinal eminence of the corpus callosum of the brain is so called, because it appears somewhat like a suture.

RAPHE SCROTI. The rough eminence which divides the scrotum, as it were, in two. It proceeds from the root of the penis inferiorly towards the perinæum.

RAPI'STRUM. (*um, i.* n.; from *rapa,* the turnip: because its leaves resemble those of the turnip.) 1. The name of a genus of plants. Class, *Tetradynamia;* Order, *Siliculosa.*

2. The name of two species of *Crambe,* the *orientalis* and *hispanica.*

RA'PUM. (*um, i.* n.; derivation uncertain.) 1. The turnip. See *Brassica rapa.*

2. The *Campanula rapunculus.*

RAPU'NCULUS. (*us, i.* m.; diminutive of *rapa,* the turnip.) The trivial name of a species of *Campanula.*

RAPUNCULUS CORNICULATUS. See *Phyteuma orbiculare.*

RAPUNCULUS VIRGINIANUS. The blue cardinal flower. See *Lobelia.*

RA'PUS. See *Brassica rapa.*

RASH. See *Exanthema.*

RASPATO'RIUM. (From *rado,* to scrape.) A rasp.

RASPBERRY. See *Rubus idæus.*

RASU'RA. (*a, æ.* f.; from *rado,* to scrape.) 1. A rasure or scratch.

2. The raspings or shavings of any substance.

RATIFIA. A liquor prepared by imparting to ardent spirits the flavour of various kinds of fruits.

RATTLES. A term very generally applied by nurses to the rattle-like, noisy breathing often heard in the throat of persons who are *in articulo mortis.*

RATTLESNAKE. See *Crotalus horridus.*

Rattlesnake-root. See *Polygala.*

RAUCE'DO. (*o, inis.* f.; from *raucus,* hoarse.) *Raucitas.* Hoarseness. It is always symptomatic of some other disease, and mostly of the mucous membrane of the larynx and trachea.

Ray of a flower. See *Radius.*

REAGENT. Test. A substance used in chemistry to detect the presence of other bodies.

REA'LGAR. *Arlada. Arladar. Auripigmentum rubrum. Arsenicum rubrum factitium. Abessi.* A native ore of sulphuret of arsenic. See *Arsenic.*

RECEIVER. A chemical vessel adapted to the neck or beak of a retort, alembic, and other distillatory vessel, to receive and contain the product of distillation.

RECEPTA'CULUM. (*um, i.* n.; from *recipio,* to receive.) I. In *Anatomy,* a name given by the older anatomists to a part of the thoracic duct. See *Receptaculum chyli.*

II. In *Botany,* the common basis or point of connection of the other parts of the fructification of plants; by some called the *Thalamus* and the *Placenta.*

It is distinguished by botanists into *proper* and *common:* one flower only belongs to the *former,* and it is formed mostly from the apex of the peduncle or scape; as in *Tulipa gesneriana,* and *Lilium candidum.* The *latter* has many flowers; as in *Helianthus annuus.*

The proper receptacle or apex of the peduncle swells in some flowers, and becomes the fruit: thus the *Fragaria vesca* is not a berry, but a *fleshy receptacle,* with its naked seeds nestling on its surface; so, in the *Hovenia dulcis,* the peduncles swell into a thick *fleshy receptacle,* on which there are small capsules; and, in the *Anacardium occidentale,* the peduncle swells into a receptacle, on which the nut rests.

The varieties of the common receptacle are,—

1. *Flat;* as in *Helianthus annuus.*
2. *Convex;* as in *Leontodon taraxacum.*
3. *Conic;* as in *Bellis perennis.*
4. *Punctate;* as in *Leontodon taraxacum.*
5. *Globose;* as in *Cephalanthus.*
6. *Oval;* as in *Dorstenia drakenia.*
7. *Ovate;* as in *Omphalea.*
8. *Favose,* cellular on the surface, honeycomb-like; as in *Onopordium.*
9. *Scrobiculate,* having round and deep holes; as in *Helianthus annuus.*
10. *Subulate;* as in *Scabiosa atropurpurea.*
11. *Quadrangular;* as in *Dorstenia houstoni,* and *Contrayerva.*
12. *Turbinate;* as in *Ficus carica.*
13. *Digitiform;* as in *Arum maculatum,* and *Calla æthiopica.*
14. *Filiform,* thread-like; as in the catkins and *Corylus.*

15. *Occluse*, or shut. The *Ficus carica* is a connivent fleshy receptacle enclosing the florets.

16. *Nude*, naked, without any vesture; as in *Lactuca*, and *Leontodon taraxacum*.

17. *Pilose*; as in *Carthamus tinctorius*.

18. *Villose*; as in *Artemisia absynthium*.

19. *Setose*; as in *Echinops sphærocephalus*, and *Centaurea*.

20. *Paleaceous*, covered with chaffy scales; as in *Zeranthemum*, *Dipsacus*, &c.

On the receptacle and seed down are founded the most solid generic characters of syngenesious plants, admirably illustrated by the inimitable Gærtner.

The term receptacle is sometimes extended by Linnæus to express the base of a flower, or even its internal part between the stamens and pistils, provided there be any thing remarkable in such parts, without reference to the foundation of the whole fructification. It also expresses the part to which the seeds are attached in a seed-vessel, and the common stalk of a spike or spikelet, in grasses.

Receptaculum chyli. *Receptaculum Pecqueti*, because Pecquet first attempted to demonstrate it. *Diversorium*. *Sacculus chyliferus*. The existence of such a receptacle in the human body is doubted. In brute animals the receptacle of the chyle is situated on the dorsal vertebræ, where the lacteals all meet. See *Absorbents*.

Reciprocal affinity. See *Affinity*.

RECLINATUS. Reclining: applied to stems, leaves, &c. which are curved towards the ground, so that the extremity is lower than the base; as the stem of the bramble, and leaves of the *Leonurus cardiaca*.

RECTIFICATION. (*Rectificatio*, *onis*. f.; from *rectifico*, to make clear.) A second distillation, in which substances are purified by their more volatile parts being raised by heat, carefully managed: thus, spirit of wine, æther, &c. are rectified by their separation from the less volatile and foreign matter which altered or debased their properties.

Re'ctor spiritus. The aromatic part of plants. See *Aroma*.

RE'CTUM. (*um*, *i*. n.: so named from an erroneous opinion that it was straight.) *Apeuthysmenos*. *Longanon*. *Longaon*. *Archos*. *Cyssaros*. The last portion of the large intestines, terminating in the anus. See *Intestine*.

RE'CTUS. Straight. Several parts of the body, particularly muscles, are so called from their direction. Parts of plants also have this term; as *caulis rectus*, the straight stem of the garden-lily, &c.

Rectus abdominis. A long and straight muscle situated near its fellow, at the middle and fore part of the abdomen, parallel to the linea alba, and between the aponeuroses of the other abdominal muscles. It arises sometimes by a single broad tendon from the upper and inner part of the os pubis, but more commonly by two heads, one of which is fleshy, and originates from the upper edge of the pubis, and the other tendinous, from the inside of the symphysis pubis, behind the pyramidalis muscle. From these beginnings, the muscle runs upwards the whole length of the linea alba, and becoming broader and thinner as it ascends, is inserted by a thin aponeurosis into the edge of the cartilago ensiformis, and into the cartilages of the fifth, sixth, and seventh ribs. This aponeurosis is placed under the pectoral muscle, and sometimes adheres to the fourth rib. The fibres of this muscle are commonly divided by three tendinous intersections, which were first noticed by Berenger, or, as he is commonly called, Carpi, an Italian anatomist, who flourished in the sixteenth century. One of these intersections is usually where the muscle runs over the cartilage of the seventh rib; another is at the umbilicus; and the third is between these two. Sometimes there is one, and even two, between the umbilicus and the pubes. When one or both of these occur, however, they seldom extend more than halfway across the muscle. As these intersections seldom penetrate through the whole substance of the muscle, they are all of them most apparent on its anterior surface, where they firmly adhere to the sheath: the adhesions of the rectus to the posterior layer of the internal oblique are only by means of cellular membrane, and of a few vessels which pass from one to another.

Albinus and some others have seen this muscle extending as far as the upper part of the sternum.

The use of the rectus is to compress the fore part of the abdomen, but more particularly the lower part; and, according to the different positions of the body, it may likewise serve to bend the trunk forwards, or to raise the pelvis. Its situation between the two layers of the internal oblique, and its adhesions to this sheath, secure it in its place, and prevent it from rising into a prominent form when in action; and, lastly, its tendinous intersections enable it to contract at any of the intermediate spaces.

Rectus abducens oculi. See *Rectus externus oculi*.

Rectus adducens oculi. See *Rectus internus oculi*.

Rectus anterior brevis. See *Rectus capitis internus minor*.

Rectus anterior longus. See *Rectus capitis internus major*.

Rectus attollens oculi. See *Rectus superior oculi*.

Rectus capitis anticus longus. See *Rectus capitis internus major*.

Rectus capitis internus major. A muscle situated on the anterior part of the neck, close to the vertebræ. *Rectus internus major*, of Albinus, Douglas, and Cowper. *Rectus anterior longus*, of Winslow. It was known to most of the ancient anatomists, but was not distinguished by any particular name until Cowper gave it the present appellation, and which has been adopted by most writers except

Winslow. It is a long muscle, thicker and broader above than below, where it is thin, and terminates in a point. It arises, by distinct and flat tendons, from the anterior points of the transverse processes of the five inferior vertebræ of the neck, and, ascending obliquely upwards, is inserted into the anterior part of the cuneiform process of the occipital bone. The use of this muscle is to bend the head forwards.

Rectus capitis internus minor. Cowper, who was the first accurate describer of this little muscle, gave it the name of *rectus internus minor*, which has been adopted by Douglas and Albinus. Winslow calls it *rectus anterior brevis*. It is in part covered by the rectus major. It arises, fleshy, from the upper and fore part of the body of the first vertebra of the neck, near the origin of its transverse process, and, ascending obliquely inwards, is inserted near the root of the condyloid process of the occipital bone, under the last described muscle. It assists in bending the head forwards.

Rectus capitis lateralis. *Rectus lateralis Fallopii*, of Douglas. *Transversalis anticus primus*, of Winslow. *Rectus lateralis*, of Cowper. This muscle seems to have been first described by Fallopius. Winslow calls it *transversalis anticus primus*. It is somewhat larger than the rectus minor, but resembles it in shape, and is situated immediately behind the internal jugular vein, at its coming out of the cranium. It arises fleshy from the upper and fore-part of the transverse process of the first vertebra of the neck, and, ascending a little obliquely upwards and outwards, is inserted into the occipital bone, opposite to the stylo-mastoid hole of the os temporis. This muscle serves to pull the head to one side.

Rectus capitis posticus major. This muscle, which is the *rectus major* of Douglas and Winslow, and the *rectus capitis posticus minor* of Albinus, is small, short, and flat, broader above than below, and is situated, not in a straight direction, as its name would insinuate, but obliquely, between the occiput and the second vertebra of the neck, immediately under the complexus. It arises, by a short thick tendon, from the upper and posterior part of the spinous process of the second vertebra of the neck; it soon becomes broader, and ascending obliquely outwards, is inserted, by a flat tendon, into the external lateral part of the lower semicircular ridge of the os occipitis. The use of this is to extend the head, and pull it backwards.

Rectus capitis posticus minor. This is the *rectus minor* of Douglas and Winslow. It is smaller than the last described muscle, but resembles it in shape, and is placed close by its fellow, in the space between the recti majores. It arises, by a short thick tendon, from the upper and lateral part of a little protuberance in the middle of the back part of the first vertebra of the neck, and, becoming broader and thinner as it ascends, is inserted, by a broad flat tendon, into the occipital bone, immediately under the insertion of the last described muscle. The use of it is to assist the rectus major in drawing the head backwards.

Rectus cruris. See *Rectus femoris.*

Rectus deprimens oculi. See *Rectus inferior oculi.*

Rectus externus oculi. The outer straight muscle of the eye: called also, *Abductor oculi, Iracundus*, and *Indignabundus*. It arises from the bony partition between the foramen opticum and lacerum, being the longest of the straight muscles of the eye, and is inserted into the sclerotic membrane, opposite to the outer canthus of the eye. Its use is to move the eye outwards.

Rectus femoris. A straight muscle of the thigh, situated immediately at the fore part. *Rectus sive Gracilis anterior*, of Winslow. *Rectus cruris*, of Albinus. It arises from the os ilium by two tendons. The foremost and shortest of these springs from the outer surface of the inferior and anterior spinous process of the ilium; the posterior tendon, which is thicker and longer than the other, arises from the posterior and outer part of the edge of the cotyloid cavity, and from the adjacent capsular ligament. These two tendons soon unite, and form an aponeurosis, which spreads over the anterior surface of the upper part of the muscle; and through its whole length we observe a middle tendon, towards which its fleshy fibres run on each side in an oblique direction, so that it may be styled a penniform muscle. It is inserted tendinous into the upper edge and anterior surface of the patella, and from thence sends off a thin aponeurosis, which adheres to the superior and lateral part of the tibia. Its use is to extend the leg.

Rectus inferior oculi. The inferior of the straight muscles of the eye. *Depressor oculi. Deprimens. Humilis. Amatorius.* It arises within the socket, from below the optic foramen, and passes forwards to be inserted into the sclerotic membrane of the bulb on the under part. It pulls the eye downwards.

Rectus internus femoris. See *Gracilis.*

Rectus internus oculi. The internal straight muscle of the eye. *Adducens oculi. Adductor oculi. Bibitorius.* It arises from the inferior part of the foramen opticum, between the obliquus superior and the rectus inferior, being, from its situation, the shortest muscle of the eye, and is inserted into the sclerotic membrane opposite to the inner angle. Its use is to turn the eye towards the nose.

Rectus lateralis Fallopii. See *Rectus capitis lateralis.*

Rectus major capitis. See *Rectus capitis posticus major.*

Rectus superior oculi. The uppermost straight muscle of the eye. *Attollens oculi. Levator oculi. Superbus.* It arises from the upper part of the foramen opticum of the sphenoid bone, below the levator palpebræ superioris, and runs forward to be inserted into the superior and fore part of the sclerotic membrane by a broad and thin tendon.

RECURRENT. (*Recurrens:* so named from its direction.) Two branches of nerves from the par vagum, in the cavity of the thorax, are so called. The right is given off near the subclavian artery, which it surrounds, and is reflected upwards to the thyroid gland; the left a little lower, and reflected around the aorta to the œsophagus, as far as the larynx. They are both distributed to the muscles of the larynx and pharynx.

RECURVATUS. See *Recurvus*.

RECURVUS. Recurved: bowed or turned backward. Applied to leaves, &c. See *Reflexus*.

Red saunders. See *Pterocarpus santalinus*.

REDDLE. A species of ochre or argillaceous earth, of a dark red colour, which has been used medicinally as a tonic and antacid.

REDUCTION. 1. In *Pathology*, the returning of a dislocated bone into its proper place.

2. In *Chemistry*, revivification: applicable to all operations by which any substance is restored to its natural state, or which is considered as such; but custom confines it to operations by which metals are restored to their metallic state, after they have been deprived of this, either by combustion, as the metallic oxides, or by the union of some heterogeneous matters which disguise them, as fulminating gold, luna cornea, cinnabar, and other compounds of the same kind. These reductions are also called revivifications.

REFLEXUS. Reflected; bent backward: applied to leaves, as those of the *Erica retorta*; and to the border of the flower-cup of the *Œnothera biennis*, and the petals of the *Pancratium zeylanicum*.

REFRACTUS. Bent back, as if broken.

REFRIGERANT. (*Refrigerans*; from *refrigero*, to cool.) That which allays the heat of the body or of the blood.

REFRIGERATO'RIUM. (From *refrigero*, to cool.) A vessel filled with water to condense vapours, or to make cool any substance which passes through it.

RE'GIMEN. (*en, inis*. f.; from *rego*, to govern.) A term employed in medicine to express the plan or regulation of the diet.

REGI'NA. A queen. A name given by way of excellence to some plants.

REGINA PRATI. See *Spiræa ulmaria*.

REGION. (*Regio, onis*. f.; from *rego*.) A part of the body: generally applied to external parts, under which is some particular viscus, that the particular place may be known. Anatomists have divided the regions, or several parts of the body when entire, as follows:—

Into *caput*, or head; *truncus*, or trunk; and *extremitates*, or extremities.

A. The head is divided into,

1. *Facies*, the face.

2. *Pars capillata*, the scalp.

The regions of the scalp are,

a. *Vertex*, the top or crown of the head.

b. *Sinciput*, the fore part of the scalp.

c. *Occiput*, the back part of the head.

d. *Partes laterales*, the sides.

The regions of the face are,

a. *Frons*, the forehead.

b. *Tempora*, the temples.

c. *Nasus*, the nose, on which are, the *radix*, or root; the *dorsum*, or bridge; the *apex*, or tip; and the *alæ*, or sides.

d. *Oculus*, the eye.

e. *Os*, the mouth, the external parts of which are, *labia*, the lips; *anguli oris*, where the lips meet; *philtrum*, an oblong depression in the middle of the upper lip.

f. *Mentum*, the chin, the hair of which is called *barba*, whereas that of the upper lip is termed *mistax*.

g. *Buccæ*, the cheeks.

h. *Auris*, the ear, on which are the *auricula*, *helix*, *antihelix*, *tragus*, *antitragus*, *concha*, *scapha*, and *lobulus*.

B. The trunk is divided into the *collum*, or neck; the *thorax*, or chest; the *abdomen*, or belly.

1. *Collum*, the neck, which has,

a. *Pars antica*, in which is the *pomum adami*, or *larynx*.

b. *Pars postica*, in which is the *fossa*, and *nucha*, or nape of the neck.

2. *Thorax*, the chest, which is divided into,

a. The front, on which is *mammæ*, the breasts, and *scrobiculus cordis*, the pit of the stomach.

b. The back part, or *dorsum*.

c. The sides.

3. *Abdomen*, is divided into the fore part, which is strictly the abdomen or belly; the hind part, or *lumbi*, the loins; the lateral parts or sides.

On the abdomen or fore part are the following regions:—

The *Epigastric*, the sides of which are termed *hypochondria*.

The *Umbilical*, the sides of which are termed the *epicolic* regions.

The *Hypogastric*, the sides of which are the *ilia*.

The *Pubes* is in the region below the abdomen, covered with hair; in women termed *mons veneris*: the sides are *inguina*, or groins.

Below the pubes are the parts of generation: in men, the *scrotum* and *penis*; in women, the *labia pudendi*, and the *rima vulvæ*. The space between the genitals and *anus* is called *perinæum*, or fork.

C. The extremities are the *superior* and *inferior*.

The upper extremity has,

1. The shoulder or top, under which is the *axilla*, or arm-pit.

2. The *brachium*, or arm.

3. The *antibrachium*, or fore-arm, in which are the bend, or *flexura*, and elbow.

4. The *manus*, or hand, which has *vola*, the palm; and *dorsum*, the back; and is divided into the *carpus* or wrist, the *metacarpus* and fingers.

The lower extremity embraces,

1. The *femur*, or thigh, the upper and outer part of which is called *coxa*, or the *regio ischiadica*.

2. The *crus*, or leg, in which are the *genu*, or knee, *cavum popletis*, or ham, and the *sura*, or calf.

3. The *pes*, or foot, which is divided into the *tarsus*, *metatarsus*, and toes.

The upper part of the tarsus laterally has the *malleolus externus* and *internus*, or the inner and outer ankle.

RE'GIUS. (From *rex*, a king.) Royal: applied, 1. in *Pathology*, to a jaundice; because it occurs to those who live in royal palaces, or because the colour of the skin is like gold, which is a royal metal.

2. In *Chemistry*, to the noble metals, especially gold, and to a preparation, the *aqua regia*, which has the power of dissolving gold.

REGULAR. *Regularis*. 1. In *Pathology*, applied to diseases which observe their usual course, in opposition to irregular, in which the course of symptoms deviate from what is usual; as regular gout, regular small-pox, &c.

2. In *Botany*, applied to parts of plants; as blossoms, &c. when regular in their figure and size, and proportion of their parts; and the flowers of the *Lilium* and *Hyacinthus*.

Regular gout. See *Arthritis*.

Regular small-pox. See *Variola*.

RE'GULUS. (Diminutive of *rex*, a king: so called because the alchemists expected to find gold, the king of metals, collected at the bottom of the crucible after fusion.) The name regulus was given by chemists to metallic matters when separated from other substances by fusion. This name was introduced by alchemists, who, expecting always to find gold in the metal collected at the bottom of their crucibles after fusion, called this metal, thus collected, regulus, as containing gold, the king of metals. It was afterwards applied to the metal extracted from the ores of the semi-metals, which formerly bore the name that is now given to the semi-metals themselves. Thus we had regulus of antimony, regulus of arsenic, and regulus of cobalt.

Regulus of antimony. See *Antimony*.

Regulus of arsenic. See *Arsenic*.

REME'DIUM. (*um, ii*. n.; *à re*, and *medeor*, to cure.) A remedy, or that which is employed with a view to prevent, palliate, or remove a disease.

Remedium divinum. See *Imperatoria*.

REMINISCENCE. See *Memory*.

REMITTENT. (*Remittens*; from *remitto*, to assuage or lessen.) A disorder, the symptoms of which diminish very considerably, and return again so as not to leave the person free from the disease until it changes its character or vanishes.

Remittent fever. A remittent fever is characterised by the usual symptoms of febrile action, which very strikingly undergo a great increase of force, at least once every twenty-four hours, and then remit. This exacerbation is widely different from the paroxysm of an intermittent, and the remission differs also very much from that subsidence of the febrile symptoms of an intermittent which constitutes the intermission. In a remittent, however considerable the diminution of the fever, there is still a considerable degree of it, and nothing like an apyrexial state; and although, in many cases, the symptoms of the fever may approach somewhat in character those of the paroxysms of an intermittent, yet they are very different, and evidently consist merely of an increased violence of those which were severest during the remission. This genus of fever sometimes exists in a mild form, sometimes in the most malignant. It is a common disease with infants, and in the juvenile period of life, when it is denominated *infantile* remittent. This latter disease is usually produced by foul bowels, by indigestible foods, and by worms; but the others are caused by marsh miasmata, by peculiar poisons of vegetable and animal production, and also by the decomposition of animal effluvium, influenced by local circumstances, peculiarities of constitution, and existing diatheses: and hence are produced bilious and choleric remittents, comatose remittents, either in a mild or malignant form, and named from the place in which they have raged, as the *Bulam*, *Philadelphian*, *Demerara*, *St. Domingo*, *Barbadoes*, *Jamaica*, *American*, *Hungarian*, *African*, *Gibraltar*, the *yellow*, and the *jungle* fever.

The following are the several species of remittents:—

1. The mild form. In this remittent the pulse is very frequent, but regular throughout, the debility is not considerable, and the skin soon becomes relaxed, and perspires freely. It attacks young persons of relaxed habits, who are weakly, and commences mostly with some disturbance of the bowels. It occurs at all seasons of the year, but more frequently in the autumn. Fatigue, cold, or long exposure to the sun's heat, often bring it into action. The patient complains of drowsiness, and is very languid; is occasionally chilly, and afterwards flushed, but without perspiration; for the skin is hot and dry, and the thirst considerable, attended by nausea and total loss of appetite. In the course of the day, but usually towards evening, the pulse quickens, the heat increases, and at length terminates in a sweat, which after a time goes off, leaving the skin hot and dry, and the pulse still very quick. This exacerbation sometimes occurs at noon, and sometimes also in the night. If the disease be left to itself, the symptoms augment in severity daily: the head occasionally, but more frequently the liver, or some other abdominal viscus, gives proof of being loaded and oppressed, and the restlessness is intolerable; or a sudden bilious purging or vomiting supervenes, and carries off the complaint by a salutary crisis. Mild remittents are more frequently caused by loaded stomach, stuffed bile-ducts, or foul bowels, than by marsh miasm, and generally give way to purgatives, especially mercurial ones. The submuriate of mercury should be given in doses of two or four grains to adults every second day, and followed by

saline purgatives with senna, and the febrile symptoms mitigated in the intervals by saline sudorifics; and the diet should consist of very little more than farinaceous drinks, sago, arrow-root, or the like. The pulse will generally be found from ninety to a hundred strokes in a minute; but as soon as it sinks below this, or the sweat is considerable, or, without this, the skin is moist and not so much heated, mild tonics, especially the mineral acids, with light infusion of colomba, gentian, quassia, chamomile, cascarilla, or cinchona, will complete the cure, though the disease usually runs on for ten days or a fortnight.

2. The infantile remittent does not essentially differ from the description just given. It is usually ascribed to worms, which are occasionally its cause; but the most common by far is crude accumulations in the bowels, from which the digestion proceeds imperfectly, producing great general irritation, and considerable languor. The belly becomes tumid and painful, and the food is nauseated. The head becomes hot, heavy, and often comatose, the disease similating in this stage the commencement of hydrocephalus, with which it is very frequently confounded. See *Hydrocephalus*. The skin is pale or livid, with occasional flushes in the cheeks. It is a singular fact, that, if the exacerbation or increase of fever take place in the night, there is watchfulness and perpetual jactitation; if in the day-time, drowsiness and stupor. Remittents in the infantile and juvenile periods of life are almost always accompanied by a sluggish state of the bowels, and require the exhibition of calomel, with jalap and scammony: the *pulvis è scammonii cum calomelane* is an excellent form for children; and if this do not act, its operation must be assisted by the infusion of senna, with sulphate of magnesia or potash. Until the bowels are well cleared, the fever goes on increasing; but under a course of brisk cathartics, in conjunction with perfect quiet, good ventilation, and light farinaceous drinks and diet, it will usually give way in a week or a fortnight. Particular symptoms are to be opposed by their appropriate remedies: thus, if there be much coma, the head should be cooled with a cold or evaporating lotion of dilute acetic acid or spirit, or the feet fomented; if there be bilious diarrhœa, the purgative plan is to be abandoned, and the pains of the bowels allayed by absorbents, demulcents, and mild anodynes: if there be bilious or other vomitings, carbonic acid, with very mild aperients, until the irritability of the stomach is allayed.

3. Besides the infantile fever and mild form of this genus, there are others which are usually of a more malignant nature, and which, occurring towards the decline of summer, are called autumnal remittents: these we shall now describe. They are usually ushered in with extreme weakness, and irregularity of the voluntary motions; the muscular strength gradually goes, and the mind soon wanders: there is coldness and sinking of the extremities, and a tendency to faint in the erect posture; nausea, vomiting, and a total disinclination for nourishment; and sooner or later, a putrid tendency of the fluids becomes apparent, by the skin being covered with fœtid sweat; the breath being offensive, the tongue clammy, fœtid, livid, or greenish black; the lips swelled, and purplish; the urine brown or blackish and offensive; a black discharge, often in great quantity, from the stomach; the stools blackish, colliquative, and very offensive, and parted with insensibly; the mind wandering; with twitching of the tendons, petechial spots, and purpura of large size, and hæmorrhages.

In this country such remittents have a strong tendency to assume the tertian or double tertian type; or, in other words, they have striking exacerbations every other day. Autumnal remittents commence with lassitude, a general soreness over the body, yawning, inquietude, and most of the other concomitants of febrile action. As some of the larger organs have been more affected by the influence of the season than the rest, we find them giving way in proportion: hence the head is sometimes severely tried with pain or heaviness; the bowels are overloaded with bile; or the stomach is exquisitely irritable, and rejects whatever is introduced into it. Generally, the stomach suffers more from this symptom than any other organ; and, along with the sickness, there is in many cases a troublesome looseness. Sometimes, however, the bowels are costive, and the stomach but little affected. The violence of the symptoms is commonly in proportion to the violence of the incursion. The exacerbation ordinarily takes place at noon, or early in the afternoon, and consists in an increase of heat and pulsation; for there is rarely any preceding chill, and as rarely any salutary moisture when the heat diminishes. The night is passed under extreme restlessness, vomiting, and mild delirium; and thus the fever continues, with strong exacerbations about noon or night, and obvious remissions.

At the very commencement of this fever, an emetic is generally found serviceable, as it not only clears the stomach of vitiated secretions, but is one of the best means of determining to the skin. The use of the lancet must depend on the circumstances of the particular case. Where the onset is violent, and particularly where the patient is plethoric, or of a vigorous habit, it may be employed with advantage instantly and freely; for without it, from the urgency of the symptoms, there can be little doubt that some large organ or other will soon become locally affected with congestion or effusion, which is always to be avoided as one of the worst symptoms that can occur: and if there be reason to suspect that such local affection exist at the time of the attack, and more especially that it be the cause of it, copious depletion will be still more necessary; for in this case, not only is

the fever to be contended with, but an inflammation of the infected organ to be guarded against. Except in these cases there is no call for the lancet, but, on the contrary, the loss of blood is injurious.

The common saline diaphoretics, either effervescing or not, will commonly take off the burning heat of the skin; or, where the stomach is not in an irritable state, the antimonial powder, or small doses of the tartarised antimony, may be given: and with such remedies, and pediluvia or fomentation to the feet at night, the fever will mostly be diminished. Dilute acids are highly useful in form of drinks, as imperial, lemonade, orangeade, the subacid fruits, and infusions of mint, balm, &c. where the bowels are not irritable. Mild aperients of rhubarb, sulphate of potash, infusion of senna, or cassia electuary, are the best aperients from time to time, unless the bilious or constipated condition of the bowels demand the submuriate of mercury, or the more active purgatives.

4. The *yellow* and *jungle* fevers owe their production unquestionably to marsh miasm; and hence they are so common in the swampy soils and morasses of the intertropical regions, exposed to a high solar heat, and perpetually exhaling a decomposition of animal and vegetable materials: in some instances, also, the remote cause seems to have been a febrile miasm, more like to common contagion, produced by a decomposition of the effluvia from human bodies. Dr. Moseley gives an excellent account of these malignant remittents:— "When a new comer," says he, "is seized with a sudden loss of strength, and a desire of changing for rest into every position, without finding it in any, those symptoms which constitute the endemial fever may be expected. The following day, but sometimes within twelve hours from the first indisposition, the violence of the disease will commence thus:— There will be a faintness, and generally a giddiness of the head, with a small degree of chilliness and horror, but never a rigor. Then immediately will succeed a high degree of fever with great heat, and strong beating in all the arteries of the body, particularly observable in the carotid and temporal arteries; flushings in the face, gaspings for cool air, white tongue, but tinged with yellow, after the retchings have commenced; excessive thirst, redness, heaviness, and burning in the eyes; heaviness and darting pains in the head and small of the back, and often down the thighs; pulse quick, generally full and strong, in some cases quick, low, and vacillating; skin hot and dry, sometimes with a partial and momentary moisture; sickness of stomach from the first, which increases with the disease; and, immediately after any thing is taken to quench the thirst, retchings succeed, in which bilious matter is brought up; anxiety and stricture, soreness, and intense heat about the præcordia; great restlessness, heavy respiration, sighing, urine deep coloured, and but little in quantity. This is the first stage of the fever, and may continue twenty-four, thirty-six, forty-eight, or sixty hours; and this constitutes its inflammatory period.

The second stage begins with the abatement of many of the preceding symptoms, and the rise of others: sometimes with a deceiving tranquillity, but with perturbation if the patient should fall into a sleep; then a yellow tinge is observed in the eyes, neck, and breast: the heat subsides, and sometimes with a chilliness; but not with that sort of strong rigor which, when it happens, terminates the disease by sweat, or by copious bilious evacuations upwards and downwards. The retchings are violent, and turn porraceous; the pulse flags, but is sometimes high and sometimes soft; the skin soft and clammy; the urine in small quantity, and of a dark croceous colour: the tongue in some cases is dry, harsh, and discoloured; in others, furred and moist: there is confusion in the head, and sometimes delirium, with the eyes glassy. This stage of the disease sometimes continues only for a few hours; sometimes for twelve, twenty-four, thirty-six, or forty-eight hours, but never longer.

In the third and last stage of the fever, the pulse sinks and becomes unequal and intermittent, sometimes very quick; frequent vomiting, with great straining and noise in vomiting, and what is brought up now is more in quantity, and has the appearance of the grounds of coffee, or is of a slate colour. Nothing can be retained in the stomach; difficult breathing, black tongue, cold clammy sweats, eyes hollow and sunk, yellowness round the mouth and temples, and soon after over the whole body.

The symptoms become gradually more aggravated, accompanied with subsultus tendinum, black urine, deadly coldness of the limbs, delirium, faltering speech, hæmorrhage, or oozing of blood from the mouth and nostrils, corners of the eyes and ears, black bloody vomiting and stools, vibices, hiccough, muttering, coma, death."

After the first prostration of strength, the disease runs on violently till the sensorial power is exhausted. Through its entire course, till the patient is sinking, the intellect is not particularly disturbed, and the organs principally affected are the abdominal: hence the intense heat and anxiety about the præcordia, the saffron dye of the urine, the yellow tint of the skin, and the vomitings, first of a bilious and afterwards of a chocolate or sanguineous colluvies. In some cases the disease opens with great violence, and rushes forward at once to its acme, and the patient is cut off in four and twenty hours. Though the remittents, in hot climates, generally pursue the course of febrile action that has been described, it is sometimes otherwise, and even in milder climates; for it sometimes commences more like to an intermittent, and sometimes it more resembles a continued fever, as which it has terminated, and occasionally as an intermittent.

With respect to the treatment of this fever, unfortunately the practitioners in warm cli-

mates have differed very much: some, alarmed at the debility which the system has to encounter in the second stage of the disease, or as soon as it has run through its inflammatory career, shuddered at the thought of the lancet, and commenced with mild saline purgatives, and immediately afterwards had recourse to the Peruvian bark. Others, somewhat less timid, have allowed the abstraction of blood to the extent of ten or twenty ounces at the very beginning; while others, again, regarding the inflammatory impetus as the sole cause of danger, resorted boldly to the lancet, and followed up the abstraction of blood as long as a single germ of an inflammatory diathesis was manifest, paying no regard to the appearance of the blood. This sanguineous depletion was accompanied by the free exhibition of purgatives. Another plan consisted in giving purgatives, especially the submuriate of mercury, in large doses. Ten grains of calomel, and as much of jalap, are often exhibited every six hours until the alvine canal is effectually evacuated. The sulphates of magnesia and soda, with infusion of senna, are also esteemed by some; and this milder practice should generally be preferred to repeated venesection, where there is not much impetuosity in the onset, no great derangement or prognostic of inflammatory congestion in the larger viscera, where the remissions are regular, and the epidemic pretty uniform in its character. Under such circumstances, the loss of a large quantity of blood will not shorten the career of the disease, but will most probably convert the remittent into a continued fever, in the latter stage of which that strength will be wanted which might have been retained, but for the profuse and injudicious bleedings.

The common nervine and saline diaphoretics are useful to oppose the febrile action: acetate of ammonia, the citrate also, with sulphuric æther, diluted with camphire mixture. Acids are continually called for as common drinks; and the dilute chlorine or oxygenated muriatic acid, in large doses, promises to be a good medicine.

In all cases where the remission is without any inflammatory condition,—in all cases where there is a flabby state of the fibre, and more especially where a septic diathesis, or putrid-tending state is apparent, bitters, such as calomba, serpentaria, Virginiana, and quassia, with mineral acids, will be required; and, in a more decided malignant state, cascarilla, cinchona, and the like, as directed against typhus, should be administered, with brandy and cordials *ad libitum*.

Particular symptoms call for particular remedies.

a. Where there is congestion in the vascular system of an organ, topical bleedings are necessary, in addition to general blood-letting; and cold applications also, especially cold sea-water, iced water, diluted spirit, and evaporating lotions to the shaved head, the epigastric region, or wherever the congestion may be.

b. Nausea and vomiting will be best opposed by mild aperients in the effervescing state; by carbonic acid from yeast, beer, or soda water: but the best remedy against continued vomiting of porraceous, chocolate-ground-like, or slate-coloured fluids from the stomach, is a punch made with brandy, lemon-juice, and cayenne pepper, from the last of which the benefit is said to result.

c. Comatose states call for stimulating cataplasms and fomentations, and cold evaporating lotions to the head. Blisters have very seldom been useful.

5. There is another form of malignant remittent which is well described by Hippocrates, under the name of *causus* or *febris ardens*, characterised by extreme heat, violent thirst, a rough and black tongue, the complexion inclined to yellowness, and the saliva bilious. There is commonly an acute aching in the head, nausea, great anxiety of the præcordia, with frequently a gnawing pain at the stomach. The bowels are unusually costive, particularly at the commencement of the disease. The tongue, mouth, nostrils, and, indeed, the whole surface of the body, is parched and fiery hot; the pulse is full and strong; the voice hoarse; the breath short and quick; occasionally delirium. It chiefly attacks the young and the vigorous, who bear it better than old persons. The treatment of this fever is precisely that of a synocha. See *Inflammatory fever*.

6. The several forms of remittent fevers which have been described, have shown a tendency to an inflammatory or a synochous, that is, a mixed type. That now about to be described, evinces one most clearly typhoid from the very commencement; for it is ushered in by extreme debility, both of the action of the heart, of the mental faculties and moving powers, and the common symptoms of typhus in the most aggravated form. The epidemics of this fever, that are accompanied with most mortality, are those which arise from a decomposition and new arrangement of the elements of human effluvia in the midst of filth, poverty, or famine, great heat and moisture, crowded multitudes, and a stagnant atmosphere; and such as seize dispirited armies, maintaining their ground with difficulty in the midst of great carnage, surrounded by the dead and the dying, reduced to short provisions, and worn out by the fatigues of the campaign.

There is no difference in the treatment of this horrible disease from that recommended against a putrid-tending fever. See *Typhus*.

RE'MORA. (*a, æ*. f.; from *remoror*, to hinder.) See *Ononis spinosa*.

REMOTE. 1. In *Pathology*, applied to the causes of diseases. See *Ætiology*.

2. In *Botany*, applied to flowers of verticillated plants when there is a considerable length of stem between each whorl.

REN. (*en, enis*. m. *Ren*, απο του ρειν: because through them the urine flows.) The kidney. See *Kidney*.

RENAL. (*Renalis*; from *ren*, the kidney.) Appertaining to the kidney.

Renal artery. See *Emulgent artery.*

Renal gland. *Glandula renalis.* Renal capsule. Supra-renal gland. The supra-renal glands are two hollow bodies, like glands in fabric, and placed one on each side upon the kidney. They are covered by a double tunic, and their cavities are filled with a liquor of a brownish red colour. Their figure is triangular, and they are larger in the fœtus than the kidneys; but in adults they are less than the kidneys. The right is affixed to the liver, the left to the spleen and pancreas, and both to the diaphragm and kidneys. They have arteries, veins, lymphatics, and nerves: their arteries arise from the diaphragmatic, the aorta, and renal arteries. The vein of the right supra-renal gland empties itself into the vena cava; that of the left into the renal vein: their lymphatic vessels go directly to the thoracic duct: they have nerves common alike to these glands and the kidneys. They have no excretory duct, and their use is at present unknown. It is supposed they answer one use in the fœtus, and another in the adult; but what these uses are is uncertain. Boerhaave supposed their use to consist in their furnishing lymph to dilute the blood returned after the secretion of the urine in the renal vein; but this is very improbable, since the vein of the right supra-renal gland goes to the vena cava, and the blood carried back by the renal vein wants no dilution. It has also been said, that these glands not only prepare lymph, by which the blood is fitted for the nutrition of the delicate fœtus; but that in adults they serve to restore to the blood of the vena cava the irritable parts which it loses by the secretion of bile and urine. Some, again, have considered them as diverticula in the fœtus, to divert the blood from the kidneys, and lessen the quantity of urine. The celebrated Morgagni believed their office to consist in conveying something to the thoracic duct. It is singular, that in children who are born without the cerebrum, these glands are extremely small, and sometimes wanting.

Renal vein. See *Emulgent vein.*

RENIFORM. *Reniformis.* Kidney-shaped. 1. In *Anatomy*, this term is applied to any deviations of parts, assuming a kidney-like form.

2. In *Botany*, leaves, seeds, &c. are so called from their shape: it is a short, broad, roundish leaf, the base of which is hollowed out; as that of the *Asarum europæum* and *Sibthorpia europæa*, and the seeds of *Beta* and *Phaseolus*.

RENNET. Runnet. The gastric juice and contents of the stomach of calves. It is much employed in preparing cheese, and in pharmacy, for making whey. To about a pound of milk, in a silver or earthen basin placed on hot ashes, add three or four grains of rennet, diluted with a little water: as it becomes cold, the milk curdles, and the whey, or serous part, separates itself from the caseous part. When these parts appear perfectly distinct, pour the whole upon a strainer, through which the whey will pass, while the curds remain behind. This whey is always rendered somewhat whitish, by a very small and much divided portion of the caseous part; but it may be separated in such a manner that the whey will remain limpid and colourless, and this is what is called clarifying it. Put into a basin the white of an egg, a glass of the serum of milk, and a few grains of tartaric acid in powder: whip the mixture with an ozier twig, and, having added the remainder of the unclarified whey, place the mixture again over the fire until it begins to boil. The tartaric acid completes the coagulation of the white part of the milk which remains; the white of egg, as it becomes hot, coagulates and envelopes the caseous part. When the whey is clear, filter it through paper: what passes will be perfectly limpid, and have a greenish colour. This is clarified whey.

Re'nuens. (From *renuo*, to nod the head back, in sign of refusal: so called from its office of jerking back the head.) A muscle of the head.

REPA'NDUS. Repand: wavy; serpentine. A leaf is so called which is bordered with many acute angles, and small segments of circles alternately; as that of the *Menyanthes nymphæoides*.

REPELLENT. (*Repellens*; from *repello*, to drive back.) Applications are sometimes so named which make diseases recede, as it were, from the surface of the body.

RE'PENS. Creeping. Often used in *Botany*: *caulis repens*, one that creeps along the earth; as that of the *Ranunculus repens*. Applied to a root, it means running transversely, and here and there giving off new plants; as that of the *Glycyrrhiza glabra*, and *Sambucus ebulus*.

REPLICA'TUS. Replicate: folded; plaited so as to form a groove or channel; as in the legumen of the *Astragalus hypoglottis*.

REPULSION. (*Repulsio*, *onis*. f.; from *repulso*, to repel.) All matter possesses a power which is in constant opposition to attraction. This agency, which is equally powerful and equally obvious, acts an important part in the phænomena of nature, and is called *the power of repulsion*.

That such a force exists, which opposes the approach of bodies towards each other, is evident from numberless facts.

Newton has shown that when a convex lens is put upon a flat glass, it remains at a distance of the one hundred and thirty-seventh part of an inch, and a very considerable pressure is required to diminish this distance; nor does any force which can be applied bring them into actual mathematical contact. A force may indeed be applied sufficient to break the glasses into pieces, but it may be demonstrated that it does not diminish their distance much beyond the one thousandth part of an inch. There is, therefore, a repulsive force which prevents the two glasses from touching each other.

Boscovich has shown that when an ivory billiard-ball sets another in motion by striking against it, an equal quantity of its own motion is lost, and the ball at rest begins to move while the other is still at a distance.

There exists, therefore, a repulsion between bodies: this repulsion takes place while they are yet at a distance from each other; and it opposes their approach towards each other.

The cause or the nature of this force is equally inscrutable with that of attraction, but its existence is undoubted: it increases, as far as has been ascertained, inversely as the square of the distance; consequently at the point of contact it is infinite.

The following experiments will serve to prove the energy of repulsion more fully:—

Experiment.—When a glass tube is immersed in water, the fluid is attracted by the glass, and drawn up into the tube; but, if we substitute mercury instead of water, we shall find a different effect. If a glass tube of any bore be immersed in this fluid, it does not rise, but the surface of the mercury is considerably below the level of that which surrounds it when the diameter of the tube is very small. In this case, a repulsion takes place between the glass and the mercury, which is even considerably greater than the attraction existing between the particles of the mercury; and hence the latter cannot rise in the tube, but is repelled, and becomes depressed.

Experiment.—When we present the north pole of a magnet A, to the same pole of another magnet B, suspended on a pivot, and at liberty to move, the magnet B will recede as the other approaches; and, by following it with A, at a proper distance, it may be made to turn round on its pivot with considerable velocity. In this case there is some agency which opposes the approach of the north poles of A and B, which acts as an antagonist, and causes the moveable magnet to retire before the other. There is, therefore, a *repulsion* between the two magnets, a repulsion which increases with the power of the magnets; which may be made so great that all the force of a strong man is insufficient to make the two north poles touch each other. The same repulsion is equally obvious in electrical bodies. For instance:

Experiment.—If two small cork balls be suspended from a body so as to touch one another, and if we charge the body in the usual manner with electricity, the two cork balls separate from each other, and stand at a distance proportional to the quantity of electricity with which the body is charged: the balls of course repel each other.

Experiment.—If we rub over the surface of a sheet of paper the fine dust of lycopodium or puffball, and then let water fall on it in small quantities, the water will instantly be repelled, and form itself into distinct drops, which do not touch the lycopodium, but roll over it with uncommon rapidity. That the drops do not touch the lycopodium, but are actually kept at a distance above it, is obvious from the copious reflection of white light.

Experiment.—If the surface of water contained in a basin be covered over with lycopodium, a solid substance deposited at the bottom of the fluid may be taken out of it with the hand without wetting it. In this case the repulsion is so powerful as to defend the hand completely from the contact of the fluid.

RES. (*es, ei.* f.) A thing.

Res naturales. The naturals. According to Boerhaave, these are life, the cause of life, and its effects. These, he says, remain in some degree, however disordered a person may be.

Res non-naturales. See *Non-naturals.*

RESE'DA. (*a, æ.* f.; from *resedo,* to appease: so called from its virtue of allaying inflammation.) The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Trigynia.*

2. The name, in some pharmacopœias, of the dyers' weed. See *Reseda luteola.*

Reseda luteola. The dyers' weed. Dioscorides mentions it as useful in jaundice.

RESIN. (*Resina, æ.* f.; from *ρεω,* to flow: because it flows spontaneously from the tree.) The name *resin* is used to denote solid inflammable substances, of vegetable origin, soluble in alkohol, usually affording much soot by their combustion. They are likewise soluble in oils, but not at all in water; and are more or less acted upon by the alkalies.

All the resins appear to be nothing else but volatile oils, rendered concrete by their combination with oxygene. The exposure of these to the open air, and the decomposition of acids applied to them, evidently prove this conclusion.

There are some among the known resins which are very pure, and perfectly soluble in alkohol, such as the balsam of Mecca and of Capivi, turpentines, tacamahaca, elemi: others are less pure, and contain a small portion of extract, which renders them not totally soluble in alkohol; such are mastic, sandarach, guaiacum, labdanum, and dragon's blood.

The essential properties of resin are, being in the solid form, insoluble in water, perfectly soluble in alkohol, and in essential and expressed oils, and being incapable of being volatilised without decomposition.

Resins are obtained chiefly from the vegetable kingdom, either by spontaneous exudation, or from incisions made into vegetables affording juices which contain this principle. These juices contain a portion of essential oil, which, from exposure to the air, is either volatilised or converted into resinous matter, or sometimes the oil is abstracted by distillation. In some plants the resin is deposited, in a concrete state, in the interstices of the wood, or other parts of the plant.

Resins, when concrete, are brittle, and have generally a smooth and conchoidal fracture; their lustre is peculiar, they are more

or less transparent, and of a colour which is usually some shade of yellow, or brown; they are of a greater specific gravity than water; they are often odorous and sapid, easily fusible, and, on cooling, become solid.

Resin, black. See *Resina nigra.*

Resin, elastic. See *Caoutchouc.*

Resin tree, elastic. See *Caoutchouc.*

Resin, white. See *Resina alba.*

Resin, yellow. See *Resina flava.*

Resina alba. The inspissated juice of the *Pinus sylvestris*, &c. The residuum of the distillation of oil of turpentine is also called, by some, white resin. See *Resina flava.*

Resina elastica. See *Caoutchouc.*

Resina flava. Yellow resin is that which remains in the still after distilling oil of turpentine, by adding water to the common turpentine. It is of very extensive use in surgery as an active detergent, and forms the base of the *unguentum resinæ flavæ.*

Resina nigra. *Colophonia.* What remains in the retort after distilling the oil of turpentine from the common turpentine. This name is also given, in the London Pharmacopœia, to pitch.

Resina novi belgii. See *Botany Bay.*

RESOLUTION. (*Resolutio;* from *resolvo,* to loosen.) 1. A determination of inflammation, in which the disease disappears without any abscess, mortification, &c.

2. The dispersion of swellings, indurations, &c.

RESOLVENT. (*Resolvens;* from *resolvo,* to loosen.) This term is applied by surgeons to such substances as discuss inflammatory and other tumours.

RESPIRATION. (*Respiratio, onis.* f.; from *respiro,* to take breath.) To comprehend the important function of breathing or respiration, it is not only necessary to have a knowledge of the structure of the thoracic viscera, the form of the parietes, of the chest, and to comprehend the mechanism by which the air enters and passes out of it, but also to be well acquainted with the chemical and physical properties of the air, and the circulation of the blood.

The lungs are two spongy and vascular organs, of a considerable size, situated in the lateral parts of the chest. Their parenchyma is divided and subdivided into lobes and lobules, the forms and dimensions of which it is difficult to determine.

We learn, by the careful examination of a pulmonary lobule, that it is formed of a spongy tissue, the *areolæ* of which are so small that a strong lens is necessary to observe them distinctly: these *areolæ* all communicate with each other, and they are surrounded by a thin layer of cellular tissue which separates them from the adjoining lobules.

Into each lobule enters one of the divisions of the bronchia, and one of the pulmonary artery: this last is distributed in the body of the lobule in a manner that is not well known: it seems to be transformed into numerous radicles of the pulmonary veins. Dr. Magendie believes that these numerous small vessels, by which the artery terminates and the pulmonary veins begin, by crossing and joining in different manners, form the *areolæ* of the tissue of the lobules. The small bronchial division that ends in the lobule, does not enter into the anterior of it, but breaks off as soon as it has arrived at the parenchyma. This last circumstance appears remarkable: because, since the bronchia do not penetrate into the spongy tissue of the lungs, it is not probable that the surface of the cells, with which the air is in contact, is covered by the mucous membrane. The most minute anatomy cannot prove its existence in this place.

A part of the nerve of the eighth pair, and some filaments of the sympathetic, are expended on the lungs, but it is not known how they are distributed: the surface of the organ is covered by the pleura, a serous membrane, similar to the *peritonæum* in its structure and functions.

Round the *bronchia*, and near the place where they enter into the tissue of the lungs, a certain number of lymphatic glands exist, the colour of which is almost black, and to which the small number of lymphatic vessels which spring from the surface and from the interior of the pulmonary tissue are directed.

With regard to the lungs, we receive from the art of delicate injections some information that we ought not to neglect.

If we inject mercury, or even coloured water, into the pulmonary artery, the injected matter passes immediately into the pulmonary veins, but at the same time a part enters the *bronchia*, and goes out by the *trachea.* If the matter be injected into a pulmonary vein, it passes partly into the artery and partly into the bronchia. Lastly, if it be introduced into the trachea, it very soon penetrates into the artery, into the pulmonary veins, and even into the *bronchial* artery and vein.

The lungs fill up a great part of the cavity of the chest, and enlarge and contract with it; and, as they communicate with the external air by the trachea and the larynx, every time that the chest enlarges it is distended by the air, which is again expelled when the chest resumes its former dimensions. We must, then, necessarily stop to examine this cavity.

The breast, or the thorax, is of the form of a *cone,* the summit of which is above, and the base below.

The apparent form and dimensions of the breast are determined by the length, disposition, and motions of the ribs upon the vertebra.

The chest is capable of being dilated vertically, transversely, forward and backward; that is, in the direction of its principal diameters.

The principal, and almost the only, agent of the vertical dilatation is the diaphragm, which, in contracting, tends to lose its vaulted form, and to become a plane; a motion which cannot take place without the pectoral motion

of the thorax increasing, and the abdominal portion diminishing.

The sides of this muscle, which are fleshy, and correspond with the lungs, descend farther than the centre, which, being aponeurotic, can make no effort by itself, and which is, besides, retained by its union with the *sternum* and the *pericardium*.

In most cases this lowering of the diaphragm is sufficient for the dilatation of the breast; but it often happens that the sternum and the ribs, in changing the position between them and the vertebral column, produce a sensible augmentation in the pectoral cavity.

In the general elevation of the thorax, its form necessarily changes, as well as the relations of the bones of which it is composed. The cartilages of the ribs seem particularly intended to assist these changes: as soon as they are ossified, and consequently lose their elasticity, the breast becomes immoveable.

Whilst the sternum is carried upwards, its inferior extremity is directed a little forward: it thus undergoes a slight swinging motion; the ribs become less oblique upon the vertebral column; they remove a little from each other, and their inferior edge is directed outward by a small tension of the cartilage. All these phænomena are not very apparent, except in the superior ribs.

A general enlargement of the thorax takes place by its elevation, as well from front to back, as transversely, and upwards.

This enlargement is called *inspiration*. It presents three degrees:—1st, Ordinary *inspiration*, which takes place by the depression of the diaphragm, and an almost insensible elevation of the thorax. 2dly, The *great* inspiration, in which there is an evident elevation of the thorax, and, at the same time, a depression of the diaphragm. 3dly, *Forced* inspiration, in which the dimensions of the thorax are augmented in every direction, as far as the physical disposition of this cavity will permit.

Expiration succeeds to the dilatation of the thorax; that is, the return of the thorax to its ordinary position and dimensions.

The mechanism of this motion is the reverse of what we have just described. It is produced by the elasticity of the cartilages, and by the ligaments of the ribs, which have a tendency to resume their former shape, by the relaxation of the muscles that had raised the thorax, and by the contraction of a great number of muscles, so disposed that they lower and contract the chest.

The contraction of the thorax, or expiration, presents also three degrees:—1st, *ordinary expiration*; 2d, *great expiration*; 3d, *forced expiration*.

In ordinary expiration, the relaxation of the diaphragm, pressed upwards by the abdominal viscera, which are themselves urged by the anterior muscles of this cavity, produces the diminution of the vertical diameter: vehement expiration is produced by the relaxation of the inspiring muscles, and a slight contraction of those of expiration, which permits the ribs to assume their ordinary relations with the vertebral column. But the contraction of the chest may go still farther. If the abdominal and other expiratory muscles contract forcibly, a greater depression of the diaphragm takes place, the ribs descend lower, the base of the *conoid* shrinks, and there is, consequently, a greater diminution of the capacity of the thorax. This is called forced expiration.

We shall now consider the air as an elastic fluid, which possesses the property of exerting pressure upon the bodies it surrounds, and upon the sides of the vessels that contain it. This property supposes, in the particles of air, a continual tendency to repulse each other.

Another property of the air is *compressibility*; that is, its volume changes with the pressure which it supports.

The air expands by heat like all other bodies; its volume augments $\frac{1}{480}$ by an increase of one degree of Fahrenheit's thermometer.

The air has weight: this is ascertained by weighing a vessel full of air, and then weighing the same vessel after the air has been taken out by the air-pump.

The air is more or less charged with humidity.

Air, notwithstanding its thinness and transparency, refracts, intercepts, and reflects the light.

The air is composed of two gases that are very different in their properties:—

1st, Oxygene: this gas is a little heavier than air, in the proportion of 11 to 10, and it combines with all the simple bodies: it is an element of water, of vegetable and animal matters, and of almost all known bodies; it is essential for combustion and respiration. 2dly, Azote: this gas is a little lighter than air: it is an element of ammonia and of animal substances; it extinguishes bodies in combustion.

It has been thus found that 100 parts in weight of air contain 21 parts of oxygene and 79 of azote. These proportions are the same in every place and at all heights, and have not sensibly changed for these fifteen years, since they were positively established by chemistry.

Besides oxygene and azote, the air contains a variable quantity of the vapour of water, as we have already observed, and a *small quantity* of carbonic acid, the proportion of which has not yet been positively fixed.

The air is decomposed by almost all combustible bodies, at a temperature which is peculiar to each. In this decomposition they combine with the oxygene, and set the azote at liberty.

Of Inspiration and Expiration.—If we call to mind the disposition of the pulmonary lobules, the extensibility of their tissue, their communication with the external air by means of the bronchia, of the trachea, and of the larynx, it may easily be conceived that every time the breast dilates, the air immediately enters the pulmonary tissue, in a quantity propor-

tionate to the degree of dilatation. When the breast contracts, a part of the air that it contains is expelled, and passes out by the glottis.

In order to arrive at the glottis in inspiration, or to go outwards in expiration, the air sometimes traverses the nasal canal, and sometimes the mouth: the position of the velum of the palate, in these two cases, deserves to be described. When the air traverses the nasal canals and the pharynx, to enter or to pass out of the larynx, the velum of the palate is vertical, and placed with its anterior surface against the posterior part of the base of the tongue, so that the mouth has no communication with the larynx. When the air traverses the mouth, in inspiration or expiration, the velum of the palate is horizontal, its posterior edge is embraced by the concave surface of the pharynx, and all communication is cut off between the inferior parts of the pharynx and the superior part of this canal, as well as with the nasal canals. Thence the necessity of making the sick breathe by the mouth, if it is necessary to examine the tonsils or the pharynx.

These two ways for the air to arrive at the glottis were necessary, for they assist each other: thus, when the mouth is full of food, the respiration takes place by the nose; it takes place by the mouth when the nasal canals are obstructed by mucus, by a slight swelling of the membrane, or any other cause. The glottis opens in the instant of inspiration, and, on the contrary, it shuts in the expiration.

It appears that in a given time the number of inspirations made by one person are very different from those of another. Haller thinks there are twenty in the space of a minute. A man upon whom Menzies made experiments respired only fourteen times in a minute. Sir H. Davy informs us that he respires in the same period twenty-six or twenty-seven times; Dr. Thomson says that he respires generally nineteen times; and Dr. Magendie only respires fifteen times. Taking twenty times in a minute for the mean, this will give 28,800 inspirations in twenty-four hours. But this number probably varies according to many circumstances, such as the state of sleep, motion, distension of the stomach by food, the capacity of the chest, moral affections, &c. What quantity of air enters the chest at each inspiration? What quantity goes out at each expiration? How much generally remains?

According to Menzies, the mean quantity of air that enters the lungs at each inspiration, is 40 cubic inches.—Goodwin thinks that the quantity remaining, after a complete expiration, is 109 cubic inches; Menzies affirms that this quantity is greater, and that it amounts to 179 cubic inches.

According to Davy, after a forced expiration, his lungs contained 41 cubic inches.

After a natural expiration 118
After a natural inspiration 135
After a forced inspiration 254

By a forced expiration, after a forced inspiration, there passed out of the lungs .... 190 cu.in.
After a natural inspiration ...... 78·5
After a natural expiration .... 67·5

Dr. Thomson thinks that we should not be far from the truth in supposing that the ordinary quantity of air contained in the lungs is 280, and that there enter or go out at each inspiration, or expiration, 40 inches. Thus, supposing twenty inspirations in a minute, the quantity of air that would enter and pass out in this time would be 800 inches; which makes 48,000 in the hour, and in 24 hours, 1,152,000 cubic inches. A great number of experiments have been made by chemists to determine if the volume of air diminishes while it remains in the lungs. In considering the latest experiments, it appears that, in most cases, there is no diminution; that is, a volume of expired air is exactly the same as one of inspired air. When this diminution takes place it appears to be only accidental.

By successively traversing the mouth or the nasal cavities, the pharynx, the larynx, the trachea, and the bronchia, the inspired air becomes of a similar temperature with the body. It most generally becomes heated, and consequently rarefied, so that the same quantity in weight of air occupies a much greater space in the lungs than it occupied before it entered them. Besides this change of volume, the inspired air is charged with the vapour that it carries away from the mucous membranes of the air-passages, and in this state always, hot and humid, it arrives in the pulmonary lobules; also this portion of air of which we treat mixes with that which the lungs contained before.

But expiration soon succeeds to inspiration: an interval only of a few seconds passes in general between them; the air contained by the lungs, pressed by the powers of expiration, escapes by the expiratory canal in a contrary direction to that of the inspired air.

We must here remark, that the portion of air expired is not exactly that which was inspired immediately before, but a portion of the mass which the lungs contained after inspiration; and, if the volume of air that the lungs usually contains is compared with that which is inspired and expired at each motion of respiration, we may be inclined to believe that inspiration and expiration are intended to renew in part the considerable mass of air contained by the lungs.

This renewal will be so much more considerable as the quantity of air expired is greater, and as the following inspiration is more complete.

Physical and Chemical Changes that the Air undergoes in the Lungs.—The air, in its passage from the lungs, has a temperature nearly the same as that of the body: there escapes with it from the breast a great quantity of vapour called *pulmonary transpiration*; besides, its chemical composition is different from that of the inspired air. The proportion of azote

is much the same, but that of oxygene and carbonic acid is quite different.

In place of 0·21 of oxygene, and a trace of carbonic acid, which the atmospheric air presents, the expired air gives 0·18 or 0·19 of oxygene, and 0·3 to 0·4 of carbonic acid; generally the quantity of carbonic acid exactly represents the quantity of oxygene which has disappeared: nevertheless, the last experiments of Gay Lussac and Davy give a small excess of acid; that is, there is a little more acid formed than the oxygene absorbed.

In order to determine the quantity of oxygene consumed by an adult in 24 hours, we have only to know the quantity of air respired in this time. According to Lavoisier and Sir H. Davy, 32 cubic inches are consumed in a minute, which gives for 24 hours 46,037 cubic inches.

It is not difficult to appreciate the quantity of carbonic acid that passes out of the lungs in the same time, since it nearly represents the volume of oxygene that disappears. Thomson values it at 40,000 cubic inches, though he says it is probably a little less: now this quantity of carbonic acid represents nearly 12 ounces avoirdupois of carbon.

Some chemists say that a small quantity of azote disappears during respiration; others think, on the contrary, that its quantity is sensibly augmented: but there is nothing positive in this respect.

We are informed of the degree of alteration that the air undergoes in our lungs by a feeling which inclines us to renew it: though this is scarcely sensible in ordinary respiration, because we always continue it, it nevertheless becomes very painful if we do not satisfy it quickly; carried to this degree, it is accompanied with anxiety and fear, an instinctive warning of the importance of respiration.

Whilst the air contained in the lungs is thus modified in its physical and chemical properties, the venous blood traverses the ramifications of the pulmonary artery, of which the tissue of the lobules of the lungs is partly formed; it passes into the radicles of the pulmonary veins, and very soon into these veins themselves; but, in passing from the one to the other, it changes its nature from venous to arterial blood.

Rest-harrow. See *Ononis spinosa.*

Re'sta bovis. (So called because it hinders the plough.) See *Ononis spinosa.*

RESUPINA'TUS. Resupinate: reversed. Applied to leaves, &c. when the upper surface is turned downwards; as in the leaf of the *Pharus latifolius.*

RESUSCITATION. (*Resuscitatio, onis.* f.; from *resuscito*, to rouse and awake.) Revivification. The restoring of persons, apparently dead, to life. See *Asphyxia.*

RE'TE. (*e, is.* n.; so called *à retinendo pissium.*) A net: a term applied very generally, in *Anatomy* and *Natural History*, to cellular membrane, nerves, vessels, and other parts which appear like a net or web.

Rete malpighi. See *Rete mucosum.*

Rete mirabile. A network of blood-vessels in the basis of the brain of quadrupeds.

Rete mucosum. A mucous substance situated between the cuticle and true skin: called also, *Corpus reticulare, Corpus mucosum, Mucus Malpighi,* and *Reticulum Malpighi;* the existence of which was first announced by Malpighi. It is a stratum of soft matter, disposed in form of fibres, crossing each other in various directions. Some modern anatomists have considered it as merely a thin layer of pulpy matter, without any distinct reticulated structure; and Bichât even doubted its existence as a proper membrane. In the Negro it is more clearly demonstrated than in Europeans. Malpighi announced that it gave colour to the skin: and this opinion is admitted by all. In the Negro it is black; in the Chinese, yellow; in the aboriginal American, copper-colour; while, in the European, it possesses different shades of red and olive, more or less approaching to whiteness.

RETENTION. (*Retentio, onis.* f.; from *retineo*, to keep back.) The keeping back of any thing which should be expelled: applied to the excretions, but particularly to the urine. See *Suppression.*

Retention of menses. This occurs when, from an imperforate hymen, or a closure of the os externum of the vagina, the menses cannot get out, and collect within the vagina and cavity of the uterus. It is cured by puncturing the hymen, or cutting open the closed vagina.

Retention of urine. *Retentio urinæ.* A collection of urine within the bladder, the person not being able to expel it. This is sometimes partial, and sometimes total. It is known, in both cases, by a tumour in the region of the bladder, subsequent to the person having passed his urine, and by his not having the power so to do, when partial small quantities of urine dribble away. This disease occasionally occurs in old age from debility: it is frequently the result of an affection of the nerves of the bladder, over-distension of the bladder, inflammation, hernia, and other displacements of the abdominal viscera; pressure on the neck of the bladder from several causes, and from strictures; and pressure of tumours in the course of the urethra, as enlarged prostate gland, uterus, &c.; and fromf oreign bodies lodging in the urethra. For the cure of this disease, attention must be given to the removal of those diseases from which it arises, and to the removal of all obstructions. The palliative cure is drawing off the urine by a catheter. A want of tone in the bladder is most relieved by chalybeates and bark; and spasmodic stricture, by fomentations, warm bath, and cinchona and opium.

RETICULAR. (*Reticularis;* from *rete*, a net.) Interwoven like a web.

RETICULA'TUS. See *Reticular.*

RETI'CULUM. (*um, i.* n.; from *rete*, a net.) A little net or web.

RETIFORM. (*Retiformis;* from *rete*, a net, and *forma*, resemblance.) Net-like.

RETI'NA. (*a, æ.* f.; from *rete*, a net.) *Amphiblestroides*. The third or innermost membrane of the eye, expanded round the choroid coat, to the ciliary ligament. It is the true organ of vision, and is formed by an expansion of the pulp of the optic nerve. See *Vision*.

Retina'culum. (From *retineo*, to prop or restrain.) An instrument for keeping the bowels in their place.

RETIN-ASPHALTUM. See *Retinite*.

RETINITE. Retin-asphalt of Hatchet. A yellowish and reddish brown coloured mineral, composed of resin, asphalt, and earth; found at Bovey Tracy, in Devonshire, adhering to coal.

RETINI'TIS. (*is, idis.* f.; from *retina*, the name of the part, and the terminal *itis*, which imports inflammation.) Inflammation of the retina. The symptoms are the same as those from inflammation of the iris. See *Iritis*.

RETORT. (*Retorta, æ.* f.; from *retorqueo*, to bend back again: probably so called because its neck was curved and bent back again.) A chemical vessel employed for many distillations, and most frequently for those which require a degree of heat superior to that of boiling water. They differ in form and materials: when pierced with a little hole in their roof, they are called tubulated retorts. They are made of common glass, stone-ware, and iron.

RETRA'CTOR. A muscle, the office of which is to retract the part into which it is inserted.

Retractor anguli oris. See *Buccinator*.

RETRAHENS. Drawing back.

Retrahens auris. *Posterior auris*, of Winslow. *Retrahens auriculæ*, of Albinus. *Deprimens auriculæ*, of Douglas. *Retrahens auriculam*, of Cowper. Two small bundles of muscular fibres which arise from the external and posterior part of the mastoid process of the temporal bone, immediately above the insertion of the sterno-cleido-mastoideus muscle. They are inserted into that part of the back of the ear which is opposite to the septum, which divides the concha and scapha. Their use is to draw the ear backwards, and stretch the concha.

RETROCEDENT. *Retrocedens*. *Retrogradus*. When a disease that moves about from one part to another, and is sometimes fixed, has been some time in its more common situation, and retires from it, it is said to be retrocedent.

Retrocedent gout. See *Arthritis*.

RETROGRADE. See *Retrocedent*.

RETRO'RSUM. Bent backward.

RETROVERSION. *Retroversio*. Turned back: applied to the uterus, bladder, and other organs and parts.

Retroversion of the uterus. See *Uterus, retroversion of*.

RETU'SUS. Retuse: dented. Applied to a leaf which ends in a broad shallow notch; as in the *Rumex digynus*.

REUSSITE. A vegetable compound saline, found as an efflorescence on the surface, in the country round Sedlitz and Seidschutz.

REVERBERATORY. See *Furnace*.

REVOLUTUS. Revolute: rolled back. Applied to a leaf, the margin of which is turned or rolled backwards; as in *Andromeda polifolia*.

REVULSION. (*Revulsio*; from *revello*, to draw away.) An old term used by the humoral pathologists, signifying the drawing of humours a contrary way.

RHABA'RBARUM. (*um, i.* n.; from *Rha*, and *barbarus*, wild: so called because it was brought from the banks of the Rha, now called the Wolga, in Russia.) See *Rheum*.

Rhabarbarum album. See *Convolvulus*.

Rhabarbarum antiquorum. See *Rheum*.

Rhabarbarum dioscoridis. See *Rheum*.

Rhabarbarum monachorum. See *Rumex patientia*.

Rhabarbarum rhaponticum. See *Rheum rhaponticum*.

Rhabarbarum sibericum. See *Rheum*.

Rhabarbarum tartaricum. See *Rheum*.

Rhabarbarum verum. See *Rheum*.

RHACHIA'LGIA. (*a, æ.* f.; from ραχις, the spine of the back, and αλγος, pain.) A pain in the spine of the back. It was formerly applied to some species of colic, when attended with severe pain in the back, and more particularly to the *colica pictonum*.

RHA'CHIS. (*is, eos.* f. Ῥαχις, the spine of the back.) 1. In *Anatomy*, the spine. See *Spine*.

2. In *Botany*, the common stalk or spike-stalk, or receptacle of the florets in the spikelets of grasses, or of the spikelets themselves; as in *Lolium*, *Triticum*, *Hordeum*, &c. It also means the rib or leaf-stalk of ferns, which is often winged or bordered.

RHACHISA'GRA. (*a, æ.* f.; from ραχις, the spine of the back, and αγρα, a prey.) A sudden pain in the spine: applied to gout fixed in the spine of the back.

Rhachi'ta. (From ραχις, the spine of the back.) A muscle belonging to the spine of the back.

RHACHI'TIS. (*is, idis.* f.; from ραχις, the spine of the back: so called because it was supposed to originate in a fault of the spinal marrow.) *Cyrtonosus*. The English disease. The rickets. A disease known by a large head, prominent forehead, protruded sternum, flattened ribs, big belly, and emaciated limbs, with great debility. It is usually confined in its attack between the two periods of nine months and two years of age, seldom appearing sooner than the former, or showing itself for the first time after the latter period. The muscles become flaccid, the head enlarges, the carotids are distended, the limbs waste away, and their epiphyses increase in bulk. The bones and spine of the back are variously distorted; disinclination to muscular exertion follows; the abdomen swells and grows hard; the stools are frequent and loose; a slow fever succeeds, with cough and difficulty of respiration: atrophy is confirmed, and death ensues.

Frequently it happens that nature restores the general health, and leaves the limbs distorted.

After death, the liver and the spleen have been found enlarged and scirrhous, the mesenteric glands indurated, and the lungs either charged with vomicæ or adhering to the pleura; the bones soft, the brain flaccid, or oppressed with lymph, and the distended bowels loaded most frequently with slime, sometimes with worms.

It is remarkable, that in the kindred disease, which Hoffmann and Sauvages call the atrophy of infants, we have many of the same symptoms, and the same appearances nearly after death. They who perish by this disease, says Hoffmann, have the mesenteric glands enlarged and scirrhous; the liver and spleen obstructed, and increased in size; the intestines are much inflated, and are loaded with black and fœtid matters; and the muscles, more especially of the abdomen, waste away.

In the treatment of rickets, besides altering any improprieties in the regimen which may have co-operated in producing it, those means should be employed by which the system may be invigorated. Tonic medicines are, therefore proper, particularly chalybeates, which are easily given to children; and the cold-bath may be essentially beneficial. The child should be regularly well exercised, kept clean and dry, and a pure air selected; the food nutritious and easy of digestion. When the appetite is much impaired, an occasional gentle emetic may do good; more frequently tonic aperients, as rhubarb, will be required to regulate the bowels; or sometimes a dose of calomel in gross habits. Of late, certain compounds of lime have been strongly recommended, particularly the phosphate, which is the earthy basis of the bones; though it does not appear likely to enter the system, unless rendered soluble by an excess of acid. Others have conceived the disease to arise from an excess of acid, and therefore recommended alkalies; which may certainly be useful in correcting the morbid prevalence of acid in the primæ viæ, so frequent in children. Where the bones are inclined to bend, care must be taken not to throw the weight of the body too much upon them.

RHACO'SIS. (From ρακος, a rag.) A ragged excoriation.

RHA'GAS. (*as*, *adis*. f.; from ρηγνυμι, to break or bruise.) 1. A common fissure, chap, or cleft.

2. A malignant, dry, and deep cutaneous fissure.

Rhagoides. (From ραξ, a grape-stone, and ειδος, a likeness: so called from its likeness in colour to a grape-seed.) Grape-seed-like. Applied to the retiform tunic of the eye.

RHA'MNUS. (*us*, *i*. m.; from ραιω, to destroy: because of its many thorns.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*. Buckthorn.

2. The pharmacopœial name of the purging buckthorn. See *Rhamnus catharticus*.

Rhamnus catharticus. Buckthorn. Purging buckthorn. *Spina cervina. Rhamnus solutivus. Spina infectoria. Cervispina.* The fruit or berries of this shrub, *Rhamnus—spinis terminalibus floribus quadrifidis dioicis, foliis ovatis, caule erecto*, of Linnæus, have been long received into the Materia Medica: they contain a pulpy deep green juice, of a faint unpleasant smell, a bitterish, acrid, nauseous taste, which operates briskly by stool, producing thirst, dryness of the mouth, and fauces, and severe gripings, unless some diluting liquor be drank plentifully after it: at present it is rarely prescribed, except as a drastic purge. The dose is said to be about twenty of the fresh berries in substance; twice or thrice that number in decoction; a drachm or a drachm and a half of the dried berries; an ounce of the expressed juice, or half an ounce of the rob or extract, obtained by inspissating the juice.

Rhamnus frangula. The systematic name of the black alder. *Frangula alnus. Alnus nigra. Rhamnus frangula—inermis floribus monogynis hermaphroditis, foliis integerrimis*, of Linnæus.

All the parts of this tree, as well as of the common alder, are astringent and bitter. The bark is most astringent; a decoction of it has cured agues, and is often used to repel inflammatory tumours of the throat, by way of gargle. The inner yellow bark of the trunk, or root, given to ʒij., vomits, purges, and gripes; but joined with aromatics, it operates more agreeably. An infusion, or decoction in water, inspissated to an extract, acts yet more mildly than these. It is mostly employed by the common people in dropsy and other disorders. The berries of alder are purgative. They are not in use under their own name, but are often substituted for buckthorn berries; to discover which, it should be observed, that the berries of the black alder have a black skin, a blue juice, and two seeds in each of them: whereas the buckthorn berries have a green juice, and commonly four seeds. The substitution of one for the other is not of material consequence, as the plants belong to the same genus, and the berries do not differ greatly.

Dr. Murray, of Gottingen, recommends, from his own experience, the leaves of alder, chopped in small pieces, and heated over the fire, as the best remedy with which he is acquainted for dispersing milk in the breasts.

Rhamnus zizyphus. The name of the tree which affords the jujubes. A half-dried fruit of the plum kind, about the size and shape of an olive. Jujubes, when in perfection, have an agreeable, sweet taste; and in the southern parts of Europe, where they are common, they make an article of food in their recent state, and of medicine when half dried.

RHA'PHANUS. See *Raphanus*.

RHAPO'NTICUM. (*um*, *i*. n.; the Rha of Pontus, *i. e.* the Rha, in Russia, a river on the banks of which it grew.) See *Rheum rhaponticum*.

Rhapontic rhubarb. See *Rheum rhaponticum*.

Rhaponticum vulgare officinarum. See *Centaurea.*

RHATA'NIA. See *Krumeria.*

RHAZES, was born at Rei, in the province of Khorasan, about the year 852. He commenced the study of medicine when more than thirty years old; and, by indefatigable application, obtained the highest reputation. He has been considered as the Galen of the Arabians; and from his assiduous attention, during the rest of a long life, to the varieties of disease, he obtained the appellation of *the experienced.* Abi Osbaia enumerated 226 treatises composed by Rhazes, but only a few of these are preserved through the medium of Latin translations. He was author also of the first treatise on the diseases of children. The use of chemical preparations in medicine appears likewise to have originated with him. He died in the year 932. Besides the treatises above mentioned, and the tract on Small-pox, there are extant by him a sort of commonplace book, entitled *Continens;* and six books of Aphorisms, under the title of *De Secretis.*

RHE'UM. (*um, i.* n.; from *Rha,* a river in Russia, now called the Wolga, from the banks of which it was first brought.) 1. The name of a genus of plants in the Linnæan system. Class, *Enneandria;* Order, *Trigynia.* Rhubarb.

2. The pharmacopœial name of the officinal rhubarb. See *Rheum palmatum.*

Rheum palmatum. The systematic name of the officinal rhubarb. *Rhabarbarum. Rheon. Rhœum. Barbaria. Lapathum orientale. Lapathum chinense. Rhabarbarum verum. Rhabarbarum tartaricum.* It was not until the year 1732 that naturalists became acquainted with any plant which seemed to afford the rhabarbarum officinale; when some plants received from Russia by Jussieu at Paris, and Rhand at Chelsea, were said to supply this important desideratum, and as such were adopted by Linnæus, in his first edition of the Species Plantarum, under the name of *Rheum rhabarbarum.* This, however, was not generally received as the genuine rhubarb plant; and with a view to ascertain this matter more completely, Kaw Boerhaave procured from a Tartarian rhubarb merchant the seeds of those plants, whose roots he annually sold, and which were admitted at Petersburg to be the true rhubarb. These seeds were soon propagated, and were discovered by De Gorter to produce two distinct species; viz. the *Rheum rhabarbarum* of Linnæus, or, as it has since been called, the *Rheum undulatum,* and another species, a specimen of which was presented to Linnæus, who declared it to be a new one; and it was first mentioned in the second edition of the Species Plantarum, in 1762, by the name of *Rheum palmatum.* Previous to this time, De Gorter had repeatedly sent its seeds to Linnæus, but the young plants which they produced constantly perished; at length he obtained the fresh root, which succeeded very well at Upsal, and afterwards enabled the younger Linnæus to describe this plant, in 1767. But two years antecedent to this, Dr. Hope's account of the *Rheum palmatum,* as it grew in the Botanic Garden near Edinburgh, had been read before the Royal Society at London; and of the great estimation in which this plant was held by him, we have the following proof:—"From the perfect similarity of this root with the best foreign rhubarb, in taste, smell, colour, and purgative qualities, we cannot doubt of our being at last possessed of the plant which produces the true rhubarb, and may reasonably entertain the agreeable expectation of its proving a very important acquisition to Britain."

But, from the relation we have given, it appears that both the seeds of the R. palmatum, and the R. undulatum, were transmitted to Petersburg, as those of the true rhubarb; we are therefore to conclude, that the former species has an equal claim to this importance with the latter; and, from further enquiries made in Russia, there is the best authority for believing that the R. compactum also affords this very useful drug. The seeds of the R. palmatum were first introduced into Britain in 1762, by Dr. Hounsy (who sent them from Russia), and were supposed to be a part of that already mentioned; and since their prosperous cultivation by the late professor of botany at Edinburgh, the propagation of this plant has been gradually extended to most of our English gardens, and with a degree of success which promises, in time, to supersede the importation of the foreign root. Two sorts of rhubarb roots are usually imported into this country for medical use; viz. the Chinese and the Tartary rhubarb. The first is in oblong pieces, flattish on one side, and convex on the other; compact, hard, heavy, internally of a dull red colour, variegated with yellow and white, and when recently powdered appears yellow, but on being kept becomes gradually redder. The second is the most valuable, and is brought to us in roundish pieces, with a large hole through the middle of each; it is more soft and friable than the former sort, and exhibits, when broken, many streaks of a bright red colour. The marks of the goodness of rhubarb are, the liveliness of its colour when cut; its being firm and solid, but not flinty or hard; its being easily pulverable, and appearing when powdered of a fine bright yellow colour; its imparting to the spittle, when chewed, a deep saffron tinge, and not proving slimy or mucilaginous in the mouth: its taste is subacrid, bitterish, and somewhat styptic; the smell lightly aromatic.

The purgative qualities of rhubarb are extracted more perfectly by water than by rectified spirit: the part remaining after the action of water is almost, if not wholly, inactive; whereas after repeated digestion in spirit, it proves still very considerably purgative. The virtue of a watery infusion, on being inspissated by a gentle heat, is so much diminished, that a drachm of the extract is said to have scarcely any greater effect than a scruple of

the root in substance. The spirituous tincture loses less; half a drachm of this extract proving moderately purgative. The qualities of this root, says Dr. Cullen, are those of a gentle purgative; and so gentle, that it is often inconvenient on account of the bulk of the dose required, which, in adults, must be from ʒss. to ʒj. When given in a large dose it will occasion some griping, as other purgatives do; but it is hardly ever heating to the system, or shows the other effects of the more drastic purgatives. The purgative quality is accompanied with a bitterness, which is often useful in restoring the tone of the stomach when it has been lost; and, for the most part, its bitterness makes it sit better on the stomach than many other purgatives do. Its operation joins well with neutral laxatives; and both together operate in a lesser dose than either of them would singly. Some degree of stypticity is always evident in this medicine; and as this quality acts when that of the purgative has ceased, so in cases of diarrhœa, when any evacuation is proper, rhubarb has been considered as the most proper remedy to be employed. It must, however, be remarked here, that, in many cases of diarrhœa, no further evacuation than what is occasioned by the disease is necessary or proper. The use of rhubarb, in substance, for keeping the belly regular, for which it is frequently employed, is by no means proper, as the astringent quality is ready to undo what the purgative has done; but it is found that the purpose mentioned may be obtained by it, if the rhubarb is chewed in the mouth, and no more is swallowed than what the saliva has dissolved. And it must be remarked, that in this way employed it is very useful to dyspeptic persons. Analogous to this, is the use of rhubarb in solution, in which it appears that the astringent quality is not so largely extracted as to operate so powerfully as when the rhubarb was employed in substance.

The officinal preparations of this drug are, a watery and a vinous infusion, a simple and a compound tincture. It is also an ingredient in different compositions.

Rheum rhaponticum. The systematic name of the rhapontic rhubarb. *Rhaponticum. Rhabarbarum Dioscoridis. Rhabarbarum antiquorum.* The root of this species appears to have been the true rhubarb of the ancients. By some it is confounded with the modern rhubarb, though considerably different from that root in appearance, as well as in quality. The rhapontic is of a dusky colour on its surface, and a loose spongy texture; is more astringent than rhubarb, and less purgative: in this last intention, two or three drachms are required for a dose.

Rheum undulatum. The systematic name of the Siberian rhubarb. The *Rheum undulatum—foliis subvillosis undulatis petiolis æqualibus*, of Linnæus. It possesses similar virtues to those of the palmate species, and is in common use in Russia.

RHE'UMA. (*a, atis.* n.; from *ρεω*, to flow.) The discharge from the nostrils or lungs, arising from cold; hence the following lines of the school of Salernum:—

Si fluit ad pectus, dicatur rheuma catarrhus,
Ad fauces branchus, ad nares, esto coryza!

RHEUMATISM. (*Rheumatismus, i.* m.; from *ρευματιζω*, to be afflicted with defluxions.) *Dolores rheumatici et arthritici*, of Hoffmann. *Myositis*, of Sagar. This disease is characterised by pyrexia, pains in the joints, increased by the action of the muscles belonging to the joint, and heat of the part. The blood, after venæsection, exhibits an inflammatory crust. Rheumatism is distinguished into *acute* and *chronic*. The acute is preceded by shivering, heat, thirst, and frequent pulse; after which the pain commences, and soon fixes on the joints. The chronic rheumatism is distinguished by pain in the joints, without pyrexia, and is divided into three species: *lumbago*, affecting the loins; *sciatica*, affecting the hip; and *arthrodynia*, or pains in the joints. The acute rheumatism mostly terminates in one of these species.

Rheumatism may arise at all times of the year, when there are frequent vicissitudes of the weather, from heat to cold; but the spring and autumn are the seasons in which it is most prevalent; and it attacks persons of all ages; but very young people are less subject to it than adults.

Obstructed perspiration, occasioned either by wearing wet clothes, lying in damp linen, or damp rooms, or by being exposed to cool air when the body has been much heated by exercise, is the cause which usually produces rheumatism. Those who are much afflicted with this complaint are very apt to be sensible of the approach of wet weather, by finding wandering pains about them at that period.

Acute rheumatism usually comes on with lassitude and rigors, succeeded by heat, thirst, anxiety, restlessness, and a hard pulse; soon after which, excruciating pains are felt in different parts of the body, but more particularly in the joints of the shoulder, wrist, knees, and ankles, or perhaps in the hip; and these keep shifting from one joint to another, leaving a redness and swelling in every part they have occupied, as likewise a great tenderness to the touch. Towards evening there is usually an exacerbation, or increase of fever; and during the night, the pains become more severe, and shift from one joint to another.

Early in the course of the disease, some degree of sweating usually occurs; but it is seldom so copious as either to remove the pains, or to prove critical. In the beginning, the urine is without sediment; but, as the disease advances in its progress, and the fever admits of considerable remissions, a lateritious sediment is deposited; but this by no means proves critical.

Chronic rheumatism is attended with pains in the head, shoulders, knees, and other large joints, which, at times, are confined to one

particular part, and at others shift from one joint to another, without occasioning any fever; and in this manner the complaint continues, often for a considerable time, and at length goes off.

No danger is attendant on chronic rheumatism; but a person having been once attacked with it, is ever afterwards more or less liable to returns of it; and an incurable anchylosis is sometimes formed, in consequence of very frequent relapses. Neither is the acute rheumatism frequently accompanied with much danger; but, in a few instances, the patient has been destroyed by general inflammation, and now and then by a metastasis to some vital part, such as the head and lungs. Acute rheumatism, although accompanied with a considerable degree of inflammation in particular parts, has seldom been known to terminate in suppuration; but a serous or gelatinous effusion takes place.

Rheumatism seldom proving fatal, very few opportunities have offered for dissections of the disease. In the few which have occurred, the same appearances have been observed as in inflammatory fever,—effusion within the cranium, and now and then affections of some of the viscera.

In the acute rheumatism the general antiphlogistic plan of treatment is to be pursued, so long as the febrile and inflammatory symptoms are severe. It may be sometimes proper to begin by a moderate abstraction of blood, where the patient is young and plethoric; and if the disease attacks any important part, this measure must be more actively pursued; but in general it does not appear necessary. Even the local abstraction of blood is hardly advisable, unless the affection be very much fixed to one part, and the symptoms urgent: and it may be said, that most local applications are rather likely to drive the disease from one part to another, than to afford permanent relief. After freely opening the bowels, the chief object is to endeavour to procure a general and mild diaphoresis, by colchichum, which has a decided operation over this disease, or by antimonial and mercurial preparations, assisted by opium, or other narcotic, which may also alleviate the pain, and occasionally by the warm bath, where the skin is particularly harsh and dry. Digitalis, by moderating the circulation, will sometimes be usefully conjoined with these medicines. As the fever abates, and the strength appears impaired, tonics should be given to promote the convalescence of the patient, and obviate a relapse: and, where the inflammation remains fixed in a particular joint, after the pyrexia has ceased, fomentations and other local measures, according to the state of the part, may be employed for its removal. In the *arthrodynia*, or chronic rheumatism, as it is commonly called, the remedies of chief efficacy are stimulant diaphoretics, in moderate doses, regularly persevered in, assisted by various local means of promoting the circulation through the affected part. Anodynes may be also used with advantage both internally and locally; and attention should be paid to support the strength, and correct any observable deficiency in the several functions.

RHE'UME. (From ρεω, to flow.) A defluxion; a common cold or catarrh.

RHEUMIC. (*Rheumicus;* from rheum, from which it is obtained.) Appertaining to rhubarb.

Rheumic acid. *Acidum rheumicum.* An acid said to be peculiar to rhubarb, but not yet sufficiently examined.

Rhibe'sia. (From *ribes*, a currant.) See *Ribes*.

RHINÆ'US. (*us, i.* m.; from ριν, the nose.) See *Compressor naris*.

Rhinenchy'tes. (From ριν, the nose, and εγχυω, to pour in.) A syringe for the nose.

RHINOPHO'NIA. (*a, æ.* f.; from ριν, the nose, and φωνη, the voice.) A nasal voice.

Rhiza'gra. (From ριζα, the root, and αγρευω, to seize.) An instrument for taking out the roots or stumps of teeth.

RHIZO'PHORA. (*a, æ.* f.; from ριζα, a root, and φερω, to bear or carry.) The name of a genus of a plants. Class, *Dodecandria;* Order, *Monogynia*.

Rhizophora gymnorhiza. The mangrove tree, the juice of the root of which is applied in the East to poisoned wounds from serpents.

RHODIA. See *Rhodiola*.

RHODI'OLA. (*a, æ,* f.; a diminutive of *rhodia;* from ροδον, a rose: so called because its root smells like the damask rose.) The name of a genus of plants. Class, *Diœcia;* Order, *Octandria*.

Rhodiola rosea. Rosewort. The *radix rhodiæ* of some pharmacopœias is the produce of this plant. When dry, it has a very pleasant smell, resembling that of the damask rose. In this odorous matter the medical virtue of the root resides. Poultices in which this root enters as a chief ingredient are said to allay violent pains of the head.

RHO'DIUM. (*um, ii.* n.; from ροδον, a rose: so called because its wood smells like roses.) 1. A metal found among the grains of crude platina. The mode of obtaining it in the state of a triple salt, combined with muriatic acid and soda, has been given under the article *Palladium*. This may be dissolved in water, and the metal precipitated from it in a black powder by zinc. Neither this metal, nor any of its combinations, have yet been used medicinally.

2. The name of a tree. See *Rhodiola*, and *Aspalathus*.

Rhodium lignum. See *Aspalathus*.

RHODODE'NDRON. (*on, i.* n.; from ροδον, a rose, and δενδρον, a tree: so called because its flowers resemble the rose.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia*.

2. The pharmacopœial name of the oleander. See *Rhododendron chrysanthemum*.

Rhododendron chrysanthemum. The sys-

tematic name of the oleander, rose-bay, or yellow rhododendron. This species of rhododendron,—*foliis oblongis impunctis supra scabris venosissimis, corolla rotata irregulari gemma florifera ferrugineo-tomentosa,*—has not yet been introduced in Britain; it is a native of Siberia, affecting mountainous situations, and flowering in June and July.

This plant and its medical virtues were first described, in 1747, by Gmelin and Haller. Little attention, however, was paid to it till the year 1779, when it was strongly recommended by Koelpin as an efficacious medicine, not only in rheumatism and gout, but even in venereal cases; and it is now very generally employed in chronic rheumatisms, in various parts of Europe. The leaves, which are the part directed for medicinal use, have a bitterish subastringent taste. Taken in a large dose, they prove a narcotic poison; and, in moderate doses, they are said to occasion heat, thirst, a degree of delirium, and a peculiar sensation of the parts affected.

As a powerful and active medicine, this shrub, says Dr. Woodville, may probably be found an addition to the materia medica. Dr. Home, who tried it unsuccessfully in some cases of acute rheumatism, says, "It appears to be one of the most powerful sedatives which we have, as, in most of the trials, it made the pulse remarkably slow, and in one patient reduced it to thirty-eight beats. And in other cases, in which the rhododendron has been used at Edinburgh, it has been productive of good effects, and accordingly it is now introduced into the Edinburgh Pharmacopœia. The manner of using this plant by the Siberians, was by putting two drachms of the dried leaves in an earthen pot, with about ten ounces of boiling water, keeping it near a boiling heat for a night; and this they took in the morning, and, by repeating it three or four times, generally effected a cure.

RHODO'MELI. (From ροδον, the rose, and μελι, honey.) Honey of roses.

Rhœadeæ. (From *rhœas*, the red poppy.) The name of an order in Linnæus's Fragments of a Natural Method, consisting of poppy and similar plants, the calyx of which is caducous, and the fruit a capsule.

RHŒADEUS. (From *rhœas*, the red poppy.) Rhœadeal, or poppy-like.

RHŒ'AS. (*as, ados.* m.; from ρεω, to flow.) See *Papaver rhœas.*

RHŒTIZITE. A glistening and pearly white mineral, which is found in primitive rocks, with quartz Psitzsci, in the Tyrol.

RHOMBEUS. Diamond-shaped.

RHOMBOI'DEUS. (From ρομβος, a geometrical figure, whose sides are equal but not right-angled, and ειδος, resemblance.) 1. In *Anatomy*, the name of a muscle of the scapula. *Rhomboideus major* and *minor*. *Rhomboides*, of Douglas, Winslow, and Cowper. This muscle, which is so named from its shape, is situated immediately under the trapezius. We find it usually, though not always, divided into two portions, which Albinus describes as two distinct muscles. The uppermost of these, or *rhomboideus minor*, arises tendinous from the spinous processes of the three inferior vertebræ of the neck, and from the ligamentum colli; the lowermost, or *rhomboideus major*, arises tendinous from the spinous processes of the back: the former is inserted into the basis of the scapula, opposite to its spine; the latter into all the basis of the scapula, below its spine. Its use is to draw the scapula obliquely upwards, and directly backwards.

2. In *Botany*, applied to leaves, &c. the shape of which is rhomboidal, or nearly diamond-shaped, but broader one way than the other.

RHOMBSPAR. See *Bitterspar.*

RHOMBUS. (*us, i.* m.) Diamond-shaped, approaching to a square: applied to leaves, &c.; as those of the *Chenopodium olidum*, and to the pod of *Cicer arietinum.*

RHO'NCHUS. (*us, i.* m. Ρογκος, *rhonchus, stertor.*) A rattling or very strong wheezing.

RHOPALO'SIS. (*is, is.* f.; from ροπαλον, a club.) A disorder in which the hair cleaves together, and hangs down in clusters resembling clubs. See *Plica.*

RHUBARB. See *Rheum.*

Rhubarb, monk's. See *Rumex patientia.*

Rhubarb, rhapontic. See *Rheum.*

RHUS. (*us, i.* f. and m.; from ρεω, to flow: so called because it stops fluxes.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Trigynia.* The sumach-tree.

Rhus belgica. See *Myrica gale.*

Rhus coriaria. Sumach. Elm-leaved sumach. This plant, *Rhus coriaria—foliis pinnatis obtusiuscule serratis ovalibus subtus villosis*, of Linnæus, is a small tree, a native of the south of Europe. It is singular that this is the only species of the genus rhus which is perfectly innocent; the others being active poisons. Both the leaves and berries of this plant are used medicinally, as astringents and tonics; the former are the most powerful, and have been long in common use, where they may be easily obtained, in various complaints indicating this class of remedies. The berries, which are red, and of a roundish compressed figure, contain a pulpy matter, in which is lodged a brown, hard, oval seed, manifesting a considerable degree of astringency. The pulp, even when dry, is grateful, and has been discovered to contain an essential salt, similar to that of wood sorrel. An infusion of the dried fruit is not rendered black by a solution of iron: hence it appears to be destitute of astringency. But its acidity is extremely grateful; therefore, like many other fruits, these berries may be advantageously taken to allay febrile heat, and to correct bilious putrescency.

Rhus radicans. See *Rhus vernix.*

Rhus tiphinum. The systematic name of the Virginian sumach, the seeds of which are said to be useful in stopping hæmorrhages.

Rhus toxicodendron. Poison oak, or sumach. This plant is a native of North America. The stems, when cut, exude a milky juice, which inflames the skin. The leaves, now inserted in the Pharmacopœia, are inodorous, and have a mawkish subacrid taste. Their virtues are extracted more perfectly by water than by alkohol. They prove stimulant and narcotic, when taken internally. Dr. Alderson, of Hull, found them successful in several cases of paralysis. They excite a sense of heat and pricking, and irregular twitches in the affected limbs. They have been sometimes useful, also, in herpetic eruptions. The dose may be from half a grain, gradually increased to four grains, two or three times a day.

Rhus vernix. *Rhus radicans.* The systematic name of a poisonous plant, the efficacy of which M. Fresnoi has endeavoured to prove, in the disease called paralysis, and herpetic affections. He, in order that others should not suffer by his experiments, began by taking an infusion of one of the three foliola of which each leaf of this plant consists; and as this dose produced no sensible effect, he increased the number to twelve. His urine and perspiration were increased in quantity; and he had some pains in his belly. He relates seven cases, in which he thinks he can remove all doubt of the efficacy of this infusion in herpetic affections.

RHY'AS. (*as, adis.* f. Ῥυας, a disease of the eye.) A decrease or defect of the lachrymal caruncle. The proximate cause is a native defect; or it may originate from excision, erosion, or acrimony. This disorder is commonly incurable, and it induces an incurable *epiphora,* or a continual weeping.

RHYPIA. (From Ῥυπος, *sordes.*) Foul; sordid; ill-conditioned. See *Rupia.*

Rhytido'sis. See *Rutidosis.*

RIB. See *Costa.*

RIBBED. See *Nervosus.*

RI'BES. (*es, is.* n.; an Arabian name properly belonging to an acid-leaved species of rheum; but which botanists, for about 200 years past, have by mistake applied to the currant and gooseberry family, and with these it now remains.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* The currant-tree.

Ribes nigrum. Black currant. This indigenous plant, *Ribes nigrum—racemis pilosis, floribus oblongis,* of Linnæus, affords larger berries than those of the red, which are said to be peculiarly useful in sore throats, and to possess a diuretic power in a very considerable degree. The leaves of the black currant are extremely fragrant, and have been likewise recommended for their medicinal virtue, which Bergius states to be mundificans, pellens, diuretica. The officinal preparations of the berries are, the *syrupus ribis nigri,* and the *succus ribis nigri inspissatus.*

Ribes rubrum. The red currant. *Grossularea non spinosa. Ribes rubrum—inerme; racemis glabris pendulis, floribus planiusculis,* of Linnæus. The white-currant tree is merely a variety of the red; the fruit of both is perfectly analogous: therefore, what is said of the one applies to the other. The red currant is abundantly cultivated in gardens, and, from its grateful acidity, is universally acceptable, either as nature presents it, or variously prepared by art, with the addition of sugar. Considered medicinally, it is esteemed to be moderately refrigerant, antiseptic, attenuant, and aperient. It may be used with considerable advantage to allay thirst, in most febrile complaints, to lessen an increased secretion of bile, and to correct a putrid and scorbutic state of the fluids, especially in sanguine temperaments; but, in constitutions of a contrary kind, it is apt to occasion flatulency and indigestion.

RIBLESS. See *Enervis.*

RIBWORT. See *Plantago lanceolata.*

RICE. See *Orysa.*

RICI'NUS. (*us, i.* m.; *quasi* ριν κυνος, a dog's nose: because they stick to the noses of dogs.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.*

2. The pharmacopœial name of the plant that affords the seed from which the castor oil is prepared.

Ricinus communis. The systematic name of the castor-oil plant. *Cataputia major. Kerva. Ricinus vulgaris. Palma christi. Ricinus communis—foliis peltatis subpalmatis serratis,* of Linnæus. This plant appears to be the Κικι, or Κροτων, of Dioscorides, who observes, that the seeds are powerfully cathartic: it is also mentioned by Aëtius, Paulus Ægineta, and Pliny. The ricinus was first cultivated in England, in the time of Turner, and is now annually reared in many gardens in the neighbourhood of London; and in that of Dr. Saunders, at Highbury, the plant grew to a state of great perfection. An oil extracted from the seeds of this plant, and known by the name of oleum ricini, palma christi, or castor oil, is the drug to which the pharmacopœias refer, and which has lately come into frequent use, as a quick but gentle purgative. The London College directs this oil to be expressed from the seeds in the same way as the oil from almonds, and without the assistance of heat, by which the oil would seem to be obtained in the purest state. However, we have some reason to believe that this method is seldom practised, and that the oil usually employed here is imported from the West Indies, where it is commonly prepared in the following manner:—"The seeds being freed from the husks, or pods, which are gathered upon their turning brown, and when beginning to burst open, are first bruised in a mortar, afterwards tied up in a linen bag, and then thrown into a large pot, with a sufficient quantity of water (about eight gallons to one gallon of the seeds), and boiled till the oil is risen to the surface, when it is carefully skimmed off, strained, and kept for use. Thus prepared, the oil is entirely

free from acrimony, and will stay upon the stomach when it rejects all other medicines." Mr. Long remarks, that the oil intended for medicinal use, is more frequently cold drawn, or extracted from the bruised seeds by means of a hand-press. But this is thought more acrimonious than that prepared by coction. Dr. Brown is also of this opinion, and prefers the oil prepared by coction to that by expression: he attributes its greater mildness to the action of the fire, observing that the expressed oil, as well as the mixed juices of the seeds, are far more active and violent in their operation.

Dr. Cullen observes, that "this oil, when the stomach can be reconciled to it, is one of the most agreeable purgatives we can employ. It has this particular advantage, that it operates sooner after its exhibition than any other purgative I know of, as it commonly operates in two or three hours. It seldom gives any griping, and its operation is generally moderate, producing one, two, or three stools only. It is particularly suited to cases of costiveness, and even to cases of spasmodic colic.

In the West Indies, it is found to be one of the most certain remedies in the dry belly-ache, or colica pictonum. It is seldom found heating or irritating to the rectum; and, therefore, is sufficiently well suited to hæmorrhoidal persons.

The only inconvenience attending the use of this medicine is, that, as an oil, it is nauseous to some persons; and that, when the dose is large, it occasions sickness at the stomach for some time after it is taken. To obviate these inconveniences, several means have been tried; and it is found that the most effectual means is the addition of a little ardent spirit. In the West Indies, they employ rum; but that I might not withdraw any part of the purgative, I employ the *Tinc. sennæ comp.* This, added in the proportion of one to three parts of the oil, and very intimately mixed, by being shaken together in a phial, both makes the oil less nauseous to the taste, and makes it sit more easy on the stomach. The common dose of this oil is a table-spoonful, or half an ounce; but many persons require a double quantity."

Ricinus major. See *Jatropha curcas.*

Ricinus vulgaris. See *Ricinus.*

RICKETS. See *Rachitis.*

RICTUS. (*us, ûs.* m.; from *ringo*, to grin.) The grinning mouth or opening between the two lips of a ringent or personate flower.

RIGID. *Rigidus.* A somewhat brittle hardness. In *Botany*, it means inflexible, not easily bending: opposed to limber and flexible.

RI'GOR. (*or, oris.* m.; from *ριγεω*, to be cold.) A sudden coldness, attended by a shivering, more or less perfect, — a symptom which ushers in many diseases, especially fevers and acute inflammation of internal parts: it also is produced by nervous complaints, and by some operations, as passing a bougie, &c. &c.

RI'MA. (*a, æ.* f.) A fissure or opening; as the *rima laryngis, rima vulvæ.*

Rima glottidis. The opening of the larynx, through which the air passes in and out of the lungs.

RIMO'SUS. Full of cracks.

RI'MULA. (*a, æ.* f.; diminutive of *rima*, a fissure.) A small fissure.

RINÆ'US. See *Rhinæus.*

RING. See *Annulus.*

RING-WORM. See *Porrigo.*

RINGENT. *Ringens.* Gaping: applied to flowers or their corolla, which are irregular and gaping, like the mouth of an animal; as those of the nettle, &c.

A ringent flower is also called a lipped or labiate by some botanists.

Ri'sagon. See *Cassumuniar.*

Risigallum. The auripigmentum was so called. See *Arsenious acid.*

RI'SUS. (*us, ûs.* m.) Laughter.

Risus caninus. A kind of laughter in which the lips are contracted, so as to show all the teeth.

Risus sardonicus. See *Sardonic laugh.*

RIVERIUS, Lazarus, was born at Montpelier, in 1589. He published some valuable works, especially one entitled *Praxis Medica.*

River-weed, hairy. See *Conferva rivalis.*

RIVINUS, Augustus Quirinus, born at Leipsic in 1652. He distinguished himself chiefly as a systematic botanist. As a medical writer, he has the merit of faithful observation and description in his treatise *De Peste Lipsiensi*, published in 1680. He wrote also on dyspepsia, on intermittents, and a *Censura Medicamentorum officinalium.*

ROASTING. A chemical process, generally performed in crucibles, by which mineral substances are divided, some of their principles being volatilised, and other changed, so as to prepare them for other operations.

ROB. (*Rob*, dense. Arabian.) An old Galenical term for an inspissated juice.

ROBORANT. (*Roborans*; from *roboro*, to strengthen.) That which is strengthening. See *Tonic.*

ROCCE'LLA. See *Lichen roccella.*

Rochelle salt. See *Soda tartarisata.*

ROCKAMBOLE. The *Allium scorodoprasum*, of Linnæus. The root is used for pickles and high-seasoned dishes.

ROCK-BUTTER. A greasy mineral which oozes out of rocks that contain alum, at the Hurlet alum-work, near Paisley.

ROCK-CORK. See *Asbestos.*

ROCK-CRYSTAL. A white and brown coloured crystallised siliceous mineral, found of great size and beauty in some parts of Scotland, and Dauphiny affords most magnificent groups.

ROCK-OIL. See *Petroleum.*

ROCK-SALT. Of this there are two kinds, the *foliated* and the *fibrous.* The principal deposit of this salt in Great Britain is in Cheshire. In 1000 parts are contained, according to Henry, 983 of muriate of soda, 6½ sulphate of lime, a little muriate of lime

and muriate of magnesia, and 10 parts insoluble matter.

ROCK-SAMPHIRE. See *Crithnum*.

ROCK-WOOD. See *Asbestos*.

ROCKET. See *Brassica eruca*.

Rocket, Roman. See *Brassica eruca*.

Rocket, wild. See *Brassica erucastrum*.

Rod-shaped. See *Virgatus*.

RORE'LLA. See *Drosera rotundifolia*.

ROS. (*os, oris.* m.; from the Hebrew.) Dew.

ROS CALABRINUS. The officinal manna is sometimes so termed.

ROS MARINUS. See *Rosmarinus*.

ROS SOLIS. See *Drosera rotundifolia*.

RO'SA. (*a, æ.* f.; an ancient and popular name, derived, most probably, from the Celtic, *ros*, or *rhos*; whence comes, also, its Greek synonym ῥοδον, and the name of the same flower in various languages, *rose*, *rosa*, &c.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria*; Order, *Polygynia*. The rose.

2. A name sometimes given to the erysipelas, because it begins with a redness like that of a rose.

ROSA ALBA. The white rose. The flowers of this species possess similar, but inferior virtues to those of the damask.

ROSA CANINA. The dog-rose, or wild-brier, or hip-tree. *Rosa Sylvestris. Cynorrhodon. Cynosbatos. Cynocyticis. Rosa canina — germinibus ovatis pedunculisque glabris, caule petiolisque aculeatis*, of Linnæus. The fruit of this tree, called heps, or hips, has a sourish taste, and obtains a place in the London pharmacopœia, in the form of conserve. It is seldom employed but to give form to more active remedies, in pills, boluses, linctuses, &c.

ROSA CENTIFOLIA. The pharmacopœial and systematic name of the damask rose. *Rosa damascena. Rosa pallida.* The pharmacopœias direct a syrup to be prepared from the petals of this rose, *Rosa centifolia — germinibus ovatis pedunculisque hispidis, caule hispido aculeato petiolis inermibus*, of Linnæus; which is found to be a pleasant and useful laxative for children, or to obviate costiveness in adults. Most of the roses, though much cultivated in our gardens, are far from being distinctly characterised. Those denominated varieties are extremely numerous, and often permanently uniform; and the specific differences, as hitherto pointed out, are, in many respects, so inadequate to the purpose of satisfactory discrimination, that it becomes a difficult matter to distinguish which are species and which are varieties only. The damask rose seems to be another species, widely different from the centifolia, as appears from the description given of it by Du Roi and Miller.

The petals are directed for medicinal use: they are of a pale red colour, and of a very fragrant odour, which, to most people, is extremely agreeable; and therefore this, and most of the other roses, are much used as nosegays. We may remark, however, that, in some instances, they have, under certain circumstances, produced alarming symptoms. The petals impart their odorous matter to watery liquors, both by infusion and distillation. Six pound of fresh roses impregnate, by distillation, a gallon or more of water strongly with their fine flavour. On distilling large quantities, there separates from the watery fluid a small portion of a fragrant butyraceous oil, which liquefies by heat, and appears yellow, but concretes in the cold into a white mass. An hundred pounds of the flowers, according to the experiments of Tachenius and Hoffmann, afforded scarcely half an ounce of oil. The smell of the oil exactly resembles that of roses, and is therefore much used as a perfume. It possesses very little pungency, and has been highly recommended for its cordial and analeptic qualities. These flowers also contain a bitterish substance, which is extracted by water along with the odorous principle, and remains entire in the decoction after the latter has been separated by distillation or evaporation.

This fixed sapid matter of the petals manifests a purgative quality; and it is on this account that the flowers are received in the Materia Medica.

ROSA DAMASCENA. See *Rosa centifolia*.

ROSA GALLICA. The pharmacopœial and systematic name of the red rose. *Rosa rubra.* The flowers of this species, *Rosa gallica — germinibus ovatis pedunculisque hispidis, caule petiolisque hispido aculeatis*, of Linnæus, are valued for their astringent qualities, which are most considerable before the petals expand; and, therefore, in this state they are chosen for medicinal use, and ordered by the pharmacopœias in different preparations, as those of a conserve, or confection, a honey, an infusion, and a syrup. The infusion of roses is a grateful, cooling subastringent, and useful in hæmoptysis, and other hæmorrhagic complaints: its efficacy, however, depends chiefly on the sulphuric acid added.

ROSA PALLIDA. See *Rosa centifolia*.

ROSA RUBRA. See *Rosa gallica*.

ROSA SYLVESTRIS. See *Rosa canina*.

ROSA'CEUS. Rose-like. 1. Applied to corolla which spread like a rose; as those of the *Dryas*.

2. The term *gutta rosacea* is applied to little rosy-coloured spots upon the face and nose.

ROSACIC. (*Rosacicus*; from *rosa*, a rose: and so called from its beautiful colour.) Of or belonging to the acid so called.

ROSACIC ACID. *Acidum rosacicum*. There is deposited from the urine of persons labouring under gout and inflammatory fevers a sediment of a rose colour, occasionally in reddish crystals. This was first discovered to be a peculiar acid by M. Proust, and afterwards examined by M. Vauquelin. This acid is solid, of a lively cinnabar hue, without smell, with a faint taste, but reddening litmus very sensibly. On burning coal it is decomposed into a pungent vapour, which has

not the odour of burning animal matter. It is very soluble in water, and it even softens in the air. It is soluble in alkohol. It forms soluble salts with potash, soda, ammonia, barytes, strontites, and lime. It gives a slight rose-coloured precipitate with acetate of lead. It also combines with lithic acid, forming so intimate a union, that the lithic acid, in precipitating from urine, carries the other, though a deliquescent substance, down along with it. It is obtained pure by acting on the sediment of urine with alkohol.

ROSA'LIA. (*a, æ.* f.) A name in some authors for the measles, or a disease very like the measles.

ROSE. See *Rosa.*

Rose, Christmas. See *Helleborus niger.*

Rose, damask. See *Rosa centifolia.*

Rose, dog. See *Rosa canina.*

Rose, red. See *Rosa gallica.*

Rose, white. See *Rosa alba.*

Rose-root. See *Rhodiola.*

Rosea radix. See *Rhodiola.*

Rosebay willow herb. See *Epilobium angustifolium.*

ROSEMARY. See *Rosmarinus.*

ROSE'OLA. (*a, æ.* f.; from *rosa,* a rose: so called from the colour of the rash.) A rose-coloured efflorescence, variously figured, without wheals, or papulæ, and not contagious. It is mostly symptomatic, occurring in connection with different febrile complaints, and requiring no deviation from the treatment respectively adapted to them.

Its principal varieties are comprised under the seven following heads:—

1. The *Roseola æstiva* appears first on the face and neck, and in the course of a day or two is distributed over the whole body, producing a considerable degree of itching and tingling. It is distributed into separate small patches, of various figure, but larger and more irregular forms than in the measles. It is at first red, but soon assumes its deep roseate hue. The fauces are tinged with the same colour, and a slight roughness of the tonsils is felt in swallowing.

The rash continues vivid through the second day; after which it declines in brightness, slight specks only remaining of a dark hue, on the fourth day; which, with the constitutional affection, wholly disappear on the fifth.

The efflorescence sometimes is partial, extending only over portions of the face, neck, and upper part of the breast and shoulders, in patches, slightly elevated, and itching considerably; but in this form the disease continues a week or longer, the rash appearing and disappearing several times; sometimes from taking warm liquors, and sometimes without any apparent cause. The retrocession is usually accompanied with disorder of the stomach, headache, and faintness, which are immediately relieved on its appearance. It commonly occurs in females of irritable constitution in summer. Light diets and acidulated drinks, with occasional laxatives, palliate the symptoms.

2. The *Roseola autumnalis* occurs in children, in the autumn, in distinct circular or oval patches, which gradually increase to the size of a shilling, and are of a dark damask rose hue. It appears chiefly on the arms, sometimes desquamating, and its decline seems to be expedited by the internal use of sulphuric acid.

3. The *roseola annulata* occurs on almost every part of the body, in rose-coloured rings, with central areas of the usual colour of the skin. When accompanied with fever, its duration is short: at other times, without any constitutional disorder, it continues for a considerable and uncertain period. The rings are, at first, from a line to two lines in diameter, but, gradually dilating, leave a larger central space, sometimes of the diameter of half an inch. The efflorescence is less vivid (and in the chronic form usually fades) in the morning, but increases in the evening or night, and produces a heat and itching in the skin. When it becomes very faint in colour for several days, the stomach is disordered, and languor, giddiness, and pains of the limbs ensue, which are relieved by the use of the warm bath.

Sea-bathing and the mineral acids afford much relief in the chronic forms of this rash.

4. *Roseola infantilis* is a closer rash, occurring in infants during the irritation of dentition, of disordered bowels, and in fevers. It is very irregular in its appearances, sometimes continuing only for a night, sometimes appearing and disappearing for several successive days, with violent disorder, and sometimes arising in single patches in different parts of the body successively. It is alleviated by the remedies adapted to relieve bowel complaints, painful dentition, and other febrile affections with which it is connected.

5. *Roseola variolosa* occurs previously to the eruption both of the natural and inoculated small-pox, but seldom before the former. It appears in the inoculated disease, on the second day of the eruptive fever, which is generally the ninth or tenth after inoculation. It is first seen on the arms, breast, and face; and on the following day it extends over the trunk and extremities.

Sometimes it is distributed in oblong irregular patches, sometimes diffused with numerous interstices, and sometimes it forms an almost continuous redness over the whole body, being in some parts slightly elevated. It continues about three days, on the second or last of which the variolous pustules may be distinguished, in the general redness, by their rounded elevation, hardness, and whiteness of their tops.

6. *Roseola vaccina* appears generally in a congeries of dots and small patches, but sometimes diffuse, like the former; it takes place on the ninth or tenth day after vaccination, at the place of inoculation, and at the same time with the areola that is formed round the vesicle, from whence it spreads irregularly over the whole surface of the body.

It is usually attended with a very quick pulse, white tongue, and great restlessness.

7. *Roseola miliaris* often accompanies an eruption of miliary vesicles after fever. It is sometimes connected with attacks of the gout, and of the febrile rheumatism, accompanied with considerable fever, extreme languor and depression of spirits, total loss of appetite, and torpid bowels, and terminates on the seventh day by desquamation.

RO'SEUS. (From *rosa*, the rose.) Of a rose-red colour. See *Colour.*

ROSEWOOD. See *Rhodium lignum.*

ROSEWORT. See *Rhodiola.*

ROSIN. See *Resina.*

ROSMARI'NUS. (*us, i.* m.; *quasi rosa, σμυρνα*, because it smells like myrrh.) 1. The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.*

2. The pharmacopœial name of the common rosemary. See *Rosmarinus officinalis.*

Rosmarinus hortensis. See *Rosmarinus officinalis.*

Rosmarinus officinalis. The systematic name of the common rosemary. *Rosmarinus hortensis. Libanotis coronaria. Dendrolibanus.* The leaves and tops of this plant have a fragrant aromatic smell, and a bitterish pungent taste. Rosemary is reckoned one of the most powerful of those plants which stimulate and corroborate the nervous system; it has therefore been recommended in various affections supposed to proceed from debility, or defective excitement of the brain and nerves, as in certain headaches, deafness, giddiness, and in some hysterical and dyspeptic symptoms. The officinal preparations of rosemary are, an essential oil from their leaves, or from the herb in flower, a conserve of the flowers, and a spirit formerly called Hungary water, from the flowery tops. The tops are also used in the compound spirit of lavender, and soap liniment.

Rosmarinus sylvestris. See *Ledum.*

ROSTE'LLUM. (*um, i.* n.) A little beak. Applied to that part of the seed of a plant which is pointed, penetrates the earth, and becomes the root. See *Corculum.*

ROSTRA'TUS. Rostrate: having a bill or beak. Applied to the pod of the *Sinapis alba.*

ROS'TRUM. (*um, i.* n.; from *rodo*, to gnaw: because birds use it to tear their food with.) 1. A beak.

2. The piece of flesh which hangs between the division of the hare-lip is called *rostrum leporinum.*

3. Applied, in *Botany*, to some elongation of a seed-vessel, originating from the permanent style; as in *Geranium:* though it is also used for naked seeds; as *Scandix.*

ROSY-DROP. See *Acne.*

ROTA'CEÆ. (From *rota*, a wheel.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of those which have one flat wheel-shaped petal.

ROTA'CEUS. Rotaceous, or wheel-like.

ROTACI'SMUS. (*us, i.* m.) The harsh or aspirated vibration of the letter *r* or *ρο*, which is very common in the northern parts of England.

ROTANG. See *Calamus rotang.*

ROTA'TOR. (*or, oris.* m.; from *roto*, to turn.) A muscle the office of which is to wheel about the thigh.

ROTA'TUS. Rotate, or wheel-like. Applied to the corols, nectary, &c.; as the nectary of the *Cyssampelos*, the corolla of the *Borago officinalis.*

RO'TULA. (*a, æ.* f.; diminutive of *rota*, a wheel: so called from its shape.) See *Patella.*

ROTU'NDUS. See *Round.*

ROUGE. See *Carthamus tinctorius.*

ROUND. *Rotundus.* Many parts of animals and vegetables receive this trivial name from their shape; as round ligaments, round foramen, &c., and leaves, stems, seeds, &c.; as the *seeds* of the *Pisum, Brassica*, &c.

Round-leaved sorrel. See *Rumex scutatus.*

Round ligament. *Ligamentum rotundum.* A bundle of vessels and fibres contained in a duplicature of the peritonæum, that proceeds one from each side of the uterus, through the abdominal rings, and disappear in the pudenda.

ROWLEY, William, was born in London, of respectable parents, about the year 1745. After acquiring the elementary part of his education with the Sheldons and Magnus Falconer, he went into the army, and was with the celebrated John Hunter at the siege of Belleisle. He next travelled through Europe, to visit the several continental hospitals; and then settled in London as a general practitioner, and, a few years after, became a licentiate of the College. He soon got into good practice, and wrote several tracts, which were afterwards collected together, and published under the title of *Practice of Physic*, in four octavo volumes. A few years before his death, in 1809, he completed an expensive work in Latin, *Schola Medicinæ Universalis Nova*, which contains many well-executed engravings from the most approved anatomical works which preceded, especially those of Haller.

RUBE'DO. (*o, inis.* f.; from *ruber*, red.) A diffused, but not spotted, redness in any part of the skin; such as that which arises from blushing.

RUBEFACIENT. (*Rubefaciens;* from *rubefacio*, to make red.) That substance which, when applied a certain time to the skin, induces a redness without blistering.

RUBELITE. Red tourmalin.

RUBE'OLA. (*a, æ.* f.; from *ruber*, red; or from *rubeo*, to become red.) The measles; called also, *Morbili.* This disease is known by inflammatory fever, hoarseness, dry cough, sneezing, drowsiness; about the fourth day, eruption of small red points, discernible by the touch, which, after three days, end in mealy desquamation. The blood, after venæsection, exhibits an inflammatory crust. In addition to the symptoms already related, it

is remarkable, that the eyes and eyelids always show the presence of this disease, being somewhat inflamed and suffused with tears. The fever continues during the whole progress of the disease. In systems of nosology, several varieties of measles are mentioned, but they may all be comprehended under two heads: the one attended with more or less of the symptoms of general inflammation; the other accompanied by a putrid diathesis.

The measles may prevail at all seasons of the year as an epidemic, but the middle of winter is the time they are usually most prevalent; and they attack persons of all ages, but children are most liable to them. They prove most unfavourable to such as are of a plethoric or scrofulous habit. Like the small-pox, they never affect persons but once in their life: their contagion appears to be of a specific nature. The eruption is usually preceded by a general uneasiness, chilliness, and shivering; pain in the head, in grown persons; but in children, a heaviness and soreness in the throat; sickness and vomiting, with other affections, such as happen in most fevers; but the chief characteristic symptoms are, a heaviness about the eyes, with swelling, inflammation, and a defluxion of sharp tears, and great acuteness of sensation, so that they cannot bear the light without pain, together with a discharge of serous humour from the nostrils, which produces sneezing. The heat, and other febrile symptoms, increase very rapidly; to which succeeds a frequent and dry cough, a stuffing, great oppression, and oftentimes retching to vomit, with violent pains in the loins, and sometimes a looseness; at other times there is great sweating, the tongue foul and white, the thirst very great, and, in general, the fever runs much higher than in the milder sort of the regular small-pox. The eruptions appear about the fourth or fifth day, and sometimes about the end of the third. On the third or fourth day from their first appearance, the redness diminishes, the spots, or very small papulæ, dry up, the cuticle peels off, and is replaced by a new one. The symptoms do not go off on the eruption, as in the small-pox, except the vomiting; the cough and headache continue, with the weakness and defluxion on the eyes, and a considerable degree of fever. On the ninth or eleventh day, no trace of redness is to be found, but the skin assumes its wonted appearance; yet, without there have been some considerable evacuations either by the skin, or by vomiting, the patient will hardly recover strength, but the cough will continue, the fever return with new violence, and bring on great distress and danger.

In the more alarming cases, spasms of the limbs, subsultus tendinum, delirium, or what more frequently happens, coma, supervene. This last symptom so frequently attends the eruptive fever of measles, that by some practitioners it is regarded as one of its diagnostics.

In measles, as in other febrile diseases, the symptoms generally suffer some remission towards the morning, returning, however, in the evening with increased severity.

The measles, even when violent, are not usually attended with a putrid tendency; but it sometimes happens, that such a disposition prevails both in the course of the disease and at its termination. In such cases, petechiæ are to be observed interspersed among the eruptions; and these last become livid, or assume almost a black colour. Hæmorrhages break out from different parts of the body; the pulse becomes frequent, feeble, and perhaps irregular; universal debility ensues; and the patient is destroyed.

In those cases where there is much fever, with great difficulty of breathing, and other symptoms of pneumonic inflammation, or where there is great debility, with a tendency to putrescency, there will always be considerable danger; but the consequences attendant on the measles are in general more to be dreaded than the immediate disease; for although a person may get through it, and appear for a time to be recovered, still hectic symptoms and pulmonary consumption may afterwards arise, and destroy him, or a troublesome ophthalmia perhaps ensue.

Measles, as well as small-pox, not unfrequently call into action a disposition to scrofula, where such happens to exist in the habit. Another bad consequence of the measles is, that the bowels are often left by them in a very weak state; a chronic diarrhœa remaining, which has sometimes proved fatal. Dropsy has also been known as a consequence of measles.

The morbid appearances to be observed on dissections of those who die of measles are pretty much confined to the lungs and intestines, the former of which always show strong marks of inflammation, and sometimes a tendency to sphacelus. Where the patient dies under the eruption, the trachea and its branches, as in the small-pox, are often covered with it, which may account for the increase of the cough after the appearance of the eruption.

In the treatment of this disorder, as it usually appears, the object is to moderate the accompanying synocha fever, and attend to the state of certain organs, particularly the lungs and the bowels. When there are no urgent local symptoms, it will be commonly sufficient to pursue the general antiphlogistic plan, avoiding, however, too free or sudden exposure to cold,) keeping the bowels open, and encouraging diaphoresis by mild antimonials, &c. Sometimes, however, in plethoric habits, especially where the lungs are weak, it will be proper to begin by a moderate abstraction of blood. Where the eruption has been imprudently checked, much distress usually follows, and it will be advisable to endeavour to bring it out again by the warm bath, with other means of increasing the action of the cutaneous vessels. Should an inflammatory determination to the lungs occur, more active evacuations must be practised, as explained

under the head of *Pneumonitis.* The cough may be palliated by opium, joined with expectorants, demulcents, &c.; and an occasional emetic will be proper, when there is much wheezing. Where diarrhœa takes place, it is better not to attempt to suppress it at once; but, if troublesome, moderate it by small doses of opium, assisted perhaps by astringents. At the decline of the disorder, much attention is often required to prevent phthisis pulmonalis supervening. Should the disorder ever put on a putrid character, the general plan pointed out under *Typhus* must be pursued.

RUBER. Red in general. See *Colour.*

RU'BIA. (*a, æ.* f.; from *ruber*, red: so called from its red roots.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.*

2. The pharmacopœial name of the madder plant. See *Rubia tinctorum.*

Rubia tinctorum. The madder plant. Dyer's madder. *Erythrodanum. Rubia major. Radix rubra. Rubia—foliis annuis, caule aculeato*, of Linnæus. The roots of this plant have a bitterish, somewhat austere taste, and a slight smell, not of the agreeable kind. It was formerly considered as a deobstruent, detergent, and diuretic, but it is now very seldom used.

RUBI'GO. (*o, inis.* f.; *à colore rubro*, from its red colour.) Rust.

Rubigo cupri. See *Verdigris.*

Rubigo ferri. See *Ferri subcarbonas.*

RUBI'NUS. (From *ruber*, red: so named from its colour.) See *Anthrax.*

Rubinus verus. See *Anthrax.*

RU'BULA. (*a, æ.* f.; a diminutive of *rubus*, a blackberry, or raspberry.) The specific name, in Good's Nosology, of the yaws,—*Anthracia rubula.*

RU'BUS. (*us, i.* m.; from *ruber*, red: so called from its red fruit.) The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Polygynia*

Rubus arcticus. The systematic name of the shrubby strawberry. *Rubus arcticus—foliis alternatis, caule inermi unifloro.* The berries, *Baccæ norlandicæ*, are recommended by Linnæus as possessing antiseptic, refrigerant, and antiscorbutic qualities.

Rubus cæsius. The systematic name of the dewberry plant, the fruit of which resembles the blackberry in appearance and qualities.

Rubus chamæmorus. The systematic name of the cloudberry tree, and knot-berries. *Chamæmorus. Chamærubus foliis ribis Anglicæ. Rubus palustris humilis. Vaccinium Lancastrense. Rubus alpinus humilis Anglicus.* The ripe fruit of this plant, *Rubus chamæmorus—foliis simplicibus lobatis, caule interno unifloro*, of Linnæus, is prepared into a jam; and is recommended to allay thirst, &c. in fevers, phthisical diseases, hæmoptysis, &c. As an antiscorbutic, it is said to excel the scurvy-grass, and other vegetables of that tribe in common use.

Rubus fruticosus. The systematic name of the common bramble, which affords blackberries. The berries are eaten in abundance by children, and are wholesome and gently aperient. Too large quantities, however, when the stomach is weak, produce vomiting and great distension of the belly, from flatus.

Rubus idæus. The systematic name of the raspberry. *Batinon. Moron. Rubus idæus—foliis quinato-pinnatis ternatisque, caule aculeato, petiolis canaliculatis*, of Linnæus. The fruit of this plant has a pleasant sweet taste, accompanied with a peculiar grateful flavour, on account of which it is chiefly valued. Its virtues consist in allaying heat and thirst, and promoting the natural excretions. A grateful syrup prepared from the juice is directed for officinal use.

RUBY. See *Sapphire.*

RU'CTUS. (*us, ûs.* m.) An eructation.

RUE. See *Ruta graveolens.*

Rue, goat's. See *Galega.*

Rue, wall. See *Asplenium murale.*

Rufi pilulæ. Rufus's pills. A compound very similar to the aloëtic pills with myrrh. See *Pilula aloes cum myrrhâ.*

RUFFLE. See *Annulus.*

RUFUS. 1. The Ephesian; a physician and anatomist of considerable eminence in the reign of Trajan, esteemed by Galen one of the most able of his predecessors. He traced the origin of the nerves in the brain by dissecting brutes, and considered some of them as contributing to motion, others to sensation. He even observed the capsule of the crystalline lens in the eye. He considered the heart as the seat of life, and of the animal heat, and as the origin of the pulse, which he ascribed to the *spirit* of its left ventricle and of the arteries. There is a very respectable treatise by him on the *Diseases of the Urinary Organs*, and the Method of curing them. He also wrote a good work on *Purgative Medicines;* and a little treatise on the names given by the Greeks to the different parts of the body. Galen affirms, also, that Rufus was the author of an *Essay on the Materia Medica*, in verse; and Suidas mentions others on the *Atra bilis*, &c., but these are all lost.

2. A brownish-red orange or carrot colour.

RUGO'SUS. Rugged; wrinkled: applied to a leaf, when the veins are tighter than the surface between them, causing the latter to swell into little inequalities; as the various species of sage. The seeds of the *Lithospermum arvense* are rugose.

RUM. *Spiritus Jamaicensis.* A spirituous liquor, the produce of the sugar-cane.

RU'MEX. (*ex, icis.* m.; a sort of pike, spear, or halberd, which the shape of the leaves in various species much resembles.) The name of a genus of plants in the Linnæan system. Class, *Hexandria;* Order, *Trigynia.* The dock.

Rumex acetosa. The systematic name of the common sorrel. Sour-dock. *Acetosa. Acetosa vulgaris. Acetosa pratensis. Acetosa*

arvensis. *Rumex acetosus—foliis, oblongis sagittatis, floribus diœciis,* of Linnæus. The leaves of this plant are sour, but not the root, which is bitter. It grows in the meadows and common fields.

Rumex acutus. The systematic name of the sharp-pointed wild-dock. *Oxylapathum. Lapathum. Rumex acutus—floribus hermaphroditis; valvulis dentatis graniferis, foliis cordato-oblongis acuminatis,* of Linnæus. The decoction of the root of this plant is used in Germany to cure the itch; and it appears to have been used, in the time of Dioscorides, in the cure of leprous and impetiginous affections, both alone and boiled with vinegar.

Rumex alpinus. The systematic name of the plant which affords the monks' rhubarb. See *Rumex patientia.*

Rumex aquaticus. See *Rumex hydrolapathum.*

Rumex crispus. The systematic name of the crisp-leaved dock, which was formerly used as an antiscorbutic.

Rumex hydrolapathum. The systematic name of the water-dock. *Hydrolapathum. Rumex aquaticus. Herba Britannica. Lapathum aquaticum. Rumex hydrolapathum—floribus hermaphroditis, valvulis integris graniferis, foliis lanceolatis,* of Linnæus. The leaves of this plant manifest considerable acidity, and are said to possess a laxative quality. The root is strongly astringent, and has been much employed, both externally and internally, for the cure of some diseases of the skin, as scurvy, lepra, lichen, &c. The root, powdered, is said to be an excellent dentifrice.

Rumex patientia. The systematic name of the garden patience. Monks' rhubarb. *Rhabarbarum monachorum. Hippolapathum. Patientia.* The root of this plant, and that of the *Rumex alpinus,* according to Professor Murray, is supposed to possess the virtues of rhubarb, but in an inferior degree. It is obviously more astringent than rhubarb, but comes very far short of its purgative virtue.

Rumex sanguineus. The systematic name of the bloody dock, the root of which has an austere and astringent taste, and is sometimes given by the vulgar in the cure of dysentery.

Rumex scutatus. The systematic name of the French sorrel. Roman, or garden sorrel. Sometimes called *acetosa rotundifolia* in the shops. *Acetosa Romana. Acetosa rotundifolia hortensis. Rumex scutatus—foliis cordato-hastatis, ramis divergentibus, floribus hermaphroditis,* of Linnæus. It is common in our gardens, and in many places is known by the culinary name of Green-sauce. Its virtues are similar to those of common sorrel. See *Rumex acetosa.*

RUMINATION. (*Ruminatio, onis.* f.) A second mastication, or the chewing of the food that has been swallowed and is again brought up into the mouth. This is very rarely seen in the human race, but in animals it is common, and is called the chewing of the cud.

RUNCINA'TUS. (From ῥύγχος, *runcina,* a saw.) Runcinate: notched. Applied to leaves which are shaped like the tooth of a lion: that is, cut into several transverse acute segments, pointing backwards; as in *Leontodon taraxacum,* called from the shape of its leaf, *dens de lion,* and hence dandelion.

RUNDLE. See *Umbel.*

RUNDLET. See *Umbellule.*

RUNNER. See *Sarmentum.*

Rupellensis sal. (From *Rupella, Rochelle,* where it was first made.) See *Soda tartarizata.*

RUPIA. (*a, æ.* f.; from ρυπος, *sordes,* as indicative of the ill smell and sordid condition of the diseased parts.) An eruptive disease, characterised by an appearance of broad and flattish vesticles, in different parts of the body, which do not become confluent: they are slightly inflamed at the base, slow in their progress, and succeeded by an ill-conditioned discharge, which concretes into thin and superficial scabs, that are easily rubbed off, and presently regenerated; which circumstance serves to mark the distinction between rupia and ecthyma, independently of the pustular form, and highly inflamed hard base, of the latter: for the scab of Ecthyma is hard, deeply indented, and surrounded by a deep-seated hardness in the muscular flesh, especially in the larger forms of it. It appears under some varieties of form, which may be included under the following heads:—

1. *Rupia simplex* consists of little vesications, containing, on their first appearance, a clear lymph, and appearing on many parts of the body. In a short time, the fluid included in them begins to thicken, and becomes at length opake and somewhat puriform; a slight ulceration of the skin takes place, with a sanious discharge, followed by scabbing; and, when this heals, it leaves the surface of a livid or blackish colour, as if from a thickening of the rête mucosum.

2. *Rupia prominens* is distinguished by elevated, conical scabs, which are gradually formed upon the vesicated bases. A fluted scab is first generated, and with some rapidity, (*e. g.* in the course of the night,) as the fluid of the vesication concretes. This extends itself by the successive small advancement of the red border, upon which a new scab arises, raising the concretion above it, so as ultimately to form a conical crust, not unlike the shell of a small limpet. This scab is quite superficial, and, if it be rubbed off, a new incrustation covers the excoriated spot in the space of six hours. The ulceration, however, is not phagedenic, but at length heals; although it often proves very tedious, especially in old and intemperate persons, in whom, and in young persons of delicate constitution, it most commonly occurs.

These varieties of rupia are to be combated by the means recommended for the cure of ecthyma; *i. e.* by supporting the system, by means of good, light, nutritious diet, and by the use of alterative and tonic medicines;

such as Plummer's pill, cinchona, and sarsaparilla.

3. *Rupia escharotica* affects only infants and young children, when in a cachectic state, whether induced by previous diseases, especially the small-pox, or by imperfect feeding and clothing, &c.; whence, among the poor, where it is commonly seen, it often terminates fatally. The vesicles generally occur on the loins, thighs, and lower extremities, and appear to contain a corrosive sanies: many of them terminate with gangrenous eschars, which leave deep pits.

RUPTU'RA. See *Hernia.*

RUPTURE. See *Hernia.*

RUPTURE-WORT. See *Herniaria.*

RU'SCUS. (*us, i.* m.; *à russo colore*, from the carnation colour of its berries.) 1. The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Syngenesia.*

2. The pharmacopœial name of the butchers'-broom. *Ruscus aculeatus.*

Ruscus aculeatus. The systematic name of butchers'-broom, or knee-holly. Wild myrtle. *Bruscus. Oxymyrrhine. Oxymyrsine. Myrtacantha. Myacantha. Scopa regia.* A small evergreen shrub, the *Ruscus aculeatis —foliis supra floriferis nudis*, of Linnæus. It grows in woods and thickets in this country. The root, which is somewhat thick, knotty, and furnished with long fibres, externally brown, internally white, and of a bitterish taste, has been recommended as an aperient and diuretic in dropsies, urinary obstructions, and nephritic cases. It is seldom used in this country.

Ruscus hypoglossum. The systematic name of the *Uvularia.* This plant was formerly used against relaxation of the uvula, but is now laid aside for more astringent remedies.

RUSH. See *Arundo.*

Rush-nut. See *Cyperus esculentus.*

Rush, sweet. See *Andropogon schœnanthus*, and *Acorus calamus.*

RUSSELL, Alexander, was a native of Edinburgh, where he received his medical education, and afterwards became physician to the English factory at Aleppo, where he resided several years. In 1755, he published his *Natural History of Aleppo*, a valuable and interesting work, containing especially some important observations relative to the Plague. He was, a few years after, physician to St. Thomas's Hospital, which office he retained till his death in 1770. He presented several valuable communications to the Royal Society, as also to the Medical Society.

RUSSELL, Patrick, was brother of the preceding, and his successor as physician to the English factory at Aleppo. He published a copious *Treatise on the Plague*, having had ample opportunities of treating that disease during 1760, and the two following years. In this work he has fully discussed the important subjects of quarantine, lazarettoes, and the police to be adopted in times of pestilence.

Russia ashes. The impure potash, as imported from Russia.

RUST. The powder or crust which forms on metals, especially iron, when exposed to the air.

RU'TA. (*a, æ.* f.; from ρυω, to preserve, because it preserves health.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

2. The pharmacopœial name of the common rue. See *Ruta graveolens.*

Ruta graveolens. The systematic name of the common rue. *Ruta graveolens —foliis decompositis, floribus lateralibus quadrifidis*, of Linnæus. Rue has a strong ungrateful smell, and a bitter, hot, penetrating taste; the leaves are so acrid, that by much handling they have been known to irritate and inflame the skin; and the plant, in its natural or uncultivated state, is said to possess these sensible qualities still more powerfully. The imaginary quality of the rue, in resisting and expelling contagion, is now disregarded. It is doubtless a powerful stimulant, and is considered, like other medicines of the fœtid kind, as possessing attenuating, deobstruent, and antispasmodic powers. In the former London Pharmacopœia it was directed in the form of an extract; and was also an ingredient in the *pulvis è myrrhâ comp.*, but these are now omitted. The dose of the leaves is from fifteen grains to two scruples.

Ruta muraria. See *Asplenium murale.*

RUTIDO'SIS. (*is, is.* f.; from ῥυτις, a wrinkle.) A puckering or corrugation: applied to a wrinkling and subsiding of the cornea of the eye. It is mostly produced by a wound or puncture penetrating the cornea, or by a fistula. It is sometimes caused by a deficiency of the aqueous humour, which happens from old age, fevers, great and continued evacuations, and in extreme dryness of the air; and it is seen in dead persons, when the aqueous humour exhales through the cornea, and no fresh humour is secreted, so that the cornea becomes obscure and collapsed: this is a most certain sign of death.

RUTILE. An ore of titanium.

Rutula. (From *ruta*, rue.) A small species of rue.

RUYSCH, Frederick, was born at the Hague, in 1638. In 1665 he published his treatise on the lacteal and lymphatic vessels; in consequence of which he was invited to the chair of anatomy at Amsterdam. From that period his attention was chiefly devoted to anatomical researches, both human and comparative; and he contributed materially to the improvement of the art of injecting, for the purpose of demonstrating minute structure, and preserving the natural appearance of parts. His museum became ultimately the most magnificent that any private individual had ever accumulated; and being at length purchased by the Czar Peter for thirty thousand florins, he immediately set about a new collection. Besides his controversial tracts,

he published several other works, chiefly anatomical: *Observationum Anatomicarum et Chirurgicarum Centuria*; twelve essays under the title of *Thesaurus Anatomicus*, at different periods, the last containing Remarks on the Anatomy of Vegetables; a *Thesaurus Animalium*, with plates; three decades of *Adversaria Anatomica, Chirurgica, Medica*, &c.

Ruyschiana tunica. The internal surface of the choroid membrane of the human eye, which Ruysch imagined was a distinct lamina from the external surface.

Ryas. See *Rhœas*.

RYE. See *Secale cereale*.

S.

S. A. The contraction of *secundum artem*.

S, or *ss*. Immediately following any quantity, imports *semis*, or half.

Sabadilla. See *Cevadilla*.

SABI'NA. (*a*, *æ*. f.; named from the Sabines, whose priests used it in their religious ceremonies.) See *Juniperus sabina*.

SABULOUS. (*Sabulosus*; from *sabulum*, fine gravel.) Gritty; sandy. Applied generally, and particularly to the calcareous matter in urine.

SABU'RRA. (*a*, *æ*. f.) Dirt; sordes; filth. Foulness of the stomach, of which authors mention several kinds, as the acid, the bitter, the empyreumatic, the insipid, the putrid.

SACCA'TUS. Saccated: encysted, or contained in a bag-like membrane. Applied to tumours, &c. See *Ascites saccatus*.

Sacchari acidum. See *Mucic acid*.

SA'CCHARUM. (*um*, *i*. n. Σακχαρον, from *sacchar*, Arabian.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Digynia*. The sugar-cane.

2. The sweet substance called sugar. See *Saccharum officinale*.

Saccharum acernum. See *Acer*.

Saccharum album. Refined sugar.

Saccharum aluminis. Alum mixed with dragon's blood and dried.

Saccharum canadense. See *Acer*.

Saccharum candidum. Sugar-candy.

Saccharum non purificatum. Brown or unpurified sugar.

Saccharum officinale. The systematic name of the cane from which sugar is obtained. *Arundo saccharifera*, of Sloane. *Suchar*. *Succhar*. *Sutter*. *Zuchar*. *Zucaro*. *Zozar* of the Arabians. Σακχαρ η σακχαρον, of the Greeks. Sugar is prepared in the West and East Indies from the expressed juice of this plant, boiled with the addition of quicklime or common vegetable alkali. It may be extracted also from a number of plants, as the maple, birch, wheat, corn, beet-root, skirret, parsnips, and dried grapes, &c. by digesting in alkohol. The alkohol dissolves the sugar, and leaves the extractive matter untouched, which falls to the bottom. It may be taken into the stomach in very large quantities, without producing any bad consequences, although proofs are not wanting of its mischievous effects, by relaxing the stomach, and thus inducing disease. It is much used in pharmacy, as it forms the basis of syrups, lozenges, and other preparations. It is very useful as a medicine, although it cannot be considered to possess much power, to favour the solution or suspension of resins, oils, &c. in water, and is given as a purgative for infants. Dr. Cullen classes it with the attenuantia, and Bergius states it to be saponacea, edulcorans, relaxans, pectoralis, vulneraria, antiseptica, nutriens. In catarrhal affections, both sugar and honey are frequently employed: it has also been advantageously used in calculous complaints; and, from its known power in preserving animal and vegetable substances from putrefaction, it has been given with a view to its antiseptic effects. Sugar-candy, by dissolving slowly in the mouth, is well suited to relieve tickling coughs and hoarseness. Sugar is every where the basis of that which is called sweetness. Its presence is previously necessary in order to the taking place of vinous fermentation. Its extraction from plants, which afford it in the greatest abundance, and its refinement for the common uses of life, in a pure state, are among the most important of the chemical manufactures.

The following is the mode of its manufacture in the West Indies:—The plants are cultivated in rows, on fields enriched by such manures as can most easily be procured, and tilled with the plough. They are annually cut. The cuttings are carried to the mill. They are cut into short pieces, and arranged in small bundles. The mill is wrought by water, wind, or cattle. The parts which act on the canes are upright cylinders. Between these the canes are inserted, compressed till all their juice is obtained from them, and themselves, sometimes, even reduced to powder. One of these mills, of the best construction, bruises canes to such a quantity as to afford, in one day, 10,000 gallons of juice, when wrought with only ten mules. The expressed juice is received into a leaden bed. It is

thence conveyed into a vessel called the receiver. The juice is found to consist of eight parts of pure water, one part of sugar, one part of oil and gummy mucilage. From the greener parts of the canes there is apt to be at times derived an acid juice, which tends to bring the whole unseasonably into a state of acid fermentation. Fragments of the ligneous part of the cane, some portions of mud or dirt which unavoidably remain on the canes, and a blackish substance called the crust, which coated the canes at the joints, are also apt to enter into contaminating mixture with the juice. From the receiver the juice is conducted along a wooden gutter, lined with lead, to the boiling-house. In the boiling-house it is received into copper pans or caldrons, which have the name of clarifiers. Of these clarifiers the number and the capacity must be in proportion to the quantity of canes, and the extent of the sugar plantation on which the work is carried on. Each clarifier has a syphon or cock, by which the liquor is to be drawn off. Each hangs over a separate fire; and this fire must be so confined, that, by the drawing of an iron slider fitted to the chimney, the fire may be at any time put out. In the progress of the operations, the stream of juice from the receiver fills the clarifiers with fresh liquor. Lime in powder is added in order to take up the oxalic acid, and the carbonaceous matters which are mingled with the juice. The lime also, in the new salts, into the composition of which it now enters, adds itself to the sugar, as a part of that which is to be obtained from the process. The lime is to be put in in the proportion of somewhat less than a pint of lime to every hundred gallons of liquor. When it is in too great quantities, however, it is apt to destroy a part of the pure saccharine matter. Some persons employ alkaline ashes, as preferable to lime, for the purpose of extracting the extraneous matter; but it is highly probable that lime, judiciously used, might answer better than any other substance whatsoever. The liquor is now to be heated almost to ebullition. The heat dissolves the mechanical union, and thus favours the chemical changes in its different parts. When the proper heat appears, from a rising scum on the surface of the liquor, to have been produced, the fire is then extinguished by the application of the damper. In this state of the liquor, the greater part of the impurities, being different in specific gravity from the pure saccharine solution, and being also of such a nature as to yield more readily to the chemical action of heat, are brought up to the surface in a scum. After this scum has been sufficiently formed on the cooling liquor, this liquor is carefully drawn off, either by a syphon, which raises a pure stream through the scum, or by a cock drawing the liquor at the bottom from under the scum. The scum, in either case, sinks down unbroken as the liquor flows; and is now, by cooling, of such tenacity as not to tend to any intermixture with the liquor. The liquor drawn after this purification from the boiler is received into a gutter or channel, by which it is conveyed to the grand copper, or evaporating boiler. If made from good canes, and properly clarified, it will now appear almost transparent. In this copper the liquor is heated to actual ebullition. The scum, raised to the surface by the boiling, is skimmed off as it rises. The ebullition is continued till there be a considerable diminution in the quantity of the liquor. The liquor now appears nearly of the colour of Madeira wine. It is at last transferred into a second and smaller copper. An addition of lime-water is here made, both to dilute the thickening liquor, to detach the superabundant acid, and to favour the formation of the sugar. If the liquor be now in its proper state, the scum rises in large bubbles, with very little discoloration. The skimming and the evaporation together produce a considerable diminution in the quantity of the liquor. It is then transferred into another smaller boiler. In this last boiler the evaporation is renewed, and continued till the liquor is brought to that degree of thickness at which it appears fit to be finally cooled. In the cooler, (a shallow wooden vessel of considerable length and wideness, commonly of such a size as to contain a hogshead of sugar,) the sugar, as it cools, granulates, or runs into an imperfect crystallisation, by which it is separated from the molasses,—a mixed saccharine matter, too impure to be capable even of this imperfect crystallisation. To determine whether the liquor be fit to be taken from the last boiler to be finally cooled, it is necessary to take out a portion from the boiler, and try separately, whether it does not separate into granulated sugar and molasses. From the cooler, the sugar is removed to the curing house. This is a spacious, airy building. It is provided with a capacious cistern for the reception of molasses, and over the cistern is erected a frame of strong joist-work, unfilled and uncovered. Empty hogsheads, open at the head, bored at the bottom with a few holes, and having a stalk of plantain leaf thrust through each of the holes, while it rises at the same time through the inside of the hogshead, are disposed upon the frames. The mass of the saccharine matter from the coolers is put into these hogsheads. The molasses drip into the cistern through the spongy plantain stalks in the holes. Within the space of three weeks the molasses are sufficiently drained off, and the sugar remains dry. By this process it is at last brought into the state of what is called muscovado or raw sugar. This is the general process in the British West Indies. In this state our West India sugar is imported into Britain. The formation of loaves of white sugar is a subsequent process. In the French West India isles it has long been customary to perform the last part of this train of processes in a manner somewhat different, and which affords the sugar in a state of greater purity. This preparation, taking

the sugar from the cooler, then puts it, not into hogsheads with holes in the bottom as above, but into conical pots, each of which has at its bottom a hole half an inch in diameter, that is, in the commencement of the process, stopped with a plug. After remaining some time in the pot, the sugar becomes perfectly cool and fixed. The plug is then removed out of the hole; the pot is placed over a large jar, and the molasses are suffered to drip away from it. After as much of the molasses as will easily run off has been thus drained away, the surface of the sugar in the jar is covered with a stratum of fine clay, and water is poured upon the clay. The water, oozing gently through the pores of the clay, pervades the whole mass of sugar, re-dissolves the molasses still remaining in it, with some parts of the sugar itself, and carrying these off by the holes in the bottom of the pot, renders that which resists the solution much purer than the muscovado sugar made in the English way. The sugar prepared in this manner is called clayed sugar. It is sold for a higher price in the European market than the muscovado sugar; but there is a loss of sugar, in the process by claying, which deters the British planters from adopting this practice so generally as do the French.

The raw sugars are still contaminated and debased by a mixture of acid, carbonaceous matter, oil, and colouring resin. To free them from these is the business of the European sugar-bakers. A new solution; clarification with alkaline substances fitted to attract away the oil, acid, and other contaminating matters; slow evaporation; and a final cooling in suitable moulds, are the processes which at last produce loaves of white sugar.

The molasses being nothing else but a very impure refuse of the sugar from which they drip, are susceptible of being employed in a new ebullition, by which a second quantity of sugar may be obtained from them. The remainder of the molasses is employed to yield rum by distillation. In rum, alkohol is mixed with oil, water, oxalic acid, and a mixture of empyreumatic matter. The French prepare, from the mixture of molasses with water, a species of wine of good quality. In its preparation, the solution is brought into fermentation, then passed through strainers to purify it, then put in casks; after clearing itself in these, transferred into others, in which it is to be preserved for use. The ratio of these processes is extremely beautiful: they are all directed to purify the sugar from contaminating mixtures, and to reduce it into that state of dryness or crystallisation in which it is susceptible of being the most conveniently preserved for agreeable use. The heat in general acts both mechanically to effect a sufficient dissolution of the aggregation of the parts of the cane juice, and chemically to produce in it new combinations, into which caloric must enter as an ingredient. The first gentle heat is intended chiefly to operate with the mechanical influence, raising to the surface impurities, which are more easily removed by skimming than by any other means: a gentle, not a violent heat, is in this instance employed, because a violent heat would produce empyreumatic salts, the production of which is to be carefully avoided. A boiling heat is, in the continuation of the processes, made use of, because, after the first impurities have been skimmed off, contaminating empyreumatic salts are less readily formed, because a boiling heat is necessary to effect a complete developement of the saccharine matter, and because the gradual concentration of the sugar is, by such a heat, to be best accomplished. Lime is employed, because it has a stronger affinity than sugar with all the contaminating matters, and particularly because it attracts into a neutral combination that excess of oxalic acid which is apt to exist in the saccharine solution. Skimming removes the new salts, which the most easily assume a solid form. The drippings carry away a mixture of water, oil, earth, and sugar, from the crystallised sugar: for, in all our crystallisations, we can never perform the process in the great way with such nicety as to preserve it free from an inequality of proportions, that must necessarily occasion a residue. Repeated solution, clarification, evaporation, are requisite to produce pure white sugar from the brown and raw sugars; because the complete purification of this matter from acid and colouring matter is an operation of great difficulty, and not to be finally completed without processes which are longer than can be conveniently performed at the first upon the sugar plantation. From vegetables of European growth, sugar is not to be easily obtained, unless the process of germination be first produced in them, or unless they have been penetrated by intense frost. Germination, or thorough freezing, developes sugar into all vegetables in which its principles of hydrogene and carbon, with a small proportion of oxygene, exist in any considerable plenty. It is not improbable, but that if penetration by a freezing cold could be commanded at pleasure with sufficient cheapness, it would enable us to obtain saccharine matter in a large proportion from a variety of substances, from which even germination does not yield a sufficient quantity. In the beet, and some other European vegetables, sugar is naturally formed by the functions of vegetation to perfect combination. From these the sugar is obtained by rasping down the vegetable, extracting by water its saccharine juice, evaporating the water charged with the juice to the consistency of syrup, clarifying, purifying, and crystallising it, just in the same manner as sugar from the sugar-cane. It is afforded by the maple, the birch, wheat, and Turkey corn. Margraaf obtained it from the roots of beet, red beet, skirrit, parsnips, and dried grapes.

In Canada, the inhabitants extract sugar from the maple. At the commencement of

spring, they heap snow in the evening at the foot of the tree, in which they previously make apertures for the passage of the returning sap. Two hundred pounds of this juice afford, by evaporation, fifteen of a brownish sugar. The quantity prepared annually amounts to fifteen thousand weight.

The Indians likewise extract sugar from the pith of the bamboo.

The beet has lately been much cultivated in Germany, for the purpose of extracting sugar from its root. For this the roots are taken up in autumn, washed clean, wiped, sliced lengthwise, strung on threads, and hung up to dry. From these the sugar is extracted by maceration in a small quantity of water; drawing off this upon fresh roots, and adding fresh water to the first roots, which is again to be employed the same way, so as to get out all their sugar, and saturate the water as much as possible with it. This water is to be strained and boiled down for the sugar. Some merely express the juice from the fresh roots, and boil this down; others boil the roots; but the sugar extracted in either of these ways is not equal in quality to the first.

Sugar is very soluble in water, and is a good medium for uniting that fluid with oily matters. It is much used for domestic purposes, and appears, on the whole, to be a valuable and wholesome article of food, the uses of which are most probably restricted by its high price.

It appears that sugar has the property of rendering some of the earths soluble in water.

The union of sugar with the alkalies has been long known; but this is rendered more strikingly evident by carbonated potash or soda, for instance, decomposing the solutions of lime and strontia in sugar, by double affinity.

Kirchoff, an ingenious Russian chemist, accidentally discovered that starch is convertible into sugar, by being boiled for some time with a very dilute sulphuric acid. Saussure showed, that 100 parts of starch yield 110 of sugar.

The varieties of sugar are,—cane sugar, maple sugar, liquid sugar of fruits, sugar of figs, sugar of grapes, starch sugar, the mushroom sugar of Braconnot, manna, sugar of gelatine, sugar of honey, and sugar of diabetes.

All honeys contain two species of sugar; one similar to sugar of the grape, another like the uncrystallisable sugar of the cane (molasses). These, combined and mingled in different proportions with an odorant matter, constitute the honeys of good quality. Those of inferior quality contain, besides, a certain quantity of wax and acid: the honeys of Brittany contain even an animal secretion (*couvain*), to which they owe their putrescent quality. A slight washing with a little alkohol separates the uncrystallisable sugar, and leaves the other, which may be purified by washing with a very little more alkohol.

Saccharum officinarum. The systematic name, in some pharmacopœias, of the sugar-cane. See *Saccharum*.

Saccharum purificatum. Refined or loaf-sugar. See *Saccharum*.

Saccharum saturni. See *Plumbi acetas*.

SACCHO-LACTIC. (*Saccho-lacticus*; from *saccharum*, sugar, and *lac*, milk: and so called because it is sugar prepared from milk.) Appertaining to the acid of this name.

Saccho-lactic acid. *Acidum saccho-lacticum*. See *Mucic acid*.

SACCHOLATE. *Saccholas*. A salt formed by the combination of the saccho-lactic acid with salifiable bases; as saccholate of iron, saccholate of ammonia, &c. &c.

SA'CCULUS. (*us*, *i*. m.; diminutive of *saccus*, a bag.) A little bag.

Sacculus adiposus. The bursæ mucosæ of the joints.

Sacculus chyliferus. See *Receptaculum chyli*.

Sacculus cordis. The pericardium.

Sacculus lachrymalis. See *Saccus*.

SA'CCUS. (*us*, *i*. m.) A bag.

Saccus lachrymalis. The lachrymal sac is situated in the internal canthus of the eye, behind the lachrymal caruncle, in a cavity formed by the os unguis. It receives the tears from the puncta lachrymalia, and conveys them into the ductus lachrymalis.

SA'CER. (From *sagur*, secret, Heb.) Sacred. Applied to some diseases which were supposed to be immediately inflicted on mankind by the special interposition of the Divinity, or of his ministers: hence *morbus sacer*, the epilepsy; *ignis sacer*, the erysipelas, &c.

A bone is called the *os sacrum*, because it was once offered in sacrifices.

SACK. (This word is probably derived from *sec*, dry.) A wine used by our ancestors, which some have taken to be Rhenish, and others Canary wine. Probably it was what is called dry mountain, or some Spanish wine of that sort. Howell, in his French and English Dictionary, 1650, translates sack by the words vin d'Espagne, vin sec.

SACLACTATE. A combination of saccho-lactic acid with a salifiable basis.

SACLACTIC. *Saclacticus*. An abbreviation of saccharo-lactic; and so called, because it is obtained from sugar of milk.) Of or belonging to the peculiar acid to which the term is given.

Saclactic acid. *Acidum saccho-lactium*. See *Mucic acid*.

Sacra herba. See *Verbena officinalis*.

Sacra tinctura. Made of aloes, canella alba, and mountain wine.

SACRAL. *Sacralis*. Of or belonging to the sacrum; as sacral arteries, veins, nerves, &c.

SA'CRO. Words compounded of this belong to the sacrum.

Sacro-coccygæus. A muscle arising from the sacrum, and inserted into the os coccygis.

Sacro-lumbalis. *Sacro-lumbaris*, of authors. A long muscle, thicker and broader below than above, and extending from the os sacrum to the lower part of the neck, under the serrati postici rhomboideus, trapezius, and latissimus dorsi. It arises, in common with the longissimus dorsi, tendinous without, and fleshy within, from the posterior part of the os sacrum; from the posterior edge of the spine of the ilium; from all the spinous processes; and from near the roots of the transverse processes of the lumbar vertebræ. At the bottom of the back it separates from the longissimus dorsi, with which it had before formed, as it were, only one muscle, and ascending obliquely outwards, gradually diminishes in thickness, and terminates above in a very narrow point. From the place where it quits the longissimus dorsi, to that of its termination, we find it fleshy at its posterior, and tendinous at its anterior edge. This tendinous side sends off as many long and thin tendons as there are ribs. The lowermost of these tendons are broader, thicker, and shorter than those above: they are inserted into the inferior edge of each rib, where it begins to be curved forwards towards the sternum, excepting only the uppermost and last tendon, which ends in the posterior and inferior part of the transverse process of the last vertebra of the neck. From the upper part of the five, six, seven, eight, nine, ten, or eleven lower ribs, (for the number, though most commonly seven or eight, varies in different subjects,) arise as many thin bundles of fleshy fibres, which, after a very short progress, terminate in the inner side of this muscle, and have been named by Steno, *musculi ad sacro lumbalem accessorii*. Besides these, we find the muscle sending off a fleshy slip from its upper part, which is inserted into the posterior and inferior part of the tranverse processes of the five inferior vertebræ of the neck, by as many distinct tendons. This is generally described as a distinct muscle. Diemerbroeck, and Douglas and Albinus after him, call it *cervicalis descendens*; Winslow names it *transversalis collateralis colli*. Morgagni considers it as an appendage to the sacro-lumbalis. The uses of this muscle are to assist in erecting the trunk of the body, in turning it upon its axis or to one side, and in drawing the ribs downwards. By means of its upper slip, it serves to turn the neck obliquely backwards, or to one side.

Sacro-sciatic ligaments. The ligaments which connect the ossa innominata with the os sacrum.

SA'CRUM. (*um, i.* n.; so called from *sacer*, sacred: because it was formerly offered in sacrifices.) *Os sacrum. Os basilare.* The os sacrum derives its name from its being offered in sacrifice by the ancients, or perhaps from its supporting the organs of generation, which they considered as sacred. In young subjects it is composed of five or six pieces, united by cartilage; but in more advanced age it becomes one bone, in which, however, we may still easily distinguish the marks of the former separation. Its shape has been sometimes compared to an irregular triangle; and sometimes, and perhaps more properly, to a pyramid flattened before and behind, with its basis placed towards the lumbar vertebræ, and its point terminating in the coccyx. We find it convex behind, and slightly concave before, with its inferior portion bent a little forwards. Its anterior surface is smooth, and affords four, and sometimes five transverse lines, of a colour different from the rest of the bone. These are the remains of the intermediate cartilages by which its several pieces were united in infancy. Its posterior convex surface has several prominences, the most remarkable of which are its spinous processes: these are usually three in number, and gradually become shorter, so that the third is not so long as the second, nor the second as the first. This arrangement enables us to sit with ease. Its transverse processes are formed into one oblong process, which becomes gradually smaller as it descends. At the superior part of the bone we observe two oblique processes, of a cylindrical shape, and somewhat concave, which are articulated with the last of the lumbar vertebræ. At the base of each of these oblique processes is a notch, which, with such another in the vertebræ above it, forms a passage for the twenty-fourth spinal nerve. In viewing this bone, either before or behind, we observe four, and sometimes five holes on each side, situate at each extremity of the transverse lines which mark the divisions of the bone. Of these holes, the anterior ones, and of these again, the uppermost, are the largest, and afford a passage to the nerves. The posterior holes are smaller, covered with membranes, and destined for the same purpose as the former. Sometimes at the bottom of the bone there is only a notch, and sometimes there is a hole common to it and the os coccygis. The cavity between the body of this bone and its processes, for the lodgment of the spinal marrow, is triangular, and becomes smaller as it descends, till at length it terminates obliquely on each side at the lower part of the bone. Below the third division of the bone, however, the cavity is no longer completely bony, as in the rest of the spine, but is defended posteriorly only by a very strong membrane; hence a wound in this part may be attended with the most dangerous consequences. This bone is articulated above, with the last lumbar vertebra; laterally, it is firmly united, by a broad irregular surface, to the ossa innominata, or hip-bones; and below it is joined to the os coccygis. In women the os sacrum is usually shorter, broader, and more curved than in men, by which means the cavity of the pelvis is more enlarged.

SAFFLOWER. See *Carthamus*.

SAFFRON. See *Crocus*.

Saffron, bastard. See *Carthamus*.

Saffron flower. See *Carthamus*.

Saffron, meadow. See *Colchicum*.

Saffron of steel. A red oxide of iron.

SAGAPE'NUM. (*um, i.* n.; the name is derived from some eastern dialect.) *Serapinum.* It is conjectured that this concrete gummi-resinous juice is the production of an oriental umbelliferous plant. Sagapenum is brought from Persia and Alexandria in large masses, externally yellowish, internally paler, and of an horny clearness. Its taste is hot and biting, its smell of the alliaceous and fœtid kind, and its virtues are similar to those which have been ascribed to assafœtida, but weaker, and consequently it is less powerful in its effects.

SAGE. See *Salvia.*

Sage of Bethlehem. See *Pulmonaria.*

Sage of Jerusalem. See *Pulmonaria.*

Sage of virtue, See *Salvia hortensis minor.*

SAGENITE. Acicular rutile.

SAGITTAL. (*Sagittalis;* from *sagitta,* an arrow.) Shaped like an arrow.

Sagittal suture. (*Sutura sagittalis;* so named from its lying between the coronal and lambdoidal sutures, as an arrow betwixt the string and the bow.) *Sutura virgata, obelæa, rhabdoides.* The suture which unites the two parietal bones.

SAGITTA'RIA. (*a, æ.* f.; so called from *sagitta,* an arrow, in allusion to the shape of the leaves in the original species and some others.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Polyandria.*

Sagittaria alexipharmaca. The systematic name of the plant,—called also, *Malacca, Canna indica,* and *Arundo indica,*—cultivated with great care in the West Indies, for its root, which is supposed to be a remedy for the wounds of poisonous arrows. The root of this species, called *radix malacca,* is sometimes used medicinally.

Sagittaria sagittifolia. The systematic name of the common arrow-head, the roots of which are esculent but not very nutritious.

SAGITTA'TUS. (From *sagittas,* an arrow.) Arrow-shaped: applied to leaves, &c. which are triangular and hollowed out very much at the base; as the leaves of the *Sagittaria sagittifolia.*

SAGO. See *Cycas circinalis.*

Sagu. See *Cycas circinalis.*

SAHLITE. Malacholite. A subspecies of oblique-edged augite, of a greenish colour, and found in Unst in Shetland, in Tiree, and Glentilt.

St. Anthony's fire. See *Erysipelas.*

St. Ignatius's bean. See *Ignatia amara.*

St. James's wort. See *Senecio jacobæa.*

St. John's wort. See *Hypericum.*

St. Peter's wort. See *Hypericum.*

St. Vitus's dance. See *Chorea.*

SAL. (*al, alis.* m. and, rarely, neut.; from the Greek, ἅλς, salt.) Salt. This term has been usually employed to denote a compound, in definite proportions, of acid matter, with an alkali, earth, or metallic oxide. When the proportions of the constituents are so adjusted, that the resulting substance does not affect the colour of infusion of litmus, or red cabbage, it is then called a neutral salt. When the predominance of acid is evinced by the reddening of these infusions, the salt is said to be acidulous, and the prefix, *super,* or *bi,* is used to indicate this excess of acid. If, on the contrary, the acid matter appears to be in defect, or short of the quantity necessary for neutralising the alkalinity of the base, the salt is then said to be with excess of base, and the prefix *sub* is attached to its name. The discoveries of Sir H. Davy have, however, taught chemists to modify their opinions concerning saline constitution. Many bodies, such as culinary salt, and muriate of lime, to which the appellation of *salt* cannot be refused, have not been proved to contain either acid or alkaline matter; but must, according to the strict logic of chemistry, be regarded as compounds of chlorine with metals.

Sal absinthii. See *Potassæ subcarbonas.*

Sal acetosellæ. See *Oxalis acetosella.*

Sal alembroth. See *Alembroth.*

Sal alkalinus fixus. See *Alkali fixum.*

Sal alkalinus volatilis. See *Ammonia.*

Sal ammoniac. (So called, because it was found in Egypt, near the temple of Jupiter Ammon.) See *Ammoniæ murias.*

Sal ammoniacum acetosum. See *Ammoniæ acetatis liquor.*

Sal ammoniacum liquidum. See *Ammoniæ acetatis liquor.*

Sal ammoniacum martiale. See *Ferrum ammoniatum.*

Sal ammoniacum secretum glauberi. See *Sulphas ammoniæ.*

Sal ammoniacum vegetabile. See *Ammoniæ acetatis liquor.*

Sal ammoniacus fixus. The muriate of lime was formerly so termed.

Sal ammoniacus nitrosus. See *Nitras ammoniæ.*

Sal antimonii. Tartar emetic.

Sal argenti. See *Argenti nitras.*

Sal catharticus amarus. See *Magnesiæ sulphas.*

Sal catharticus anglicanus. See *Magnesiæ sulphas.*

Sal catharticus glauberi. See *Sodæ sulphas.*

Sal communis. See *Sodæ murias.*

Sal cornu certi volatilis. See *Ammoniæ subcarbonas.*

Sal culinaris. See *Sodæ murias.*

Sal de duobus. See *Potassæ sulphas.*

Sal digestivus. See *Murias potassæ.*

Sal digestivus sylvii. See *Murias potassæ.*

Sal diureticus. See *Potassæ acetas.*

Sal epsomensis. See *Magnesiæ sulphas.*

Sal febrifugus sylvii. See *Murias potassæ.*

Sal fontium. See *Sodæ murias.*

Sal fossilis. See *Sodæ murias.*

Sal gemmæ. See *Sodæ murias.*

Sal glauberi. See *Sodæ sulphas.*

Sal herbarum. See *Potassæ subcarbonas.*

Sal marinus. See *Sodæ murias.*

Sal martis. See *Ferri sulphas.*

SAL MARTIS MURIATICUM SUBLIMATUM. See *Ferrum ammoniatum.*

SAL MICROCOSMICUS. Microcosmic salt. The compound saline matter obtained by inspissating human urine.

SAL MIRABILIS GLAUBERI. See *Sodæ sulphas.*

SAL MURIATICUS. See *Sodæ murias.*

SAL PLANTARUM. See *Potassæ subcarbonas.*

SAL POLYCHRESTUS. See *Potassæ sulphas.*

SAL POLYCHRESTUS GLASERI. See *Potassæ sulphas.*

SAL POLYCHRESTUS SEIGNETTI. See *Soda tartarizata.*

SAL PRUNELLÆ. Nitrate of potash, cast into flat cakes or round balls.

SAL RUPELLENSIS. See *Soda tartarizata.*

SAL SATURNI. See *Plumbi acetas.*

SAL SEDATIVUS. See *Boracic acid.*

SAL SEIDLICENSIS. See *Magnesiæ sulphas.*

SAL SEIGNETTI. See *Soda tartarizata.*

SAL SUCCINI. See *Succinic acid.*

SAL TARTARI. See *Tartaric acid.*

SAL THERMARUM CAROLINARUM. See *Magnesiæ sulphas.*

SAL VEGETABILIS. See *Potassæ tartras.*

SAL VOLATILIS. See *Spiritus ammoniæ aromaticus,* and *Ammoniæ subcarbonas.*

SAL VOLATILIS SALIS AMMONIACI. See *Ammoniæ subcarbonas.*

SALEP. *Salap.* See *Orchis morio.*

SALICARIA. (*a, æ.* f.; from *salix,* a willow: from the resemblance of its leaves to those of the willow.) See *Lythrum salicaria.*

SALICO'RNIA. (*a, æ.* f.) The name of a genus of plants in the Linnæan system. Class, *Monandria;* Order, *Monogynia.*

SALICORNIA EUROPÆA. The systematic name of the jointed glasswort. This plant is gathered by the country people, and sold for samphire. It forms a good pickle with vinegar, and is little inferior to the samphire.

SALIFIABLE. Having the property of forming a salt. The alkalies, and those earths and metallic oxides which have the power of neutralising acidity, entirely or in part, and producing salts, are called salifiable bases.

SALINE. (*Salinus;* from *sal,* salt.) Of a salt nature. The number of saline substances is very considerable, and they possess peculiar characters by which they are distinguished from other substances. These characters are founded on certain properties, which, it must be confessed, are not accurately distinctive of their true nature. All such substances, however, as possess several of the four following properties are considered as saline:—1. A strong tendency to combination, or a very strong affinity of composition. 2. A greater or lesser degree of sapidity. 3. A greater or lesser degree of solubility in water. 4. Perfect incombustibility.

SALINUCA. See *Valeriana celtica.*

SALI'VA. (*a, æ.* f.; so called, *à salino sapore,* from its salt taste, or from σιαλος, spittle.) The fluid which is secreted by the salivary glands into the cavity of the mouth. The *secretory organ* is composed of three pair of salivary glands:—

1. The *parotid glands,* which evacuate their saliva by means of the *Stenonian duct,* behind the middle dens molaris of the upper jaw.

2. The *submaxillary glands,* which pour out their saliva through the *Warthonian ducts,* on each side of the frenulum of the tongue, by a narrow osculum.

3. The *sublingual glands,* situated between the internal surface of the maxilla and the tongue, which pour out their saliva through numerous *Rivinian ducts* at the apex of the tongue.

The saliva in the cavity of the mouth has mixed with it, 1. The *mucus of the mouth,* which exhales from the labial and genal glands. 2. A *roscid vapour,* from the whole surface of the cavity of the mouth. The saliva is continually swallowed with or without masticated food, and some is also spit out. It has no *colour* nor *smell;* it is *tasteless,* although it contains a little salt, to which the nerves of the tongue are accustomed. Its *specific gravity* is somewhat greater than water. Its *consistence* is rather plastic and spumous, from the entangled atmospheric air. The *quantity* of twelve pounds is supposed to be secreted in twelve hours. During mastication and speaking, the secretion is augmented, from the mechanical pressure of the muscles upon the salivary glands. Those who are hungry secrete a great quantity, from the sight of agreeable food. It is imperfectly dissolved by water; somewhat coagulated by alkohol; and congealed with more difficulty than water. It is inspissated by a small dose, and dissolved in a large dose, of mineral acids. It is also soluble in carbonated alkali. Caustic alkali and quicklime extract volatile alkali from saliva. It corrodes copper and iron; and precipitates silver and lead from containing muriatic acid. It assists the spirituous fermentation of farinaceous substances; hence barbarous nations prepare an inebriating drink from the chewed roots of the *Jatropha manihot* and *Piper methisticum.* It possesses an antiseptic virtue, according to the experiments of the celebrated Pringle. It easily becomes putrid in warm air, and gives off volatile alkali.

Constituent principles. Saliva appears to consist, in a healthy state of the body, of water, which constitutes at least four fifths of its bulk, mucilage, albumen, muriate of soda, phosphate of soda, phosphate of lime, and phosphate of ammonia.

The use of the saliva. 1. It augments the taste of the food, by the evolution of sapid matter. 2. During mastication, it mixes with, dissolves, and resolves into its principles, the food, and changes it into a pultaceous mass, fit to be swallowed: hence it commences chymification. 3. It moderates thirst, by moistening the cavity of the mouth and fauces.

SALIVAL. (*Salivalis;* from *saliva,* the spittle.) Of or belonging to the saliva.

SALIVAL DUCTS. The excretory ducts of the salival glands. That of the parotid gland is called the *Stenonian* duct; those of the submaxillary glands, the *Warthonian* ducts; and those of the sublingual, the *Rivinian* ducts.

SALIVAL GLANDS. Those glands which secrete the saliva are so termed. See *Saliva.*

SALIVA'NS. (From *saliva*, spittle.) That which excites salivation.

SALIVA'RIA. (*a, æ.* f.; from *saliva*, the spittle: so called because it excites a discharge of saliva.) See *Anthemis pyrethrum.*

SALIVARIS HERBA. See *Anthemis pyrethrum.*

SALIVATION. (*Salivatio, onis.* f.; from *saliva*, the spittle.) See *Ptyalism.*

SA'LIX. (*ix, icis.* f.; from *sala*, Heb.) 1. The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Diandria.* The willow.

2. The pharmacopœial name of *Salix.* See *Salix fragilis.*

SALIX ALBA. See *Salix fragilis.*

SALIX CAPREA. The systematic name of a species of willow, the bark of the branches of which possess the same virtues with that of the fragilis.

SALIX FRAGILIS. The systematic name of the common crack willow. The bark of the branches of this species manifests a considerable degree of bitterness to the taste, and is very astringent. It is recommended as a good substitute for Peruvian bark, and is said to cure intermittents and other diseases requiring tonic and astringent remedies. Not only the bark of this species of salix, but those also of several others, possess similar qualities, particularly of the *Salix alba* and *Salix pentandria,* both of which are recommended in the foreign pharmacopœias. But Dr. Woodville is of opinion that the bark of the *Salix triandria* is more effectual than that of any other of this genus; at leasts its sensible qualities give it a decided preference. The trials Dr. Cullen made were with the bark of the *Salix pentandria,* taken from its branches, the third of an inch diameter, and of four or five years' growth. Nevertheless, he adds, in intermittent fevers, Bergius always failed with this bark.

SALIX PENTANDRIA. The bark of the branches of this species of willow possesses the same virtues as that of the fragilis.

SALIX VITULINA. The bark of the branches of this species of willow may be substituted for the fragilis.

SA'LMO. (*o, onis.* m.; so called *à saliendo.*) The name of a genus of fishes, of the order *Abdominales.* The salmon.

SALMO ALPINUS. The red charr. This beautiful and delicate little fish, and the *Salmo carpio,* or gilt charr, are found in our lakes of Westmorland, in Wales, and Scotland. They are very rich, and hard of digestion.

SALMO EPERLANUS. The smelt. A beautiful little fish, found in great abundance in the Thames and river Dee, and in the European seas, between November and February. It is a great delicacy when in season, but not easy of digestion in weak stomachs.

SALMO FARIO. The common fresh-water trout, the flesh of which is very delicate and rich, but hard of digestion.

SALMO LACUSTRIS. The lake-trout.

SALMO SALAR. The common salmon. This fish is considered as one of the greatest delicacies. It is rich, and of difficult digestion to weak stomachs, and with some, whose stomachs are not particularly feeble, it uniformly disagrees. The pickled, salted, and smoked, though much eaten, are only fitted for the very strong and active.

SALMO SALMULUS. The samlet: the least of the British species of the salmo genus. It is found in the river Wye, and up the Severn.

SALMO THYMALLUS. The graling salmon, which is somewhat like our trout. It inhabits the rivers of Derbyshire, and some of the north, and near Christchurch in Hampshire. It is much esteemed for the delicacy of its flesh, which is white, firm, and of a fine flavour; and is considered as in the highest season in the depth of winter.

SALMO TRUTTA. The bill trout.

SALMON. See *Salmo salar.*

SALPINGO. (From Σαλπιγξ, *buccina,* a trumpet.) Names compounded of this word belong to the palate, and are connected with the Eustachian tube.

SALPINGO-PHARYNGEUS. This muscle is composed of a few fibres of the palato-pharyngeus, which it assists in dilating the mouth of the Eustachian tube.

SALPINGO-STAPHILINUS. See *Levator palati.*

SALPINGO-STAPHILINUS INTERNUS. See *Levator palati.*

SALSAFY. See *Tragopogon pratense.*

SALSO'LA. (*a, æ.* f.; so called from its saline properties: hence the English word salt-wort, most of the species affording the fossile alkali.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

SALSOLA KALI. *Kali spinosum cochleatum. Tragus sive Tragum Matthioli.* Snail-seeded glass-wort or salt-wort. The systematic name of a plant which affords the mineral alkali. See *Soda.*

SALSOLA SATIVA. The systematic name of a plant, which also affords the mineral alkali. See *Soda.*

SALSOLA SODA. The systematic name of a plant which likewise affords mineral alkali. See *Soda.*

SALT. See *Sal.*

Salt, acid. 1. A salt which has an acid for one of its constituents.

2. A salt in which there is some loose acid, which is known by its sour taste when diluted with water. See *Acid.*

Salt, alkaline. One which has an alkali as one of its constituents. See *Alkali.*

Salt, ammoniacal fixed. Muriate of lime.

Salt, bitter purging. Sulphate of magnesia.

Salt, cathartic. See *Magnesiæ sulphas,* and *Sodæ sulphas.*

Salt, common. See *Sodæ murias.*
Salt, digestive. The acetate of potash.
Salt, diuretic. The acetate of potash.
Salt, Epsom. See *Magnesiæ sulphas.*
Salt, febrifuge of Sylvius. The muriate of potash.
Salt, fossil. A salt found in the earth.
Salt, fusible. Phosphate of ammonia.
Salt, fusible, of urine. A triple of phosphate of soda and ammonia.
Salt, microcosmic. A triple phosphate of soda and ammonia.
Salt, nitrous ammoniacal. Nitrate of ammonia.
Salt, neutral. Under the name of neutral or secondary salts are comprehended such matters as are composed of two primitive saline substances, combined together in a certain proportion. These salts are called neutral, because they do not possess the characters of primitive salts; that is to say, they are neither acid nor alkaline; such as Epsom salts, nitre, &c. But in many secondary salts the qualities of one ingredient predominate; as tartar, or supertartrate of potash, has an excess of acid; borax, or subborate of soda, an excess of base. The former are termed acidulous, the latter sub-alkaline salts.
Salt of amber. Succinic acid.
Salt of benzoin. Benzoic acid.
Salt of colcothar. Sulphate of iron.
Salt of lemons. Crystallised citric acid, and the oxalate and hyperoxalate of potash are so called.
Salt of Saturn. Acetate of lead.
Salt of Sedlitz. Sulphate of magnesia.
Salt of sorrel. Superoxalate of potash.
Salt, Rochelle. See *Soda tartarizata.*
Salt, sea. See *Sodæ murias.*
Salt of steel. See *Ferri sulphas.*
Salt, polychrest. Sulphate of potash.
Salt, secondary. See *Neutral salt.*
Salt, sedative. Boracic acid.
Salt, spirit of. Muriatic acid.
Salt of vitriol. A sulphate of zinc.
Salt of wisdom. Sal alembroth.
Salt, primitive. Under this order is comprehended those salts which are thought to be simple or primitive, and which are occasionally called simple salts. This order is divided into three genera, comprehending saline terrestrial substances, alkalies, and acids.
Saltpetre. See *Nitre.*

SALTWORT. See *Salsola kali.*

SALVATE'LLA. (From *salus*, health; because the opening of this vein was formerly thought to be of singular use in melancholy.) This vein runs along the little finger, unites upon the back of the hand with the cephalic of the thumb, and empties its blood into the internal and external cubical veins.

Salver-shaped. See *Hypocrateriform.*

SA'LVIA. (*a, æ. f.*; *à salvendo.*) 1. The name of a genus of plants in the Linnæan system. Class, *Diandria*; Order, *Monogynia.* Sage.

2. The pharmacopœial name of the common sage. See *Salvia officinalis.*

Salvia hortensis minor. The small sage, or sage of virtue. A variety of the officinal sage, possessing similar virtues.

Salvia officinalis. The systematic name of the garden sage: called also, *Elelisphacos. Salvia*—*foliis lanceolato ovatis integris crenulatis, floribus spicatis, calicybus acutis*, of Linnæus. In ancient times sage was celebrated as a remedy of great efficacy, as would appear from the following lines of the school of Salernum:—

"*Cur moriatur homo, cui salvia crescit in horto?*
Contra vim mortis, non est medicamen in hortis?
Salvia salvatrix, naturæ conciliatrix.
Salvia cum ruta faciunt tibi pocula tuta."

But at present it is not considered as an article of much importance. It has a fragrant strong smell; and a warm, bitterish, aromatic taste, like other plants containing an essential oil. It has a remarkable property in resisting the putrefaction of animal substances, and is in frequent use among the Chinese as a tonic, in the form of tea, in debility of the stomach and nervous system.

Salvia sclarea. The systematic name of the garden clary, called *Horminum* in the pharmacopœias, and anciently *Bisermas*, and *Sclarea hispanica.* The leaves and seeds are recommended as corroborants and antispasmodics, particularly in leucorrhœas and hysterical weaknesses. They have a bitterish, warm taste, and a strong smell, of the aromatic kind. The seeds are infused in white wine, and imitate muscadel.

Salvia vitæ. See *Asplenium murale.*

SAMARA. (*a, æ. f.*; the name, according to Pliny, of the fruit of the elm.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria*; Order, *Monogynia.*

2. A species of capsule of a compressed form, and dry coriaceous texture, with one or two cells, never bursting, but falling off entire, and dilated into a kind of wing at the summit or sides. In *Fraxinus*, it goes from the summit of the seed: in *Acer* and *Batula*, from the side: in *Ulmus campestris*, it goes all round.

SAMBU'CUS. (*us, i. f.*; from *sabucca*, Heb. a musical instrument formerly made of this tree.) Elder.

1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Trigynia.*

2. The pharmacopœial name of the elder-tree. See *Sambucus nigra.*

Sambucus ebulus. The systematic name of the dwarf elder, or dane-wort; called also, *Ebulus, Chamæacte, Sambucus humilis*, and *Sambucus herbacea.* The root, interior bark, leaves, flowers, berries, and seeds of this herbaceous plant, *Sambucus*—*cymis trifidis, stipulis foliaceis, caule herbaceo*, of Linnæus, have all been administered medicinally, in moderate doses, as resolvents and deobstruents, and, in larger doses, as hydragogues. The plant is chiefly employed by the poor of this

country, amongst whom it is in common use as a purgative; but Dr. Cullen speaks of it as a violent remedy.

Sambucus nigra. The systematic name of the elder-tree; which is also called, *Sambucus vulgaris, Sambucus arborea, Acte,* and *Infelix lignum.* The *Sambucus—cymis quinquepartitis, foliis pinnatis, caule carboreo,* of Linnæus. This indigenous plant has an unpleasant narcotic smell, and some authors have reported its exhalations to be so noxious, as to render it unsafe to sleep under its shade. The parts of this tree that are proposed for medicinal use in the pharmacopœias are the inner bark, the flowers, and the berries. The first has scarcely any smell, and very little taste: on first chewing, it impresses a degree of sweetness, which is followed by a very slight but durable acrimony, in which its powers seem to reside. From its cathartic property it is recommended as an effectual hydragogue by Sydenham and Boerhaave: the former directs three handfuls of it to be boiled in a quart of milk and water, till only a pint remains, of which one half is to be taken night and morning, and repeated for several days: it usually operates both upwards and downwards, and upon the evacuation it produces its utility depends. Boerhaave gave its expressed juice in doses from a drachm to half an ounce. In smaller doses it is said to be an useful aperient and deobstruent in various chronic disorders. The flowers have an agreeable flavour; and infusions of them, when fresh, are gently laxative and aperient. When dry, they are said to promote chiefly the cuticular excretion, and to be particularly serviceable in erysipelatous and eruptive disorders. Externally they are used in fomentations, &c.; and in the London Pharmacopœia are directed in the form of an ointment. The berries in taste are somewhat sweetish, and not unpleasant; on expression they yield a fine purple juice, which proves an useful aperient and resolvent in some chronic diseases, gently loosening the belly, and promoting the urine and perspiration.

SAMPHIRE. See *Crithmum.*

Sampsuchus. See *Thymus mastichina.*

Sampsychum. (From σαω, to preserve, and ψυχη, the mind; because of its cordial qualities.) See *Origanum.*

SANATIVE. (From *sano,* to cure.) That which cures diseases.

Sancti antonii ignis. See *Erysipelas.*

SANCTORIUS, Sanctorius, was born in 1561, at Capo d'Istria. He studied medicine at Padua, and settled at Venice, and practised with considerable success. Sanctorius first called the attention of physicians to the cutaneous and pulmonary transpiration. His treatise, entitled *Ars de Statica Medicina,* passed through more than twenty editions, including translations, with various commentaries: it is written in an elegant and perspicuous Latin style. He was also author of a Method of avoiding Errors in Medicine, to which was afterwards added an essay *De Inventione Remediorum;* and of Commentaries on some of the ancient physicians. Besides the statical chair, by which he contrived to determine the weight of the ingesta and egesta, he invented an instrument for measuring the force of the pulse, and several others for surgical use; and he was the first who attempted to determine the temperature of the body by a thermometer, of which, indeed, he is considered as the inventor.

Sanctum semen. The wormseed, or santonicum.

SA'NCTUS. 1. Holy: formerly applied to some herbs, &c.

2. A saint: applied to some diseases. See *Chorea, Carduus benedictus, Sacer, &c.*

SANDALIFORMIS. Sandal or slipper-like: applied to the nectary of the *Cypripedium calceolus.*

SANDARA'CHA. (*a, æ.* f.; from *saghad narak,* Arabian.) 1. A gummy resin.

2. A sort of arsenic.

Sandaracha arabum. Arabian sandarach. This resinous juice appears to have been the produce of a large species of juniper-tree.

SANDBATH. See *Bath.*

SANDERS. See *Pterocarpus santalinus.*

SANDRACK. (An Arabian word.) See *Juniperus communis.*

Sandyx. (From *sani duk,* red, Arabian.) Cerusse burnt till it becomes red.

SANGUIFICATION. (*Sanguificatio.;* from *sanguis,* blood, and *facio,* to make.) A natural function of the body, by which the chyle is changed into blood. The uses of sanguification are, the generation of blood, which serves to fill the blood-vessels, to irritate and stimulate the heart and arteries, to generate or cause heat, to secrete the humours, and to excite the vital actions.

SANGUINA'LIS. (From *sanguis,* blood: so named from its use in stopping bleedings.) The *Polygonum aviculare,* or knot-grass, is sometimes so called.

SANGUINA'RIA. (From *sanguis,* blood: so named from its use in stopping bleedings.) See *Polygonum aviculare.*

SANGUINEOUS. (*Sanguineus;* from *sanguis,* blood.) Bloody; appertaining to the blood.

1. In *Natural History,* applied very generally to designate a red or blood colour. See *Colour.*

2. In *Pathology,* applied to certain conditions of the body and diseases, and appearances of solids and fluids; as sanguineous temperament, sanguineous apoplexy.

Sanguineous apoplexy. See *Apoplexy.*

Sanguipurgium. (From *sanguis,* blood, and *purgo,* to purge.) A gentle fever, or such a one as by its discharges is supposed to purify the blood.

SA'NGUIS. (*is, inis.* m.) See *Blood.*

Sanguis draconis. See *Calamus.*

Sanguis herculis. See *Crocus.*

SANGUISORBA. (*a, æ.* f.; probably so named originally from the blood-red colour of

its flowers, although the juice of this plant being astringent, the medicinal properties it possesses of stopping hæmorrhages may be a better warrant for its name.) The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Monogynia.*

SANGUISORBA OFFICINALIS. The systematic name of the Italian pimpinel, which was formerly much esteemed as an astringent, but is not now in use.

SANGUISU'GA. (*a, æ.* f.; from *sanguis,* blood, and *sugo,* to suck.) The leech or blood-sucker. See *Leech.*

SANICLE. See *Sanicula.*

Sanicle, Yorkshire. See *Pinguicula.*

SANI'CULA. (*a, æ.* f.; from *sano,* to heal: so called from its virtues in healing.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

2. The pharmacopœial name of sanicle.

SANICULA EBORACENSIS. See *Pinguicula.*

SANICULA EUROPÆA. The systematic name of the sanicle: called also, *Cucullata, Dodecatheon, Cortusa, Symphytum petræum, Sanicula mas,* and *Diapensia cortusa.* This herb was formerly recommended as a mild astringent, and is supposed to have received its name from its sanative power. Its sensible qualities are a bitterish and somewhat austere taste, followed by an acrimony which chiefly affects the throat. It is only in use in the present day amongst the country people.

SANICULA MAS. See *Sanicula europæa.*

SA'NIES. (*es, ei.* f.) This term is sometimes applied to a thin, limpid, and greenish discharge from an ulcer; and at other times to a thick and bloody kind of pus.

SA'NTALUM. (*um, i.* n.; from *zandal,* Arabian.) The name of a genus of plants in the Linnæan system. Class, *Tetrandria;* Order, *Monogynia.* Saunders.

SANTALUM ALBUM. The systematic name of the white and yellow saunders; called also, *Santalum citrinum* and *Santalum pallidum.* White saunders wood is of a pale white colour, often with a yellowish tinge, and, being destitute of taste or odour, it is superseded by the santalum citrinum, which is of a brownish yellow colour, of a bitterish aromatic taste, and of a pleasant smell, approaching to that of the rose. Both kinds are brought from the East Indies in billets, consisting of large thick pieces, which, according to Rumphius, are sometimes taken from the same, and sometimes from different trees. For though the white and yellow saunders are the wood of the same species of tree, yet the latter, which forms the central part of the tree, is not always to be found in sufficient quantity to repay the trouble and expense of procuring it, especially, unless the trees be old; while the white, which is the exterior part of the wood, is always more abundant, and is consequently much cheaper.

Yellow saunders, distilled with water, yields a fragrant essential oil, which thickens in the cold into the consistence of a balsam, approaching in smell to ambergris, or a mixture of ambergris and roses; the remaining decoction, inspissated to the consistence of an extract, is bitterish and slightly pungent. Rectified spirit extracts, by digestion, considerably more than water; the colour of the tincture is a rich yellow. The distilled spirit is slightly impregnated with the flavour of the wood; the remaining brownish extract has a weak smell, and a moderate balsamic pungency. The wood is valued highly on account of its fragrance: hence the Chinese are said to fumigate their clothes with it, and to burn it in their temples in honour of their gods. Though still retained in the Materia Medica, it cannot be thought to possess any considerable share of medicinal power. Hoffmann considers its virtues as similar to those of ambergris; and some others have esteemed it in the character of a corroborant and restorative.

SANTALUM RUBRUM. See *Pterocarpus.*

SANTOLI'NA. (*a, æ.* f.; from *santalum,* saunders; because it smells like the saunders wood.) See *Artemisia santonica.*

SANTOLINA CHAMÆ-CYPARISSUS. The systematic name of the lavender cotton.

SANTONICUM. (From *Santonia,* its native place.) See *Artemisia santonica.*

SAPHE'NA. (*a, æ.* f.; from σαφης, visible.) *Vena saphena.* The large vein of the leg, which ascends along the little toe over the external ankle, and evacuates part of the blood from the foot into the popliteal veins.

SAPIENTIA. (Wisdom, discretion: the *dentes sapientiæ* are so called because they appear when the person is supposed to be at years of discretion.) See *Teeth.*

SAPI'NDUS. (*us, i.* f.; that is, *Sapo Indus,* Indian soap: the rind of the fruit serving instead of soap to cleanse linen, but not without hazard of injury to the texture of the cloth.) The name of a genus of plants. Class, *Octandria;* Order, *Digynia.* The soap-tree.

SAPINDUS SAPONARIA. The systematic name ofthe plant which affords the soap-nuts, or soap-berries; called also, *Baccæ bermudenses.* A spherical fruit, about the size of a cherry, the cortical part of which is yellow, glossy, and so transparent as to show the spherical black nut which rattles within, and which includes a white kernel. The tree grows in Jamaica. It is said that the cortical part of this fruit has a bitter taste, and no smell; that it raises a soapy froth with water, and has similar effects with soap in washing; that it is a medicine of singular and specific virtue in chlorosis. They are not known in the shops of this country.

SA'PO. (*o, onis.* m.) Soap. A compound, in definite proportions, of certain principles in oils, fats, or resin, with a salifiable base. When this base is potash or soda, the compound is used as a detergent in washing clothes. When an alkaline earth, or oxide of a common metal, as litharge, is the salifiable base, the compound is insoluble in water.

The first of these combinations is scarcely applied to any use, if we except that of linseed-oil with lime-water, sometimes prescribed as a liniment against burns; and the last is known only in surgery as the basis of certain plasters. Concerning the chemical constitution of soaps and saponification, no exact ideas were entertained prior to Chevreuil's researches. Fats, according to this chemist, are compounds of a solid and a liquid substance; the former he has called *stearine*, the latter *elaïne*. See *Adeps*.

When fat is treated with a hot ley of potash or soda, the constituents react on one another, so as to generate the solid pearly matter *margaric acid*, and the fluid matter *oleic acid*, both of which enter into a species of saline combination with the alkali; while the third matter that is produced, the *sweet principle*, remains free. We must, therefore, regard our common soap as a mixture of an alkaline margarate and oleate, in proportions determined by the relative proportions of the two acids producible from the peculiar species of fat.

The specific gravity of soap is, in general, greater than that of water. Its taste is faintly alkaline. When subjected to heat it speedily fuses, swells up, and is then decomposed. Exposed to the air in thin slices, it soon becomes dry; but the whole combined water does not leave it, even by careful desiccation on a sand-bath.

Soap is much more soluble in hot than in cold water. This solution is instantly disturbed by the greater number of acids, which, seizing the alkali, either separate the fatty principles, or unite with them into an acido-soapy emulsion. The solution is likewise decomposed by almost all the earthy and metallic salts, which give birth to insoluble compounds of the oleic and margaric acids, with the salifiable bases.

Soap is soluble in alkohol, and in large quantity by the aid of heat. When boiling alkohol is saturated with soap, the liquid, on cooling, forms a consistent transparent mass of a yellow colour. When this mass is dried, it still retains its transparency, provided the soap be a compound of tallow and soda; and in this state it is sold by the perfumers in this country.

Good soap possesses the property of removing from linen and cloth the greater part of fatty substances which may have been applied to them.

The medicinal soap, *sapo amygdalinus*, is made with oil of sweet almonds, and half its weight of caustic alkali. Common or soft soap, *sapo mollis*, is made of potash and oil, or tallow. Spanish, or Castile soap, *sapo durus*, of oil of olives and soda, or barilla. Black soap is a composition of train oil and an alkali; and green soap, of hemp, linseed, or rape oil, with an alkali. The white Spanish soap, being made of the finer kinds of olive oil, is the best, and therefore preferred for internal use. Soap was imperfectly known to the ancients. It is mentioned by Pliny as made of fat and ashes, and as an invention of the Gauls. Aretæus and others inform us, that the Greeks obtained their knowledge of its medical use from the Romans. Its virtues, according to Bergius, are detergent, resolvent, and aperient; and its use recommended in jaundice, gout, calculous complaints, and obstruction of the viscera. The efficacy of soap in the first of these diseases was experienced by Sylvius, and since recommended very generally by various authors who have written on this complaint; and it has also been thought of use in supplying the place of bile in the primæ viæ. The utility of this medicine in icterical cases was inferred chiefly from its supposed power of dissolving biliary concretions; but this medicine has lost much of its reputation in jaundice, since it is now known that gall-stones have been found in many after death who had been daily taking soap for several months, and even years. Of its good effects in urinary calculous affections, we have the testimonies of several, especially when dissolved in lime-water, by which its efficacy is considerably increased; for it thus becomes a powerful solvent of mucus, which an ingenious modern author supposes to be the chief agent in the formation of calculi. It is, however, only in the incipient state of the disease that these remedies promise effectual benefit, though they generally abate the more violent symptoms where they cannot remove the cause. With Boerhaave, soap was a general medicine; for, as he attributed most complaints to viscidity of the fluids, he, and most of the Boerhaavian school, prescribed it, in conjunction with different resinous and other substances, in gout, rheumatism, and various visceral complaints. Soap is also externally employed as a resolvent, and gives names to several officinal preparations.

Sapo terebinthinæ. Starkey's soap. This is made of one part of dried and warm subcarbonate of potash, and three parts oil of turpentine. The heated alkali is to have the oil of turpentine gradually blended with it, in a warm mortar. Indolent swellings were formerly rubbed with this application, and perhaps some chronic affections of the joints might still be benefited by it.

SAPONA'RIA. (*a, æ*. f.; from *sapo*, soap: so called because its juice, like soap, cleans cloths.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Digynia*.

2. The pharmacopœial name of the soap-wort. See *Saponaria officinalis*.

Saponaria nucula. See *Sapindus*.

Saponaria officinalis. The systematic name of the soap-wort: called also, bruisewort, and *Struthium*, *Lanaria*, *Lychnis sylvestris*, and *Ibixuma*. The root of this plant, *Saponaria — calycibus cylindricis, foliis ovato-lanceolatis*, of Linnæus, is employed medicinally: it has no peculiar smell; its taste is sweetish, glutinous, and somewhat bitter. On being chewed for some time, it is said to dis-

cover a degree of acrimony, which continues to affect the mouth a considerable time. According to Newman, two ounces of the root yielded eleven drachms of watery extract; but Carthouser, from a like quantity, only obtained six drachms and twenty-four grains. This extract manifested a sweetish taste, followed by an acrid quality. The spirituous extract is less in quantity, but of a more penetrating acrid taste. Decoctions of the root, on being sufficiently agitated, produce a saponaceous froth: a similar soapy quality is observable also in the extract, and still more manifestly in the leaves, in so much that they have been used by the mendicant monks as a substitute for soap for washing their clothes; and Bergius, who made several experiments with the saponaria, declares that it had all the effects of soap itself.

From these peculiar qualities of the saponaria, there can be little doubt of its possessing a considerable share of medical efficacy, which Dr. Woodville says he could wish to find faithfully ascertained.

The diseases for which the saponaria is recommended, as syphilis, gout, rheumatism, and jaundice, are not, perhaps, the complaints in which its use is most availing; for a fancied resemblance of the roots of saponaria with those of sarsaparilla, seems to have led physicians to think them similar in their effects; and hence they have both been administered with the same intentions, particularly in fixed pains, and venereal affections. Bergius says, " in arthritide, cura mercuriale, &c. nullum aptiorem potum novi." However, according to several writers, the most inveterate cases of syphilis were cured by a decoction of this plant, without the use of mercury.

Haller informs us that Boerhaave entertained an high opinion of its efficacy in jaundice and other visceral obstructions.

SAPONULE. *Saponulus.* A combination of a volatile or essential oil with different bases; as *saponule of ammonia*, &c.

SAPOTA. (The West Indian name of several sorts of fruits of the plum kind.) See *Acras sapota.*

SAPPAN LIGNUM. See *Hæmatoxylon.*

SAPPHIRE. A subspecies of rhomboidal corundum. The oriental ruby and topaz are sapphires. It is one of the esteemed precious stones, a sapphire of ten carats' weight being worth fifty guineas. Its colours are blue, red, and also grey, white, green, and yellow. It is found in blunt-edged pieces, in roundish pebbles, and crystallised after the diamond. It is the hardest substance in nature.

SAPPHIRINA AQUA. (So called from its sapphire or blue colour.) *Aqua cupri ammoniati.* Made by a solution of sal ammoniac in lime-water, standing in a copper vessel.

Saracen's consound. See *Solidago.*

SARATOGA. The name of a country in America, in the State of New York, celebrated for its springs of mineral water, which are numerous throughout a circuit of several miles, near the centre of that country. The ground throughout this circuit is, generally speaking, flat, and in two or three places is covered with extensive sheets of limpid water, which are fed by streams that take their origin in the neighbouring mountains of granite and gneiss. The soil in which the springs rise is sandy, and rests upon a bed of compact limestone, or argillaceous slate, or grey wacke; and they are apparently more numerous where these specimens of the transition and secondary formation are ascertained to meet. There is more variety in the degree of mineral impregnation at two points, about seven miles distant from each other, where accommodation has been more liberally provided for visitors, and which have taken the names of Saratoga and Ballston Spa. The former of these seems to have been known to the Indians before the formation of European settlements, and was pointed out by them to Sir William Johnson, in 1767. It was called in their language the *Spring of Life*, and is in temperature about 50° of Fahrenheit. Most of the American chemists have made the analysis of the Saratoga water an object of enquiry and publication; and, though one or two of them differ as to the existence of some of the more trifling impregnations, they agree generally that it contains carbonic acid gas, muriate of soda, carbonate of soda, carbonate of lime, carbonate of iron, and carbonate of magnesia.

In two or three of the springs there is, besides, sulphuretted hydrogene gas, and, in one at least, traces of silica and alumina. These incidental varieties give rise to slight differences in the medicinal effects of the springs; but, as a general rule for guiding strangers in their selection, it may be stated, that the more abundant the muriate of soda, and carbonates of soda, lime, and magnesia, the more aperient and diuretic will be the water: while the greater the quantity of carbonic acid and of iron, in proportion to the former ingredients, the more powerful will be its tonic effects.

The great superiority of these American mineral waters over every thing of the kind to be found in Europe, consists,

1st, In their containing a greater quantity of carbonic acid, or fixed air, by which they are capable of retaining in solution a much larger proportion of useful saline matter, of a particular character, than any European mineral water.

2dly, In their possessing more efficient purgative properties than any of the springs of Europe, with the exception of Harrowgate, and perhaps Cheltenham, which are both not only destitute of the refreshing taste given by the carbonic acid, but contain (Harrowgate in particular) matters which render them to the palate in some degree offensive.

3dly, In containing such a combination of materials, in the most eligible form, as fit them to become at once a most refreshing beverage to all, and to those suffering from the

diseases about to be mentioned in particular, a more perfect union of what is agreeable with that which is necessary and useful in the way of medicine, than any that has hitherto been provided, either by nature or art.

The diseases in which the Saratoga waters have been found to be productive of the best effects, are, dyspepsia, cutaneous diseases, scrofulous tumours, dropsy, chlorosis, and other affections peculiar to the female sex, nephritic disorders, and gravel.

SARCIMINALIS. The membrana allantoides is sometimes so called. See *Allantoid*.

SARCI'TES. (From σαρξ, flesh.) See *Anasarca*.

SA'RCIUM. (*um, ii.* n.; diminutive of σαρξ, flesh.) A caruncle, or small fleshy excrescence.

SARCOCE'LE. (*e, es.* f.; from σαρξ, flesh, and κηλη, a tumour.) *Hernia carnosa*. This is a disease of the body of the testicle, and, as the term implies, consists, in general, in such an alteration made in the structure of it as produces a resemblance to a hard fleshy substance, instead of that fine, soft, vascular texture of which it is, in a natural and healthy state, composed.

The ancient writers have made a great number of distinctions of the different kinds of this disease, according to its different appearances, and according to the mildness or malignity of the symptoms with which it may chance to be attended. Thus, the *sarcocele*, the *hydro-sarcocele*, the *scirrhus*, the *cancer*, the *caro adnata ad testum*, and the *caro adnata ad vasa*, which are really little more than descriptions of different states and circumstances of the same disease, are reckoned as so many different complaints, requiring a variety of treatment, and deriving their origin from a variety of different humours.

Every species of sarcocele consists primarily in an enlargement, induration, and obstruction of the vascular part of the testicle; but this alteration is, in different people, attended with such a variety of circumstances, as to produce several different appearances, and to occasion the many distinctions which have been made.

If the body of the testicle, though enlarged and indurated to some degree, be perfectly equal in its surface, void of pain, has no appearance of fluid in its tunica vaginalis, and produces very little uneasiness, except what is occasioned by its mere weight, it is usually called a simple sarcocele, or an indolent scirrhus; if, at the same time that the testis is enlarged and hardened, there be a palpable accumulation of fluid in the vaginal coat, the disease has by many been named a *hydro-sarcocele;* if the lower part of the spermatic vessels and the epididymis were enlarged, hard, and knotty, they supposed it to be a fungous, or morbid accretion, and called it the *caro adnata ad vasa;* if the testicle itself was unequal in its surface, but at the same time not painful, they distinguish it by the title of *caro adnata ad testem;* if it was tolerably equal, not very painful, nor frequently so, but at the same time hard and large, they give it the appellation of an occult or benign cancer; if it was ulcerated, subject to frequent acute pain, to hæmorrhage, &c. it was known by that of a malignant or confirmed cancer. These different appearances, though distinguished by different titles, are really no more than so many stages (as it were) of the same kind of disease, and depend a great deal on several accidental circumstances, such as age, habit, manner of living, &c. It is true, that many people pass several years with this disease under its most favourable appearances, and without encountering any of its worst; but, on the other hand, there are many who, in a very short space of time, run through all its stages. They who are most conversant with it, know how very convertible its mildest symptoms are into its most dreadful ones, and how very short a space of time often intervenes between the one and the other.

There is hardly any disease affecting the human body which is subject to more variety than this is, both with regard to its first manner of appearance, and the changes which it may undergo.

Sometimes the first appearance is a mere simple enlargement and induration of the body of the testicle, void of pain, without inequality of surface, and producing no uneasiness or inconvenience, except what is occasioned by its mere weight. And some people are so fortunate to have it remain in this state for a very considerable length of time without visible or material alteration. On the other hand, it sometimes happens that, very soon after its appearance in this mild manner, it suddenly becomes unequal and knotty, and is attended with very acute pains darting up to the loins and back, but still remaining entire, that is, not bursting through the integuments. Sometimes the fury of the disease brooks no restraint, but, making its way through all the membranes which envelope the testicle, it either produces a large, foul, stinking, phagedænic ulcer, with hard edges, or it thrusts forth a painful gleeting fungus, subject to frequent hæmorrhage.

Sometimes an accumulation of water is made in the tunica vaginalis, producing that mixed appearance called the *hydro-sarcocele*.

Sometimes there is no fluid at all in the cavity of the tunica vaginalis; but the body of the testicle itself is formed into cells, containing either a turbid kind of water, a bloody sanies, or a purulent fœtid matter. Sometimes the disorder seems to be merely local, that is, confined to the testicle, not proceeding from a tainted habit, nor accompanied with diseased viscera, the patient having all the general appearances and circumstances of health, and deriving his local mischief from an external injury. At other times, a pallid, leaden countenance, indigestion, frequent nausea, colicky pains, sudden purgings, &c. sufficiently indicate a vitiated habit and diseased

viscera, which diseased viscera may also sometimes be discovered and felt.

The progress, also, which it makes from the testis upward, toward the process, is very uncertain; the disease occupying the testicle only, without affecting the spermatic process, in some subjects, for a great length of time; while in others, it totally spoils the testicle very soon, and almost as soon seizes on the spermatic chord.

SARCOCO'LLA. (*a, æ.* f.; from σαρξ, flesh, and κολλα, glue: because of its supposed power of gluing together wounds.) A spontaneous exudation from a tree of the fir kind, which grows in Persia, supposed to be similar to olibanum or frankincense.

SARCOEPIPLOCE'LE. A rupture, containing omentum, with a mass of flesh.

SARCOLITE. A variety of analcime.

SARCOLOGY. (*Sarcologia, æ.* f.; from σαρξ, flesh, and λογος, a discourse.) The doctrine of the muscles and soft parts.

SARCO'MA. (*a, atis.* n.; from σαρξ, flesh.) A fleshy tumour or excrescence.

SARCOMATOUS. *Sarcomatosus.* Fleshy.

SARCO'MPHALUS. (*us, i.* m.; from σαρξ, flesh, and ομφαλος, the navel.) A fleshy excrescence about the navel.

SARCOPHYIA. (From σαρξ, flesh, and φυω, to grow.) A fleshy excrescence.

Sarcopyodes. (From σαρξ, flesh, and πυον, pus.) Pus so solidified or dense as to resemble flesh. Applied to the purulent, fleshy discharge which is thrown up in some stages of consumption.

SARCO'SIS. (*is, is.* f.; from σαρξ, flesh.) 1. A fleshy tumour.

2. The generation of flesh.

Sarco'tics. (From σαρξ, flesh.) Sarcotic: that which promotes the generation of flesh in wounds.

SARDE. Sardoin. A variety of cornelian of a deep blood-red colour.

SARDI'ASIS. (From σαρδωνιη, the Sardonia, or herb, which, being eaten, causes convulsive laughter.) See *Sardonic.*

SARDO'NIA. (From *Sardonia*, its native soil.) A kind of smallage.

SARDONIC. (*Sardonicus*: so called from the herb *Sardonia*, which, being eaten, is said to cause a deadly convulsive laughter.) The term *risus Sardonicus*, or Sardonic laugh, is applied to a singular convulsive grin or laughter, which was first observed in those who had eaten the herb called *Sardonia.* See *Spasmus cynicus.*

SARDONYX. A variety of cornelian, composed of layers of white and red.

Sarmenta'ceæ. (From *sarmen*, a runner.) The name of a natural order of Linnæus's *Fragmenta*, embracing the plants with twining or trailing stems.

SARMENTA'CEUS. Sarmentaceous: having twigs or runners.

SARMENTO'SUS. (From *sarmentum*, a twig or trailing stalk.) Trailing, or having runners: applied to a creeping stem, barren of flowers, thrown out from the root for the purpose of increase.

SAR'MEN'TUM. (*um, i.* n.; from *sarpio*, to prune, lop, or cut off.) A twig; a runner.

SARSAPARI'LLA. (*a, æ.* f. This word is of Spanish origin, signifying a red tree.) See *Smilax sarsaparilla.*

Sarsaparilla germanica. See *Carex arenaria.*

SARTO'RIUS. (From *sartor*, a tailor: because tailors cross their legs with it.) *Sartorius seu longissimus femoris*, of Cowper. This flat and slender muscle, which is the longest of the human body, and from an inch and a half to two inches in breadth, is situated immediately under the integuments, and extends obliquely from the upper and anterior part of the thigh, to the upper, anterior, and inner part of the tibia, being enclosed by a thin membraneous sheath, which is derived from the adjacent *fascia lata.* It arises, by a tendon of about half an inch in breadth, from the outer surface and inferior edge of the anterior superior spinous process of the ilium, but soon becomes fleshy, and runs down a little way obliquely inwards, and then for some space upon the rectus, nearly in a straight direction; after which it passes obliquely over the vastus internus, and the lower part of the adductor longus, and then running down between the tendons of the adductor magnus and the gracilis, is inserted, by a thin tendon, into the inner part of the tibia, near the inferior part of its tuberosity, and for the space of an inch or two below it. This tendon sends off a thin aponeurosis, which is spread over the upper and posterior part of the leg. This muscle serves to bend the leg obliquely inwards, or to roll the thigh outwards, and at the same time to bring one leg across the other; on which account, Spigelius first gave it the name of *sartorius*, or the tailor's muscle.

SA'SSAFRAS. (*Quasi saxifraga*; from *saxum*, a stone, and *frango*, to break: so called because a decoction of its wood was supposed good for the stone; or, which is most probable, from the river Sassefras, in America, on the banks of which it grows in abundance.) See *Laurus sassafras.*

SASSOLINE. Native boracic acid, found on the edges of hot springs near Sasso, in Florence. It consists of boracic acid, 86; ferruginous sulphate of manganese, 11; sulphate of lime, 3.

Satanus devorans. Antimony.

SATELLITE. The veins which accompany the brachial artery, as far as the bend of the cubit, are so called.

Sathe. The penis.

SATIN SPAR. A species of fibrous limestone.

Saturans. A medicine was so called which neutralised the acid in the stomach.

SATURATION. (*Saturatio, onis.* f.) A term employed, in *Pharmacy* and *Chemistry*, to express the state of a body which has a power of dissolving another, to a certain extent

only, in which it has effected that degree of solution. Some substances unite in all proportions. Such, for example, are acids in general, and some other salts with water; and many of the metals with each other. But there are, likewise, many substances which cannot be dissolved in a fluid at a settled temperature, in any quantity beyond a certain proportion. Thus, water will dissolve only about one third of its weight of common salt, and, if more be added, it will remain solid. A fluid, which holds in solution as much of any substance as it can dissolve, is said to be saturated with it. But saturation with one substance does not deprive the fluid of its power of acting on and dissolving some other bodies; and in many cases it increases this power. For example, water saturated with salt will dissolve sugar; and water saturated with carbonic acid will dissolve iron, though without this addition its action on this metal is scarcely perceptible.

The word saturation is likewise used in another sense by chemists. The union of two principles produces a body, the properties of which differ from those of its component parts, but resemble those of the predominating principle. When the principles are in such proportion that neither predominates, they are said to be saturated with each other; but if otherwise, the most predominant principle is said to be subsaturated or undersaturated, and the other, supersaturated or oversaturated.

SATUREI'A. (*a, æ.* f.; from *satyri*, the lustful satyrs: because it makes those who eat it lascivious.) Blanch. 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*.

2. The pharmacopœial name of the summer savory.

SATUREIA CAPITATA. The systematic name of the ciliated savory: called in the shops *Thymus creticus*. It possesses similar virtues to our thyme, but in a stronger degree.

SATUREIA HORTENSIS. The systematic name of the summer savory: called also, *Satureia sativa*, *Culina sativa Plinii*, and *Thymbra*. This low shrub is cultivated in our gardens for culinary purposes. It has a warm, aromatic, penetrating taste, and smells like thyme, but milder. It is an ingredient in most of the warm stews and made dishes.

SATUREIA SATIVA. See *Satureia hortensis*.

SATU'RNUS. (From the planet, or heathen god, of that name.) Saturn. The chemical name of lead.

SATYRI'ASIS. (*is, is.* m.; from σατυρος, a satyr: because they are said to be greatly addicted to venery.) Excessive and violent desire for coition in men.

SATY'RION. (*on, ii.* n.; from σατυρος, an animal given to venery: so called because it was supposed to excite venery if only held in the hand.) See *Orchis mascula*.

SATY'RIUM. See *Orchis mascula*.

Sauce-alone. See *Erysimum alliaria*.

SAUCER. See *Scutella*.

SAUNDERS. See *Santalum album*.

Saunders, red. See *Pterocarpus*.

SAUR-KRAUT. Cabbage preserved in brine. An article of food common in Germany, like our pickled cabbage.

SAUSSURITE. A hard mineral, placed by Jameson near Andalusite, of white and grey or green colour, found at the foot of Mount Rosa.

SAUVAGES, FRANCIS BOISSIER DE, was born at Alais, in 1706. Among his earlier publications was one entitled *Nouvelles Classes des Maladies*, the outline of the system of nosology which has rendered his name illustrious, but which did not appear in its complete form till after an additional labour of thirty years had been bestowed upon it. This work, *Nosologia Methodica*, consisting of five octavo volumes, contains an immense body of information, indeed almost every thing then known concerning the species of disease. Besides this valuable work, Sauvages was author of numerous others, on different subjects, relating to medicine.

SAVIN. See *Juniperus sabina*.

Savin ointment. See *Ceratum sabinæ*.

SAVINA. See *Juniperus sabina*.

SAVOURY. See *Satureia*.

SAXI'FRAGA. (*a, æ.* f.; from *saxum*, a stone, and *frango*, to break: so called because it was supposed to be good against the stone in the bladder.) The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Digynia*.

SAXIFRAGA ALBA. See *Saxifraga granulata*.

SAXIFRAGA ANGLICA. See *Peucedanum*.

SAXIFRAGA CRASSIFOLIA. The root of this species of saxifrage is extolled, by Professor Pallas, as an antiseptic.

SAXIFRAGA GRANULATA. The systematic name of the white saxifrage. *Saxifraga alba*. Called by Oribasius, *Besto*. *Sanicula sedum*. Linnæus describes the taste of this plant to be acrid and pungent, which we have not been able to discover; neither the tubercles of the root nor the leaves manifest to the organs of taste any quality likely to be of medicinal use; and therefore, though this species of saxifrage has been long employed as a popular remedy in nephritic and gravelly disorders, yet we do not find, either from its sensible qualities, or from any published instances of its efficacy, that it deserves a place in the Materia Medica. The superstitious doctrine of signatures suggested the use of the root, which is a good example of what Linnæus has termed radix granulata. The bulbs or tubercles of such roots answer an important purpose in vegetation, by supplying the plants with nourishment and moisture, and thereby enabling them to resist the effects of that drought to which the dry soils they inhabit peculiarly expose them.

SAXIFRAGA RUBRA. See *Spiræa*.

SAXIFRAGA VULGARIS. See *Peucedanum*.

SAXIFRAGE. See *Saxifraga*.

Saxifrage, burnet. See *Pimpinella*.

Saxifrage, English. See *Peucedanum*.

Saxifrage, meadow. See *Peucedanum.*

Saxifrage, white. See *Saxifraga.*

Saxon blue. See *Blue, saxon.*

SCAB. A hard substance covering superficial ulcerations, and formed by a concretion of the fluid discharged from them.

SCABER. Rough to the touch, from any little rigid inequalities: applied to several parts of plants.

SCA'BIES. (*es, ei.* f.; from *scabo*, to scratch.) *Psora.* The itch. This disease is characterised by an eruption of pustules, or of small vesicles, which are subsequently intermixed with, or terminate in, pustules; it is accompanied by constant and importunate itching, but not with fever; and is in all its varieties contagious. It appears occasionally on every part of the body, the face only excepted; but most abundantly about the wrists and fingers, the fossa of the nates, and the flexures the joints.

Among the varieties which the disease assumes, four have been distinguished with considerable accuracy by the vulgar, who have, indeed, the most ample opportunities of becoming acquainted with its character; and to these they have given the epithets of *rank, watery, pocky,* and *scorbutic* itch. Their division was adopted by Dr. Willan, with the appropriate titles of papuliform, lymphatic, purulent, and cachectic.

1. The *Scabies papuliformis*, or *rank* itch, consists in an extensive eruption of minute itching vesicles, which are slightly inflamed and acuminated, resembling papulæ when examined by the naked eye. They commonly arise first about the bend of the wrist and between the fingers, or in the epigastrium; on which parts, as well as about the axillæ and nates, and in the flexures of the upper and lower limbs, they are at all periods most numerous, and often intermixed with a few phlyzacious pustules, containing a thick yellow matter. The itching is extremely troublesome in this form of scabies, more especially when the patient becomes warm after getting into bed. The appearance of the disease is modified by the abrasion of the tops of the vesicles and pustules, and even of the rest of the skin, by the frequent scratching, which cannot be withheld. Hence long red lines are here and there left, and the blood and humour concrete upon the vesicles into little brown or blackish scabs.

These mixed appearances, partly belonging to the disease, and partly the result of abrasion by the nails, being in some measure common to the lichen and prurigo, where much scratching is also often employed, render the diagnosis of the scabies papuliformis more difficult than it would be from the mere similarity in the form of the eruption. But, as the most effectual remedy for the scabies is detrimental in the latter affections, the distinction is of great practical importance.

With respect to the eruption itself, the unbroken elevations in scabies papuliformis, when carefully examined, are found to be vesicular, and not papular; they are often intermixed, in particular situations, with pustules; and, when they break, are succeeded by scabs: whereas in lichen, the papulæ terminate spontaneously in scurfy exfoliations. In scabies, the eruption is unconnected with any constitutional or internal disorder, and the itching is severe: but in lichen there is commonly some constitutional affection, and a tingling sensation, as well as itching. The highly contagious nature of scabies will, in many cases, have already manifested itself, and remove all doubt; for the lichen is not thus communicable.

In prurigo, the papulæ, where no friction has been applied, retain the usual colour of the skin, are commonly flatter, or less acuminated, and present no moisture or scab, except when their tops have been forcibly abraded; they are not particularly numerous in the parts above mentioned; and they remain long distinctly papular, without showing any contagious property.

2. The *Scabies lymphatica*, or *watery* itch, is distinguished by an eruption of transparent vesicles, of a considerable size, and without any inflammation at their base. They arise in succession, with intense itching, chiefly round the wrists, between the fingers, on the back of the hands, and on the feet and toes: they often occur also about the axillæ, the hams, the bend of the elbows, and fossa of the nates, where they are intermixed with pustules: but they do not frequently appear, like the papuliform species, over the breast and epigastrium, nor on the thighs and upper parts of the arms.

In a day or two the vesicles break, and some of them heal, under the little scab that concretes upon them. But others inflame, and become pustules, which discharge at length a yellow matter, and extend into small ulcerated blotches, over which a dark scab is ultimately formed. — So that, during the progress of the eruption, all these appearances are intermixed with each other: the vesicles, and pustules, the excoriated blotches discharging pus, the minute dry scabs, and the larger ones succeeding the ulceration, may be observed at the same time. This circumstance constitutes one of the points of diagnosis between this and other vesicular diseases.

3. The *Scabies purulenta*, or *pocky* itch, is often mistaken by those who confine their notion of the disease to the ordinary small and ichorous vesicle of the two former species. The eruption consists of distinct, prominent, yellow pustules, which have a moderate inflammation round their bases, and which maturate and break in two or three days, and then ulcerate, with increasing pain and inflammation. These pustules commonly appear first, and attain the largest size, on the hands and feet, especially about the knuckles and roots of the toes, between the fingers, and particularly between the fore-finger and thumb, and round the wrists. In these situ-

ations, the pustules often exceed two lines in diameter, and assume a prominent globular form: whence, from their general resemblance to the large well-maturated pustules of small-pox, and not from any allusion to syphilis, as some have erroneously supposed, the popular term *pocky* has been applied to them. If the disease continue a few weeks, the pustules begin to appear on the other parts of the body which scabies usually attacks, especially about the axillæ, on the back and shoulders, and on the arms and thighs near the joints of the knee and elbow, in the fossa of the nates, and sometimes, though of a smaller size, even about the epigastrium. In several of these situations, where the pustules are largest and numerous, they coalesce, and form irregular blotches, which ulcerate to some extent, with hardness and elevation of the surface; but at length hard and dry scabs are formed, which adhere tenaciously for a considerable time.

4. *Scabies cachectica.* This variety of scabies exhibits, in different parts of the body, all the appearances which belong to the three foregoing species. It is occasionally also combined with patches resembling lichen, psoriasis, or impetigo, especially in adults, or young persons approaching the term of puberty; whence it assumes an ambiguous character. In several instances, this form of scabies has been obviously contagious in its double character; and, after the scabious affection has disappeared, the impetiginous patches have remained for some time, in a drier form, and yielded very slowly to medicine. For, although this form of scabies does not so readily spread by contagion, it is much more obstinate, under the use of remedies, than the preceding.

Another peculiarity of the scabies cachectica is, that it often originates, independently of contagion, in weakly children, and also in adults, when the constitution is suffering under some chronic malady, or debilitated by some previous acute disease; and, however it is produced, it is liable to return at intervals, especially in the spring and autumnal seasons, after it has been to all appearance cured.

The most ordinary cause of scabies is contagion; the virus being communicated by the actual contact of those already affected with it, or of their clothes, bedding, &c.; especially where there is much close intercourse. It seems to originate, however, in crowded, close, and uncleanly houses; and is, therefore, extremely prevalent in workhouses, jails, and hospitals, where the means of great cleanliness are not easily obtained, and is most easily seen among the families of the poor. When the contagion has been introduced, however, into families, where every attention to cleanliness is enforced, it will frequently spread to all the individuals, children and adults, and continue, in spite of the utmost cleanliness, until the proper remedies are resorted to.

Some writers have ascribed the origin of the itch, in all cases, to the presence of a minute insect, breeding and burrowing in the skin; while others have doubted the existence of such an insect. Both these opinions appear to be incorrect; and probably that of Sauvages is right, who considers the insect as generated only in some cases of scabies, and therefore speaks of a scabies *vermicularis* as a separate species.

The existence of such an insect, in some cases of scabies, has been fully demonstrated; but the breeding of these acari in the scabious skin is a rare and casual circumstance; and the contagious property of scabies exists in the fluid secreted in the pustules, and not in the transference of insects.

Among the remedies appropriated to the cure of scabies, sulphur has long been deemed to possess *specific* powers. The common people treated the disease with this substance alone a century ago, administering it internally in milk, and applying it externally in butter. In the less violent degrees of scabies, and in the purulent species affecting the hands and wrists, perhaps no improvement can be made upon this practice. The latter species, when it occurs in children, is often readily removed by the internal use of this medicine alone, or in combination with a neutral salt, independently of any external application; and there are few cases of scabies which will not yield to the steady employment of the sulphur ointment, continued a sufficient time, and rubbed on the parts affected nightly with assiduity. Five or six applications are commonly sufficient for the cure of the disease; but sometimes it is necessary to persevere in the inunction for the space of a fortnight, or even longer, from which no detriment ensues to the constitution.

The disgusting odour of the sulphur, however, has led practitioners to resort to various other stimulating applications, some of which have been recommended from ancient times, for the cure of scabid and pruriginous eruptions. Both the smell and sordid appearance of the sulphur ointment may be in a considerable degree obviated by the following combination: —

℞ Potassæ subcarbonatis, ℥ss.
Aquæ rosæ, ℥j.
Hydrarg. sulphurati rubri, ʒj.
Olei essent. bergamot, ʒss.
Sulphuris-sublimati,
Adipis suillæ, āā ℥ix. Misce secundum artem.

SCABIO'SA. (*a*, *æ*. f.; from *scaber*, rough: so called from its rough hairy surface.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetrandria*; Order, *Monogynia*.

2. The pharmacopœial name of the common scabious. See *Scabiosa arvensis*.

Scabiosa arvensis. The systematic name of the common field scabious. This herb, *Scabiosa — corollis quadrifidis radiantibus; foliis pinnatifidis, incisis; caule hispido*, of Linnæus, and its flowers, are sometimes used

medicinally. The whole plant possesses a bitter and subastringent taste, and was formerly much employed in the cure of some leprous affections and diseases of the lungs.

Scabiosa succisa. The systematic name of the devil's bit scabious.

Scabrideæ. (From *scaber*, rough.) The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of plants with rough leaves, incomplete and inelegant flowers.

SCABRI'DEUS. Rough: applied to plants.

SCABRI'TIES. Roughness.

SCA'LA. A ladder or staircase.

Scala tympani. The superior spiral cavity of the cochlea.

Scala vestibuli. The inferior spiral cavity of the cochlea.

SCALD. See *Ambustio*.

Scald-head. See *Porrigo favosa*.

SCALE. *Squama*. A lamina of morbid cuticle, hard, thickened, whitish, and opake, of a very small size, and irregular, often increasing into layers, denominated crusts. Both scales and crusts repeatedly fall off, and are reproduced in a short time.

SCALE'NUS. (From σκαληνος, irregular, or unequal.) A muscle about which anatomical writers have differed greatly in their descriptions. It is situated at the side of the neck, between the transverse processes of the cervical vertebræ and the upper part of the thorax. The ancients, who gave it its name from its resemblance to an irregular triangle, considered it as one muscle. Vesalius and Winslow divide it into two, Fallopius and Cowper into three, Douglas into four, and Albinus into five portions, which they describe as distinct muscles. Without deviating in the least from anatomical accuracy, it may be considered as one muscle divided into three portions. The anterior portion arises commonly from the transverse processes of the six inferior vertebræ of the neck, by as many short tendons, and descending obliquely outwards, is inserted, tendinous and fleshy, into the upper side of the first rib, near its cartilage. The axillary artery passes through this portion, and sometimes divides it into two slips, about an inch and a half above its insertion. The middle portion arises, by distinct tendons, from the transverse processes of the four last vertebræ of the neck, and, descending obliquely outwards and a little backwards, is inserted tendinous into the outer and upper part of the first rib, from its root, to within the distance of an inch from its cartilage. The space between this and the anterior portion affords a passage to the nerves going to the upper extremities. It is in part covered by the third or posterior portion, which is the thinnest and longest of the three. This arises from the transverse processes of the second, third, fourth, and fifth vertebræ of the neck, by distinct tendons, and is inserted into the upper edge of the second rib, at the distance of about an inch and a half from its articulation, by a broad flat tendon. The use of the scalenus is to move the neck to one side, when it acts singly, or to bend it forwards, when both muscles act; and, when the neck is fixed, it serves to elevate the ribs, and dilate the chest.

Scalenus primus. See *Scalenus*.

Scalenus secundus. See *Scalenus*.

Scalenus tertius. See *Scalenus*.

SCALLOP. See *Ostrea maxima*.

SCALPE'LLUM. (*um, i.* n.; from *scalpo*, to scratch or carve.) A scalpel or common dissecting knife.

Scalprum. A denticular raspatory, used in trepanning.

SCALY. See *Squamosus*.

SCAMMO'NIUM. (*um, ii.* n.; a corruption of the Arabian word *chamozah*.) See *Convolvulus scammonia*.

SCAMMONY. See *Convolvulus*.

SCA'NDENS. Climbing: applied to stems, &c. of plants which climb, either with spiral tendrils for support, or by adhesive fibres; as the stems of the *Vitis vinifera*, and *Bryonia dioica*.

SCA'NDIX. (*ix, icis.* f.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

Scandix cerefolium. The systematic name of the officinal chervil. *Cerefolium*. *Chærophyllum*. *Chærefolium*. *Chervillum*. *Daucus sepriniis*. Chervil. This plant, *Scandix — seminibus nitidis, ovato-subulatis; umbellis sessilibus, lateralibus*, of Linnæus, is a salubrious culinary herb, sufficiently grateful both to the palate and stomach, slightly aromatic, gently aperient, and diuretic.

Scandix odorata. The systematic name of the sweet cicely, *myrrhis*, which possesses virtues similar to the common chervil. See *Scandix cerefolium*.

SCA'PHA. (*a, æ.* f.; a skiff, or cockboat: from σκαπτω, to make hollow, because formerly it was made by excavating a large tree.) 1. The excavation or cavity of the auricula, or external ear, between the helix and antihelix.

2. The name of a double-headed roller.

SCAPHOID. (*Scaphoides*; from σκαφη, a little vessel, or boat, and ειδος, resemblance.) Boat-like. See *Naviculare os*.

SCAPOLITE. Pyramidal felspar. Professor Jameson divides this into four subspecies: —

1. *Radiated*, of a grey colour, resinous, and pearly in distinct concretions, and crystallised; found in the neighbourhood of Arendal, in Norway, associated with magnetic ironstone, and felspar.

2. *Foliated scapolite*, crystallised, and of a grey, green, and black colour, found in granular granite, or whitestone, in the Saxon Erzegebirge.

3. *Compact scapolite*, of a red colour, found with the former species.

4. *Elaolite*.

SCA'PULA. (*a, æ.* f.; from the Hebrew *schipha*.) *Omoplata*. *Os homoplatæ*. *Scaptula*.

Epinotion. The shoulder-blade. This bone, which approaches nearly to a triangular figure, is fixed, not unlike a buckler, to the upper, posterior, and lateral part of the thorax, extending from the first to about the seventh rib. The anterior and internal surface is irregularly concave, from the impression, not of the ribs, as the generality of anatomists have supposed, but of the sub-scapularis muscle. Its posterior and external surface is convex, and divided into two unequal fossæ by a considerable spine, which, rising small from the posterior edge of the scapula, becomes gradually higher and broader, as it approaches the anterior and superior angle of the bone, till at length it terminates in a broad and flat process, at the top of the shoulder, called the *processus acromion.* On the anterior edge of this processus acromion, we observe an oblong, concave, articulating surface, covered with cartilage, for the articulation of the scapula with the clavicle. At its lower part, the acromion is hollowed, to allow a passage to the supra and infra spinati muscles. The ridge of the spine affords two rough, flat surfaces, for the insertion of the trapezius and deltoid muscles. Of the two fossæ into which the external surface of the bone is divided by the spine, the superior one, which is the smallest, serves to lodge the supra spinatus muscle; and the inferior fossa, which is much larger than the other, gives origin to the infra spinatus. The triangular shape of the scapula leads us to consider its angles and its sides. The upper posterior angle is neither so thick, nor has so rough a surface, as the inferior one; but the most remarkable of the three angles of this bone is the anterior one, which is of great thickness, and formed into a glenoid cavity of an oval shape, the greatest diameter of which is from below upwards. This cavity, in the recent subject, is furnished with cartilage, and receives the head of the os humeri. The cartilaginous crust, which surrounds its brims, makes it appear deeper in the fresh subject than in the skeleton. A little beyond this glenoid cavity, the bone becomes narrower, so as to give the appearance of a neck; and above this rises a considerable process, which, from being thick at its origin, becomes thinner, and, in some degree, flattened at its extremity. This process projects considerably, and is curved downwards. From its supposed resemblance to a beak of a bird, it is called the *coracoid* process. From the whole external side of this process, a strong and broad ligament is stretched to the processus acromion, becoming narrower as it approaches the latter process, so as to be of a somewhat triangular shape. This ligament, and the two processes with which it is connected, are evidently intended for the protection of the joint, and to prevent a luxation of the os humeri upwards. Of the three sides of the scapula, the posterior one, which is the longest, is called the *basis.* This side is turned towards the vertebræ. Its other two sides are called *costæ.* The superior costa, which is the upper and shortest side, is likewise thinner than the other two, having a sharp edge. It is nearly horizontal, and parallel with the second rib; and is interrupted, near the basis of the coracoid process, by a semicircular niche, which is closed by a ligament that extends from one end of it to the other, and affords a passage to vessels and nerves. Besides this passage, there are other niches in the scapula for the transmission of vessels; viz. one between the coracoid process and the head of the bone, and another between its neck and the processus acromion. The third side of the scapula, or the inferior costa, as it is called, is of considerable thickness, and extends obliquely from the neck of the bone to its inferior angle, reaching from about the third to the eighth rib. The scapula has but very little cellular substance, and is of unequal thickness, being very thin at its middle part, where it is covered by a great number of muscles, and having its neck, the acromion, and coracoid process of considerable strength. In the fœtus, the basis and the neck of the scapula, together with its glenoid cavity, acromion, coracoid process, and the ridge of the spine, are so many epiphyses with respect to the rest of the bone, to which they are not completely united till a considerable time after birth. The scapula is articulated to the clavicle and os humeri, to which last it serves as a fulcrum; and, by altering its position, it affords a greater scope to the bones of the arm in their different motions. It likewise affords attachment to a great number of muscles, and posteriorly serves as a defence to the thorax.

SCAPULAR. (*Scapularis*; from *scapula*, the shoulder bone.) Belonging to the scapula; as the scapulary arteries and veins, which are branches of the subclavian and axillary.

SCAPULA'RIA. (*a, æ.* f.; from *scapula*, the shoulder bone.) A scapulary. A bandage for the shoulder blade.

SCA'PUS. (*us, i.* m.; from σκαπτω, to lean or rest upon: because it rests, as it were, on the root or base.) The scape, or a stalk which springs from the root, and bears the flowers and fruit, but not the leaves. The primrose and cowslip are good examples of it.

The following are the principal varieties:—

1. *Round*; as in *Plantago major.*
2. *Angular*; as in *Plantago lanceolata.*
3. *Ventricose*, hollow at the bottom; as in *Allium cepa.*
4. *Flexuose*; as in *Orchis flexuosa.*
5. *Two-edged*; as *Allium angulosum.*
6. *Filiform*; as *Bellis bellidoides.*
7. *Three-sided*; as *Allium triquetrum.*
8. *Spiral*; as *Anthericum spirale*, and that wonderful plant, *Valisneria spiralis.*
9. *Pentagonal*; as *Ophrys paludosa.*
10. *Articulate*; as *Statice echioides.*
11. *Erect*; in *Tulipa gesneriana.*
12. *Ascending*; in *Sisymbrium vimineum.*
13. *Declinate*; as *Astragalus incanus.*
14. *Decumbent*; as *Potentilla subacaulis.*
15. *Dichotomous*; as *Statice tartarica.*

16. *Nude*; as *Convallaria majalis.*
17. *Leafy*; as *Ophris insectifera.*
18. *Bracteate*; as most of the *Orchides.*
19. *Imbricate*; as *Tussilago farfara.*
20. *Setaceous*; as *Schœnus bulbosus.*
21. *Vaginate*; as *Arethusa bulbosa.*

When several species of the same plant have a scapus, and it is wanting in one of the same species, it is termed *excapus*; as in *Astragalus excapus.*

SCAR. See *Cicatrix.*

SCARBOROUGH. 1. The name of a town in Yorkshire, noted for its ferruginous spring. There are two species of chalybeate water found in this spot, and they differ considerably in their composition, though they rise nearly contiguous to each other. The one is a simple carbonated chalybeate, similar to the Tunbridge water; the other, which is better known and more frequented, and more particularly distinguished as Scarborough water, has, in conjunction with the iron, a considerable admixture of a purging salt, which adds much to its value. The diseases in which it is ordered are similar to those in which Cheltenham water is prescribed, only it is necessary to increase the purgative effect of this water by adding similar salts. It is, therefore, chiefly as an alterative that this water can be employed in its natural state.

Scarborough has an advantage belonging to its situation which Cheltenham does not possess, that of affording an opportunity for sea-bathing, the use of which will, in many cases, much assist in the plan of cure for many of the disorders for which the mineral water is resorted to.

2. The name of a physician. Sir CHARLES, born about the year 1616. He delivered anatomical lectures at Surgeons' Hall for sixteen or seventeen years. The works left by him were chiefly mathematical.

SCARF-SKIN. See *Cuticle*, *Epidermis*, and *Skin.*

SCARIFICATION. (*Scarificatio*; from *scarifico*, to scarify.) A superficial incision made with a lancet, or a chirurgical instrument called a scarificator, for the purpose of taking away blood, or letting out fluids, &c.

SCARIFICATOR. An instrument used by surgeons and cuppers to evacuate blood. It is made in form of a box, in which are fitted ten, twelve, or more lancets, all perfectly in the same plane. The instrument is so constructed that the depth to which the lancets penetrate may be made greater or less, at the option of the operator. Immediately before the application of the scarificator to the part, the lancets are all, as it were, cocked by means of a spring, and all discharged at the same time, by pulling a kind of trigger, and thus they are driven equally within the skin.

SCARI'OLA. See *Lactuca scariola.*

SCARIOLA GALLORUM. See *Lactuca.*

SCARLATI'NA. (*a*, *æ*. f.; from *scarlatto*, the Italian for a deep red.) The scarlet fever. A disease characterised by contagious fever, the face swelling, and a scarlet eruption appearing on the skin in patches; which, after three or four days, ends in the desquamation of the cuticle. It has two species:—

1. *Scarlatina simplex*, the mild.
2. *Scarlatina cynanchica*, or *anginosa*, with ulcerated sore throat.

Dr. Willan has added to these a third, called *maligna*, agreeing with the *tonsillitis maligna.*

Some have asserted that scarlatina never attacks the same person a second time: more extensive observation has confuted this opinion. It seizes persons of all ages, but children and young persons are most subject to it, and it appears at all seasons of the year; but it is more frequently met with towards the end of autumn, or beginning of winter, than at any other periods, at which time it very often becomes a prevalent epidemic. It is, beyond all doubt, a very contagious disease.

The one to which it bears the greatest resemblance is the measles; but from this it is readily to be distinguished by the absence of the cough, watery eye, running at the nose and sneezing, which are the predominant symptoms in the early stage of the measles, but which do not usually attend on scarlet fever, or at least in any high degree.

It begins, like other fevers, with languor, lassitude, confusion of ideas, chills, and shiverings, alternated by fits of heat. The thirst is considerable, the skin dry, and the patient is often incommoded with anxiety, nausea, and vomiting. About the third day, the scarlet efflorescence appears on the skin, which seldom produces, however, any remission of the fever. On the departure of the efflorescence, which usually continues out only for three or four days, a gentle sweat comes on, the fever subsides, the cuticle or scarf-skin then falls off in small scales, and the patient gradually regains his former strength and health.

On the disappearance of the efflorescence in scarlatina, it is, however, no uncommon occurrence for an anasarcous swelling to affect the whole body, but this is usually of a very short continuance.

Scarlatina anginosa, in several instances, approaches very near to the malignant form. The patient is seized not only with a coldness and shivering, but likewise with great languor, debility, and sickness, succeeded by heat, nausea, vomiting of bilious matter, soreness of the throat, inflammation, and ulceration in the tonsils, &c., a frequent and laborious breathing, and a quick and small depressed pulse. When the efflorescence appears, which is usually on the third day, it brings no relief; on the contrary, the symptoms are much aggravated, and fresh ones arise.

In the progress of the disease, one universal redness, unattended however by any pustular eruption, pervades the face, body, and limbs, which parts appear somewhat swollen. The eyes and nostrils partake likewise more or less of the redness, and in proportion as the former have an inflamed appearance so does the tendency to delirium prevail.

On the first attack, the fauces are often

much inflamed; but this is usually soon succeeded by greyish sloughs, which give the parts a speckled appearance, and render the breath more or less fœtid. The patient is often cut off in a few days: and even if he recovers, it will be by slow degrees; dropsical swellings, or tumours of the parotid and other glands, slowly suppurating, being very apt to follow. In the malignant form of the disease the symptoms at first are pretty much the same; but some of the following peculiarities are afterwards observable:—The pulse is small, indistinct, and irregular; the tongue, teeth, and lips covered with a brown or black incrustation; a dull redness of the eyes, with a dark red flushing of the cheeks, deafness, delirium, or coma; the breath is extremely fœtid; the respiration rattling and laborious, partly from viscid phlegm clogging the fauces; the deglutition is constricted and painful; and there is a fulness and livid colour of the neck, with retraction of the head. Ulcerations are observed on the tonsils and adjoining parts, covered with dark sloughs, and surrounded by a livid base; and the tongue is often so tender as to be excoriated by the slightest touch. An acrid discharge flows from the nostrils, causing soreness, or chaps, nay even blisters, about the nose and lips; the fluid discharged being at first thin, but afterwards thick and yellowish. The rash is usually faint, except in a few irregular patches, and it presently changes to a dark, or livid red colour: it appears late, is very uncertain in its duration, and often intermixed with petechiæ: it sometimes disappears suddenly a few hours after it is formed, and comes out again at the expiration of two or three days. In an advanced stage of the disease, where petechiæ, and other symptoms characteristic of putrescency, are present, hæmorrhages frequently break forth from the nose, mouth, and other parts.

When scarlatina is to terminate in health, the fiery redness abates gradually, and is succeeded by a brown colour, the skin becomes rough, and peels off in small scales, the tumefaction subsides, and health is gradually restored. On the contrary, when it is to terminate fatally, the febrile symptoms run very high from the first of its attack, the skin is intensely hot and dry, the pulse is very frequent but small, great thirst prevails, the breath is very fœtid, the efflorescence makes its appearance on the second day, or sooner, and about the third or fourth is probably interspersed with large livid spots; and a high degree of delirium ensuing, or hæmorrhages breaking out, the patient is cut off about the sixth or eighth day. In some cases a severe purging arises, which never fails to prove fatal. Some again, where the symptoms do not run so high, instead of recovering, as is usual, about the time the skin begins to regain its natural colour, become dropsical, fall into a kind of lingering way, and are carried off in the course of a few weeks.

Scarlatina, in its inflammatory form, is not usually attended with danger, although a considerable degree of delirium sometimes prevails for a day or two; but when it partakes much of the malignant character, or degenerates into typhus putrida, which it is apt to do, it often proves fatal. On dissection of those who die of this disease, the fauces are inflamed, suppurated, and gangrenous; and the trachea and larynx are likewise in a state of inflammation, and lined with a viscid fœtid matter. In many instances, the inflammatory affection extends to the lungs themselves. Large swellings of the lymphatic glands about the neck, occasioned by an absorption of the acrid matter poured out in the fauces, are now and then to be found. The same morbid appearances which are to be met with in putrid fever, present themselves in other parts of the body.

The plan to be pursued will differ according to the form of the disease. In the scarlatina simplex little is required, except clearing the bowels, and observing the antiphlogistic regimen. But where the throat is affected, and the fever runs higher, more active means become necessary, varying according to the type of this, whether synochial or typhoid. In general, we may begin by exhibiting a nauseating emetic, which, besides its effect on the fever, may be useful in checking inflammation in the throat; and occasionally the repetition of such a remedy, after a time, may answer a good purpose: but commonly it will be better to follow up the first by some cathartic remedy of sufficient activity. Then, so long as the strength will allow, we may endeavour to moderate the fever by mercurial and antimonial preparations, or other medicines promoting the several secretions, by steadily pursuing the antiphlogistic regimen, and occasionally applying cold water to the skin, when this is very hot and dry. Sometimes severe inflammation in the throat, at an early period, may render it advisable to apply a few leeches externally, or blisters behind the ears; and gargles of nitrate of potash, the mineral acids, &c. should be used from time to time. But where the disorder exhibits the typhoid character, with ulcers in the throat, tending perhaps to gangrene, it is necessary to support the system by a nutritious diet, with a moderate quantity of wine, and tonic or stimulant medicines, as the cinchona, calumba, ammonia, capsicum, &c.; the acids will also be very proper, from their antiseptic, as well as tonic power; and stimulant antiseptic gargles should be frequently employed, as the mineral acids sufficiently diluted, with the addition of tincture of myrrh, or these mixed with decoction of bark, &c. Besides the general measures, thus varied according to the character of the disease, particular alarming symptoms may require to be palliated; as vomiting by the effervescing draught, and occasionally a blister to the stomach, if there be tenderness on pressure; diarrhœa, by small doses of opium, &c. The management of these, however, as well as of the dropsical swellings, and other sequels of the disease, will be understood

from what is said under those heads respectively.

Scarlet fever. See *Scarlatina.*

Scarred. See *Cicatrisatus.*

SCELETOS. (*os, i.* m.; from σκελλω, to dry.) A skeleton.

SCELOTYRBE. (*e, es.* f.; from σκελος, the leg, and τυρβη, riot, intemperance.) This is Galen's name for chorea; and his description of it under this name is a very accurate one:—"It is a species of atony or paralysis, in which a man is incapable of walking straight on, and is turned round to the left, when the right leg is put forward, and to the right, when the left is put forward, or alternately. Sometimes he is incapable of raising the foot, and hence drags it awkwardly, as those that are climbing up steep cliffs."

Some writers have applied it to a debility of the legs from scurvy or an intemperate way of life.

Schaalstein. See *Tabular spar.*

Schaum earth. See *Aphrite.*

SCHERO'MA. (*a, atis.* n.) A dryness of the eye from the want of the lachrymal fluid. The effects of this lachrymal fluid being deficient are, the eyes become dry, and in their motions produce a sensation as though sand, or some gritty substances, were between the eye and the eyelid; the vision is obscured, the globe of the eye appears foulish and dull, which is a bad omen in acute diseases.

It is observed in fevers, happens after great evacuations, and in persons dying, and is common with travellers in sandy places, as in hot Syria, or from dry winds, which dry up the humidity necessary for the motion of the eyes.

SCHIDACE'DON. (From σχιδαξ, a splinter.) A longitudinal fracture of the bone.

SCHILLER SPAR. This mineral contains two subspecies:—

1. See *Bronzite.*

2. The *common Schiller spar*, which is of an olive green colour, and occurs embedded in serpentine in Shetland, Cornwall, &c.

SCHINELÆ'UM. (From σχινος, mastich, and ελαιον, oil.) Oil of mastich.

Schistus, argillaceous. Clay-slate.

SCHNEIDER, CONRAD VICTOR, was born in Misnia. He wrote many treatises; those on anatomical subjects relating chiefly to the bones of the cranium, and to the pituitary membrane of the nostrils, to which his name is still attached. He refuted an ancient error, that the mucus in catarrh distilled through the cribriform bone from the brain, showing that it was secreted by the pituitary membrane. In other respects his writings, except in anatomy, are diffuse and obscure, and full of ancient hypothetical doctrines.

SCHNEIDER'S MEMBRANE. (So called from its discoverer.) See *Membrana.*

SCHŒNAN'THUS. (*us, i.* m.; from σχοινος, a rush, and ανθος, a flower.) See *Andropogon schœnanthus.*

SCHŒNOLAGU'RUS. (From σχοινος, a rush, λαγως, a hare, and ουρα, a tail: so called from its resemblance to a hare's tail.) Hare's tail, the *Trifolium arvense.*

SCHORL. A subspecies of rhomboidal tourmaline, of a velvet-black colour, found embedded in granite, gneiss, &c. in Scotland and Cornwall.

Schorl, blue. A variety of Haüyne.

Schorl, red and titanic. Rutile.

SCHORLITE. Schorlous topaz. Pycnite of Werner. This mineral is of a straw-yellow colour, and becomes electric by heating. It is found at Altenburg in Saxony, in a rock of quartz and mica in porphyry.

SCIATIC. (*Sciaticus*; from *ischiaticus.*) Belonging to the ischium.

SCIATIC ARTERY. *Arteria sciatica* and *ischiatica.* A branch of the internal iliac.

SCIATIC NERVE. *Nervus sciaticus* and *ischiaticus.* A branch of a nerve of the lower extremity, formed by the union of the lumbar and sacral nerves. It is divided near the popliteal cavity into the tibial and peroneal, which are distributed to the leg and foot.

SCIATIC NOTCH. See *Innominatum os.*

SCIATIC VEIN. *Vena sciatica* and *ischiatica.* The vein which accompanies the sciatic artery in the thigh.

SCIA'TICA. A rheumatic affection of the hip-joint.

Sciatica cresses. See *Lepidium iberis.*

SCYLLA. (*a, æ.* f.; from σκιλλω, to dry: so called from its property of drying up humours.) 1. The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia.*

2. The pharmacopœial name of the medicinal squill. See *Scilla maritima.*

SCILLA HISPANICA. The Spanish squill.

SCILLA MARITIMA. The systematic name of the officinal squill: called also, *Ornithogalum maritimum. Pancratium. Squilla. Scilla —nudiflora, bracteis refractis,* of Linnæus. A native of Spain, Sicily, and Syria, growing on the sea-coast. The red-rooted variety has been supposed to be more efficacious than the white, and is therefore still preferred for medicinal use. The root of the squill, which appears to have been known as a medicine in the early ages of Greece, and has so well maintained its character ever since, as to be deservedly in great estimation, and of very frequent use at this time, seems to manifest a poisonous quality to several animals. In proof of this, we have the testimonies of Hillefield, Bergius, Vogel, and others. Its acrimony is so great, that even if much handled it exulcerates the skin; and if given in large doses, and frequently repeated, it not only excites nausea, tormina, and violent vomiting, but it has been known to produce strangury, bloody urine, hypercatharsis, cardialgia, hæmorrhoids, convulsions, with fatal inflammation, and gangrene of the stomach and bowels. But as many of the active articles of the Materia Medica, by injudicious administration, become equally deleterious, these effects of the scilla do not derogate from its medicinal virtues: on the contrary, we feel ourselves

fully warranted, says Dr. Woodville, in representing this drug, under proper management, and in certain cases and constitutions, to be a medicine of great practical utility, and real importance in the cure of many obstinate diseases. Its effects, as stated by Bergius, are incidens, diuretica, emetica, subpurgans, hydragoga, expectorans, emmenagoga. In dropsical cases it has long been esteemed the most certain and effectual diuretic with which we are acquainted; and in asthmatic affections, or dyspnœa, occasioned by the lodgment of tenacious phlegm, it has been the expectorant usually employed. The squill, especially in large doses, is apt to stimulate the stomach, and to prove emetic; and it sometimes acts on the intestines, and becomes purgative; but when these operations take place, the medicine is prevented from reaching the blood-vessels and kidneys, and the patient is deprived of its diuretic effects, which are to be obtained by giving the squill in smaller doses, repeated at more distant intervals, or by the joining of an opiate to this medicine, which was found by Dr. Cullen to answer the same purpose. The Doctor further observes, that from a continued repetition of the squill, the dose may be gradually increased, and the interval of its exhibitions shortened; and when in this way the dose comes to be tolerably large, the opiate may be most conveniently employed to direct the operation of the squill more certainly to the kidneys. In cases of dropsy, that is, when there is an effusion of water into the cavities, and therefore less water goes to the kidneys, we are of opinion that neutral salt, accompanying the squill, may be of use in determining this fluid more certainly to the kidneys; and whenever it can be perceived that it take this course, we are persuaded that it will be always useful, and generally safe, during the exhibition of the squills, to increase the usual quantity of drink.

The diuretic effects of squills have been supposed to be promoted by the addition of some mercurial; and the less purgative preparations of mercury, in the opinion of Dr. Cullen, are best adapted to this purpose: he therefore recommends a solution of corrosive sublimate, as being more proper than any other, because most diuretic. Where the primæ viæ abound with mucous matter, and the lungs are oppressed with viscid phlegm, this medicine is likewise in general estimation.

As an expectorant, the squill may be supposed not only to attenuate the mucus in the follicles, but also to excite a more copious secretion of it from the lungs, and thereby lessen the congestion, upon which the difficulty of respiration very generally depends. Therefore, in all pulmonic affections, excepting only those of actual or violent inflammation, ulcer, and spasm, the squill has been experienced to be a useful medicine. The officinal preparations of squills are, a conserve, dried squills, a syrup, and vinegar, and oxymel, and pills. Practitioners have not, however, confined themselves to these. When this root was intended as a diuretic, it has most commonly been used in powder, as being, in this state, less disposed to nauseate the stomach; and to the powder it has been the practice to add neutral salts, as nitre, or crystals of tartar, especially if the patient complained of much thirst: others recommend calomel; and, with a view to render the squills less offensive to the stomach, it has been usual to conjoin an aromatic. The dose of dried squills is from one to four or six grains once a day, or half this quantity twice a day; afterwards to be regulated according to its effects. The dose of the other preparations of this drug, when fresh, should be five times this weight; for this root loses in the process of drying four fifths of its original weight, and this loss is merely a watery exhalation.

SCILLA NUTANS. This plant was, until very lately, called *Hyacinthus non scriptus*. It is well known by the name of blue-bells, and is common in our hedges in spring. The roots are bulbous; the flowers agreeably scented. Galen considered the root as a remedy in jaundice. It is ranked among the astringents, but of very inferior power.

SCILLITES. (From σκιλλα, the squill.) A wine impregnated with squills.

SCILLITINE. A white, transparent, acrid substance, extracted by Vogel from squills.

SCI'NCUS. (*us, i. m.*; from *sheque*, Hebrew.) The skink. This amphibious animal is of the lizard kind, and caught about the Nile, and thence brought dried into this country, remarkably smooth and glossy, as if varnished. The flesh of the animal, particularly of the belly, has been said to be diuretic, alexipharmic, aphrodisiac, and useful in leprous disorders.

SCIRRHO'MA. (*a, atis. n.*; from σκιρροω, to harden.) See *Scirrhus*.

SCI'RRHUS. (*us, i. m.*; from σκιρροω, to harden.) *Scirrhoma. Scirrhosis.* A disease known by a hard tumour of a glandular part, indolent, and not readily suppurating. The following observations of Mr. Pearson are deserving of attention. A scirrhus, he says, is usually defined to be a hard and almost insensible tumour, commonly situated in a glandular part, and accompanied with little or no discoloration of the surface of the skin. This description agrees with the true or exquisite scirrhus; but when it has proceeded from the indolent to the malignant state, the tumour is then unequal in its figure, it becomes painful, the skin acquires a purple or livid hue, and the cutaneous veins are often varicose. Let us now examine whether this enumeration of symptoms be sufficiently accurate for practical purposes.

It is probable, that any gland in the living body may be the seat of a cancerous disease, but it appears more frequently as an idiopathic affection in those glands that form the several secretions than in the absorbent glands; and of the secreting organs, those which separate fluids that are to be employed in the animal

economy, suffer much oftener than the glands which secrete the excrementitious parts of the blood. Indeed, it may be doubted whether an absorbent gland be ever the primary seat of a true scirrhus. Daily experience evinces, that these glands may suffer contamination from their connection with a cancerous part; but, under such circumstances, this morbid alteration being the effect of a disease in that neighbouring part, it ought to be regarded as a secondary or consequent affection. I never yet met with an unequivocal proof of a primary scirrhus in an absorbent gland; and if a larger experience shall confirm this observation, and establish it as a general rule, it will afford material assistance in forming the diagnosis of this disease. The general term scirrhus hath been applied, with too little discrimination, to indurated tumours of lymphatic glands. When these appendages of the absorbent system enlarge in the early part of life, the disease is commonly treated as strumous; but as a similar alteration of these parts may, and often does, occur at a more advanced period, there ought to be some very good reasons for ascribing malignity to one rather than the other. In old people, the tumour is, indeed, often larger, more indurated, and less tractable than in children; but when the alteration originated in the lymphatic glands, it will very rarely be found to possess any thing cancerous in its nature.

If every other morbid alteration in a part were attended with pain and softness, then induration and defective sensibility might point out the presence of a scirrhus. But this is so far from being the case, that even encysted tumours, at their commencement, frequently excite the sensation of impenetrable hardness. All glands are contained in capsulæ, not very elastic, so that almost every species of chronic enlargement of these bodies must be hard: hence this induration is rather owing to the structure of the part, than to the peculiar nature of the disease; and, as glands in their healthy state are not endowed with much sensibility, every disease that gradually produces induration will rather diminish than increase their perceptive powers. Induration and insensibility may, therefore, prove that the affected part does not labour under an acute disease; but these symptoms alone can yield no certain information concerning the true nature of the morbid alteration. Those indolent affections of the glands that so frequently appear after the meridian of life, commonly manifest a hardness and want of sensation, not inferior to that which accompanies a true scirrhus; and yet these tumours will often admit of a cure by the same mode of treatment which we find to be successful in scrofula; and, when they prove unconquerable by the powers of medicine, we generally see them continue stationary and innocent to the latest period of life. Writers have, indeed, said much about certain tumours changing their nature, and assuming a new character; but it is now generally believed, that the doctrine of the mutation of diseases into each other stands upon a very uncertain foundation. Improper treatment may, without doubt, exasperate diseases, and render a complaint, which appeared to be mild and tractable, dangerous or destructive; but to aggravate the symptoms, and to change the form of the disease, are things that ought not to be confounded. It is not denied, that a breast which has been the seat of a mammary abscess, or a gland that has been affected with scrofula, may not become cancerous; for they might have suffered from this disease had no previous complaint existed; but these morbid alterations generate no greater tendency to cancer than if the parts had always retained their natural condition. There is no necessary connection between the cancer and any other disease, nor has it been proved that one is convertible into the other.

Chirurgical writers have generally enumerated tumour as an essential symptom of the scirrhus; and it is very true, that this disease is often accompanied with an increase of bulk in the part affected. From long and careful observation, I am, however, induced to think, that an addition to the quantity of matter is rather an accidental than a necessary consequence of the presence of this affection.

When the breast is the seat of a scirrhus, the altered part is hard, perhaps unequal in its figure, and definite; but these symptoms are not always connected with an actual increase in the dimensions of the breast: on the contrary, the true scirrhus is frequently accompanied with a contraction and diminution of bulk, a retraction of the nipple, and a puckered state of the skin.

The irritation produced by an indurated substance lying in the breast, will very often cause a determination of blood to that organ, and a consequent enlargement of it; but this is to be considered as an inflammatory state of the surrounding parts, excited by the scirrhus, acting as a remote cause, and by no means essential to the original complaint. From the evident utility of topical blood-letting under these circumstances, a notion has prevailed that the scirrhus is an inflammatory disease; but the strongly-marked dissimilarity of a phlegmon and an exquisite scirrhus, in their appearances, progress, and mode of termination, obliged Mr. Pearson to dissent from that opinion. That one portion of the breast may be in a scirrhous state, while the other parts are in a state of inflammation, is agreeable to reason and experience; but that an inflammation, which is an acute disease, and a scirrhus, whose essential characters are almost directly the reverse of inflammation, shall be co-existent in the same part, is not a very intelligible proposition. Tumour and inflammation are commonly met with on a variety of other occasions, and in this particular instance they may be the effects of the disease, but are not essentially connected with its presence.

An incipient scirrhus is seldom accompanied with a discoloration of the skin; and a

dusky redness, purple, or even livid appearance of the surface, is commonly seen when there is a malignant scirrhus. The presence or absence of colour can, however, at the best, afford us but a very precarious criterion of the true nature of the complaint. When the disease is clearly known, an altered state of the skin may assist us in judging of the progress it has made; but, as the skin may suffer similar variations in a number of very dissimilar diseases, it would be improper to found an opinion upon so delusive a phænomenon.

SCITAMINE'US. (From *scitamentum*, a dainty: so called because they are warm cordial luxuries.) Scitamineous: dainty. Applied to several plants which are considered as dainties.

SCITAMINE'Æ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of those which have an herbaceous stalk, broad leaves, and the germen obtusely angled under an irregular corolla; as *Amomum*, *Canna*, *Musa*, &c.

SCLA'REA. (*a, æ.* f.; from σκληρος, hard: because its stalks are hard and dry.) Blanch. See *Salvia sclarea*.

SCLAREA HISPANICA. See *Salvia sclarea*.

SCLERI'ASIS. (From σκληροω, to harden.) *Scleroma. Sclerosis.* A hard tumour or induration; a scirrhus.

SCLEROPHTHA'LMIA. (*a, æ.* f.; from σκληρος, hard, and οφθαλμος, the eye.) A protrusion of the eyeball. An inflammation of the eye, attended with hardness of the parts.

SCLEROSARCOMA. (From σκληρος, hard, and σαρκωμα, a fleshy tumour.) A hard fleshy excrescence.

SCLEROSIS. See *Scleriasis*.

SCLERO'TIC. (*Scleroticus*; from σκληροω, to harden.) Hard: applied to membraneous parts.

SCLEROTIC COAT. *Tunica sclerotica. Membrana sclerotica. Sclerotis.* The outermost coat of the eye, of a white colour, dense, and tenacious. Its anterior part, which is transparent, is termed the *cornea transparens*. It is into this coat of the eye that the muscles of the bulb are inserted. See *Eye*.

SCLERO'TIS. See *Sclerotic coat*.

SCLOPETARIA AQUA. (From *sclopetum*, a gun: so called from its supposed virtues in healing gun-shot wounds.) See *Arquebusade*.

SCLOPETOPLA'GA. (*a, æ.* f.; from *sclopetum*, a gun, and *plaga*, a wound.) A gun-shot wound.

SCOLI'ASIS. (From σκολιοω, to twist.) A distortion of the spine.

Scolloped. See *Crenatus*.

SCOLOPAX. (*ax, acis.* f.) A genus of birds of the order *Grallæ*. It includes curlews and woodcocks.

SCOLOPAX GALLINAGO. The common snipe. The flesh of this bird approaches the woodcock in flavour: it is rich, and improper for weak stomachs.

SCOLOPAX RUSTICOLA. The woodcock. The flesh of this bird is tender and easy of digestion; but the entrails, which generally come to table, are rich and strong, and improper for invalids.

SCOLOPE'NDRIA. (*a, æ.* f.) See *Asplenium ceterach*.

SCOLOPE'NDRIUM. (*um, ii.* n.; from σκολοπενδρα, the earwig: so called because its leaves resemble the earwig.) The name of a genus of plants. Class, *Cryptogamia*; Order, *Filices*. Hart's-tongue; spleenwort.

SCOLOPENDRIUM VULGARE. *Phyllitis. Lingua cervina. Scolopendrium. Asplenium scolopendrium. Blechnium linguifolium.* This indigenous plant, *Asplenium—frondibus simplicibus, cordato lingulatis, integerrimis; stipitibus hirsutis*, of Linnæus, grows on most shady banks, walls, &c. It has a slightly astringent and mucilaginous sweetish taste. When fresh and rubbed, it imparts a disagreeable smell. Hart's-tongue, which is one of the five capillary herbs, was formerly much used to strengthen the viscera, restrain hæmorrhages and alvine fluxes, and to open obstructions of the liver and spleen, and for the general purposes of demulcents and pectorals.

SCOLOPOMACHÆ'RIUM. (From σκολωπαξ, the woodcock, and μαχαιρα, a knife: so called because it is bent a little at the end, like a woodcock's bill.) An incision-knife.

SCO'LYMUS. (*us, i.* m.; from σκολος, a thorn: so named from its prickly leaves.) See *Cinara scolymus*.

SCOMBER. (*er, bri.* m. Σκόμβρος.) The name of a genus of fishes, of the order *Thoracici*.

SCOMBER SCOMBER. The systematic name of the common mackarel, a beautiful fish, of easy digestion, which frequents our shore in vast shoals, between the months of April and July.

SCOMBER THYNNUS. The systematic name of the tunny-fish, which frequents the shores of the Mediterranean, and, though a coarse fish, was much esteemed by the Greeks and Romans, and is still considered a delicacy by some.

SCOPA REGIA. See *Ruscus aculeatus*.

SCORBU'TUS. (*us, i.* m.; from *schorboet*, Germ.) *Porphyra* of Dr. Good. The scurvy. A disease characterised by extreme debility; complexion pale and bloated; spongy gums; livid spots on the skin; breath offensive; œdematous swellings in the legs; hæmorrhages; foul ulcers; fœtid urine; and extremely offensive stools. The scurvy is a disease of a putrid tending nature, much more prevalent in cold climates than in warm ones, and which chiefly affects sailors, and such as are shut up in besieged places, owing, as is supposed, to their being deprived of fresh provisions, and a due quantity of acescent food, assisted by the prevalence of cold and moisture, and by such other causes as depress the nervous energy, as indolence, confinement, want of exercise, neglect of cleanliness, much labour and fatigue, sadness, despondency, &c. These several debilitating causes, with the concurrence of a diet consisting principally of salted or putrescent food, will be sure to

produce this disease. It seems, however, to depend more on a defect of nourishment than on a vitiated state; and the reason that salted provisions are so productive of the scurvy, is, most probably, because they are drained of their nutritious juices, which are extracted and run off in brine. As the disease is apt to become pretty general amongst the crew of a ship when it has once made its appearance, it has been supposed by many to be of a contagious nature; but the conjecture seems by no means well founded.

A preternatural saline state of the blood has been assigned as its proximate cause. It has been contended, by some physicians, that the primary morbid affection in this disease is a debilitated state of the solids, arising principally from the want of aliment. The scurvy comes on gradually, with heaviness, weariness, and unwillingness to move about, together with dejection of spirits, considerable loss of strength, and debility. As it advances in its progress, the countenance becomes sallow and bloated, respiration is hurried on the least motion, the teeth become loose, the gums are spongy, the breath is very offensive, livid spots appear on different parts of the body, old wounds which have been long healed up break out afresh, severe wandering pains are felt, particularly by night, the skin is dry, the urine small in quantity, turning blue vegetable infusions of a green colour; and the pulse is small, frequent, and, towards the last, intermitting; but the intellects are, for the most part, clear and distinct. By an aggravation of the symptoms, the disease, in its last stage, exhibits a most wretched appearance. The joints become swelled and stiff, the tendons of the legs are rigid and contracted, general emaciation ensues, hæmorrhages break forth from different parts, fœtid evacuations are discharged by stool, and a diarrhœa or dysentery arises, which soon terminates the tragic scene.

Scurvy, as usually met with on shore, or where the person has not been exposed to the influence of the remote causes before enumerated, is unattended by any violent symptoms; as slight blotches, with scaly eruptions on different parts of the body, and a sponginess of the gums, are the chief ones to be observed.

In forming our judgment as to the event of the disease, we are to be directed by the violence of the symptoms, by the situation of the patient with respect to a vegetable diet, or other proper substitutes, by his former state of health, and by his constitution not having been impaired by previous diseases.

Dissections of scurvy have always discovered the blood to be in a very dissolved state. The thorax usually contains more or less of a watery fluid, which, in many cases, possesses so high a degree of acrimony, as to excoriate the hands by coming in contact with it; the cavity of the abdomen contains the same kind of fluid; the lungs are black and putrid; and the heart itself has been found in a similar state, with its cavity filled with a corrupted fluid. In many instances, the epiphyses have been found divided from the bones, the cartilages separated from the ribs, and several of the bones themselves dissolved by caries. The brain seldom shows any disease.

In the cure, as well as the prevention of scurvy, much more is to be done by regimen than by medicines, obviating as far as possible the several remote causes of the disease, but particularly providing the patient with a more wholesome diet, and a large proportion of fresh vegetables; and it has been found that those articles are especially useful which contain a native acid, as oranges, lemons, &c. Where these cannot be procured, various substitutes have been proposed, of which the best appear to be the inspissated juices of the same fruits, or the crystallised citric acid. Vinegar, sour crout, and farinaceous substances made to undergo the acetous fermentation, have likewise been used with much advantage: also brisk fermenting liquors, as spruce beer, cyder, and the like. Formerly many plants of the Class *Tetradynamia,* as mustard, horseradish, &c. likewise garlic, and others of a stimulant quality, promoting the secretions, were much relied upon, and, no doubt, proved useful to a certain extent. The spongy state of the gums may be remedied by washing the mouth with some of the mineral acids sufficiently diluted, or perhaps mixed with the decoction of cinchona. The stiffness of the limbs by fomentations, cataplasms, and friction; and sometimes, in hot climates, the earth-bath has afforded speedy relief to this symptom.

SCO'RDIUM. (*um, i.* n.; from *σκοροδον,* garlic: so called because it smells like garlic.) See *Teucrium scordium.*

SCO'RIÆ. (*a, æ.* f.; from *σκω,* excrement.) Dross. The refuse or useless parts of any substance.

SCORODOPRASUM. (*um, i.* n.; from *σκοροδον,* garlic, and *πρασον,* the leek.) The wild garlic, a species of allium.

SCO'RODUM. (*um, i.* n. Απο του σκωρ οζειν, from its filthy smell.) Garlic.

Scorpiacus. (From *σκορπιος,* a scorpion.) Useful against the bite of serpents.

SCORPIOI'DES. (From *σκορπιος,* a scorpion, and *ειδος,* a likeness: so called because its leaves resemble the tail of a scorpion.) The *Myosurus scorpioides.*

SCORPIU'RUS. (From *σκορπιος,* a scorpion, and *ουρα,* a tail.) 1. The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

2. See *Myosurus scorpioides.*

SCORZA. A variety of epidote.

SCORZONE'RA. (*a, æ.* f.; from *escorza,* a serpent, Spanish: so called because it is said to be effectual against the bite of all venomous animals.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis.*

2. The pharmacopœial name of the viper grass. See *Scorzonera humilis.*

Scorzonera hispanica. The systematic name of the esculent vipers' grass. *Serpentaria hispanica.* The root of this plant is mostly sold for that of the *humilis*.

Scorzonera humilis. The systematic name of the officinal vipers' grass. Goats' grass. Vipers' grass. *Escorzonera. Viperaria.* The roots of this plant, *Scorzonera—caule subnudo, unifloro; foliis lato-lanceolatis, nervosis, planis,* of Linnæus, have been sometimes employed medicinally as alexipharmics, and in hypochondriacal disorders and obstructions of the viscera. The *Scorzonera hispanica* mostly supplies the shops; the root of which is esculent, oleraceous, and against diseases inefficacious.

SCOTODI'NUS. (*us, i.* m.; from σκοτος, darkness, and δινος, a giddiness.) *Scotodinia. Scotodinos. Scotodine.* Giddiness, with impaired sight.

SCOTOMA. (From σκοτος, darkness.) Blindness.

SCRIBONIUS, Largus, a Roman physician in the reign of Claudius, who wrote a treatise, *De Compositione Medicamentorum.* Many of these formulæ are perfectly trifling and superstitious; and the whole work displays a great attachment to empiricism.

SCROBICULA'TUS. (From *scrobiculus,* a little ditch, or furrow.) Hollowed; having deep, round foramina. Applied to the receptacle of the *Helianthus annuus.*

SCROBI'CULUS. (*us, i.* m.; diminutive of *scrobs,* a ditch.) A hollow: applied to the region of the stomach.

Scrobiculus cordis. The pit of the stomach.

SCROBIFORM. (*Scrobiformis;* from *scrobs,* saw-dust, and *forma,* likeness.) Like fine saw-dust, as are the seeds of the orchis.

SCROFA. The sow. See *Sus scrofa.*

SCRO'FULA. (*a, æ.* f. The Greeks denominated this disease χοιρας; the nosologists of recent times, *scrofula:* thus literally translating the Greek, and importing *swine evil, swine swellings,* or morbid tumours, to which swine are subject. Scrofula is a disease very difficult to define: it consists in hard indolent tumours of the conglobate glands in various parts of the body, but particularly in the neck, behind the ears, and under the chin, which, after a time, suppurate and degenerate into ulcers, from which, instead of pus, a white curdled matter, somewhat resembling the coagulum of milk, is discharged.

The first appearance of the disease is most usually between the third and seventh year of the child's age; but it may arise at any period between this and the age of puberty; after which it seldom makes its first attack. It most commonly affects children of a lax habit, with smooth fine skins, fair hair, and rosy cheeks. It is likewise apt to attack such children as show a disposition to rickets, marked by a protuberant forehead, enlarged joints, and a tumid abdomen. Like this disease, it seems to be peculiar to cold and variable climates, being rarely met with in warm ones.

Scrofula is by no means a contagious disease, but, beyond all doubt, is of an hereditary nature, and is often entailed by parents on their children. There are, indeed, some practitioners who wholly deny that this, or any other disease, can be acquired by an hereditary right; but that a peculiar temperament of body, or predisposition in the constitution of some diseases, may extend from both father and mother to their offspring, is very clearly proved.

Where there is any predisposition in the constitution to scrofula, and the person happens to contract a venereal taint, this frequently excites into action the causes of the former, as soon as the virus is destroyed by mercury. Dr. Cullen supposed scrofula to depend upon a peculiar constitution of the lymphatic system. Dr. Parr ascribes the scrofulous diathesis to a redundancy of albumen, which abounds in early life, together with an excess of oxygene, and a deficiency of azote, evinced by the florid hue of the countenance. By this opinion he obtains a sort of lentor in the circulating system; and accounts for the origin of scrofulous tumours, by arguing that, since the mobility of the lymphatic system is peculiarly affected and diminished, the viscid fluids will be most disposed to stagnate there, and particularly in the lymphatic glands; as they must necessarily stagnate most where the impelling power is least. Be the proximate cause what it may, the remote causes are all of a debilitating nature, and embrace every thing that lowers or reduces the tone of the living fibre, and puts the system out of that state of firm and vigorous action which keeps the scrofulous diathesis most effectually in a state of subjection: and hence the common debilitating powers of cold and damp, low and unwholesome food, want of cleanliness, and a close and suffocating atmosphere, are the most usual incidental sources of scrofula. But for these causes, the scrofulous predisposition might be overcome, or remain dormant in the constitution through life, and show itself in the next generation, without having in the least disturbed the present. But the moment any other occasional causes become adjuncts with the scrofulous diathesis, scrofula, rather than any other disease which they may also be calculated to promote, will make its appearance, and commence its ravages. The attacks of the disease seem much affected or influenced by the periods of the seasons. They begin usually some time in the winter and spring, and often disappear, or are greatly amended, in summer and autumn. The first appearance of the disorder is commonly in that of small oval or spherical tumours under the skin, unattended by any pain or discoloration. These appear, in general, upon the sides of the neck, below the ear, or under the chin; but, in some cases, the joints of the elbows or ankles, or those of the fingers and toes, are the parts first affected. In these instances, we do not, however, find small move-

able swellings; but, on the contrary, a tumour almost uniformly surrounding the joint, and interrupting its motion.

After some length of time, the tumours become larger and more fixed; the skin which covers them acquires a purple or livid colour, and, being much inflamed, they at last suppurate and break into little holes, from which, at first, a matter, somewhat puriform, oozes out; but this changes, by degrees, into a kind of viscid serous discharge, much intermixed with small pieces of a white substance, resembling the curd of milk.

The tumours subside gradually, whilst the ulcers at the same time open more, and spread unequally in various directions. After a time some of the ulcers heal, but other tumours quickly form in different parts of the body, and proceed on, in the same slow manner as the former ones, to suppuration. In this manner the disease goes on for some years; and appearing at last to have exhausted itself, all the ulcers heal up, without being succeeded by any fresh swellings, but leaving behind them an ugly puckering of the skin, and a scar of considerable extent. This is the most mild form under which scrofula ever appears. In more virulent cases, the eyes are particularly the seat of the disease, and are affected with ophthalmia, giving rise to ulcerations in the tarsi, and inflammation of the tunica adnata, terminating not unfrequently in an opacity of the transparent cornea.

In similar cases the joints become affected; they swell and are incommoded by excruciating deep-seated pain, which is much increased upon the slightest motion. The swelling and pain continue to increase, and the muscles of the limb become at length much wasted. Matter is soon afterwards formed; and this is discharged at small openings made by the bursting of the skin. If the progress of the disease be not arrested, it extends to the ligaments and cartilages, and produces a caries of the neighbouring bones. Hectic fever at last arises, and, in the end, often proves fatal.

When scrofula is confined to the external surface, it is by no means attended with danger, although, on leaving one part, it is apt to be renewed in others; but when the ulcers spread, erode, and become deep, without showing any disposition to heal; when deep-seated collections of matter form amongst the small bones of the hands and feet, or in the joints, or tubercles in the lungs, with hectic fever, arise, the consequences will be fatal.

On opening the bodies of persons who have died of this disease, many of the viscera are usually found in a diseased state, but more particularly the glands of the mesentery, which are not only much tumefied, but often ulcerated. The lungs are frequently discovered beset with a number of tubercles or cysts, which contain matter of various kinds.

Scrofulous glands, on being examined by dissection, feel somewhat softer to the touch than in their natural state, and, when laid open, they are usually found to contain a soft curdy matter, mixed with pus. Cullen distinguishes four species of this disease:—

1. *Scrofula vulgaris*, when it is without other disorders external and permanent.

2. *Scrofula mesenterica*, when internal, with loss of appetite, pale countenance, swelling of the belly, and an unusual fœtor of the excrements.

3. *Scrofula fugax*. This is of the most simple kind: it is seated only about the neck, and, for the most part, is caused by absorption from sores on the head.

4. *Scrofula americana*, when it is joined with the yaws.

In conducting the treatment of this disease, we must always recollect that it is debility affecting principally the lymphatic system, so that our chief dependance must be on a tonic and stimulating plan, so modified as to meet the patient's age, idiosyncrasy, and manner of life.

It is of the utmost importance to select a dry and salubrious situation, so defended as not to be keen for the lungs; but the higher and drier the better for the most part. Such a situation by the sea-side is most desirable, as the sea air has great good effect.

The clothing should be calculated to ensure a regular circulation on the surface, without being oppressive, or suffering the person to feel chilly.

The diet should be as invigorating as the stomach will bear, and consist of a free use of tender beef and mutton, dilute wine, and malt liquor.

Tonic and stimulant medicines are to be exhibited regularly, either alone or in combination with alkalies or acids, or some narcotic, anti-scrofulous medicine, of the latter of which there are many.

Tonics and Stimulants.

1. *Cinchona.* All of this family may be given, but the best is the *cinchona lancifolia*, of which, as of the other species, powders, infusions, decoctions, tinctures, and extracts may be made and given in their compounded states, varying them from time to time, and combining other medicines. An infusion of bark in lime-water has been found very serviceable. Bark combined with acids are in many cases useful; with the alkalies also, and more especially with the bicarbonates of soda and potash. Bark and steel are frequently found beneficial, when neither have done any good separately. With most of the anti-scrofulous medicines the Peruvian barks may also be exhibited.

2. *Chalybeates.* Of these, Dr. Griffiths' steel medicine, the mistura ferri cum myrrhâ, and pilula ferri composita, of the London Pharmacopœia, are the best. The tinctura ferri muriatis is also an excellent medicine against some forms, and in some constitutions which will not bear the others.

3. *Mercurials.* These are exhibited in alterative doses. With some constitutions they agree, and are of infinite service; whilst, on

the other hand, they debilitate and increase the disease with others; and it cannot, *à priori*, be said in what cases they are likely to disagree and be injurious. The mercurial oxides are to be selected, in very small doses, and never so as to affect the gums; for a mercurial salivation has, in almost every instance, been productive of great mischief.

A combination of submuriate of mercury and precipitated sulphuret of antimony, in what has been long called Plummer's pill, is, occasionally, an excellent medicine in the cure of many forms of scrofula.

4. The *Alkalies.* Whether or not an acrimonious principle exists primarily, or is generated when the disease is in an aggravated state, it is difficult to determine. This opinion, however, has had, and still has, many able advocates, who seem, accordingly, to have resorted to the use of the alkalies.

The mineral alkali, in the state of bicarbonate, is decidedly the best, because it agrees best with the stomach. Burnt sponge contains this alkali with carbon, and is often useful, especially against bronchocele. The next is the vegetable or the bicarbonates of potash. The volatile alkali, though praised by some, has disappointed many.

All these preparations of the alkalies are to be exhibited in full doses: a drachm daily to an adult: and the patient must avoid every thing acid, or tending to an acid or acescent state, in the stomach.

5. The *Acids.* The best of these against scrofula is the muriatic and nitric. The oxygenated muriatic acid and the nitro-muriatic acid, and also the chloride of soda, have been found very serviceable in many cases.

6. *Mineral Waters.* The chalybeate and sulphureous spring waters are not without their efficacy in some cases, especially the chalybeates of Tunbridge Wells, Hampstead, Cheltenham, Leominster, and Harrowgate.

The Narcotics.

1. Conium, or hemlock, stands the first on the list; and a decidedly good medicine it is in some cases. All, however, depends not merely on its genuineness, but also on its preparation. It should be given in full doses, but so as never to cause any uneasiness of the head. Henbane is mostly exhibited as a quieter of irritation. Very little is now thought of the efficacy of any of the Solana tribe. Digitalis is of no use whatever in the cure of scrofula.

Anti-scrofulous Specifics.

Sarsaparilla has long been esteemed as highly beneficial; so much so, that few cases of this disease have not been treated with it. Here, again, every thing depends on having the root of the true plant, and there is not, perhaps, one in the materia medica which is more adulterated; so much so, that little dependance can be placed on the powder, unless it comes from such establishments as the Apothecaries' Hall in this and the sister kingdoms. It is usual, when sarsaparilla is given, to exhibit the powder, or the decoction, or the extract; but the latter is very apt to lose its virtue by a strong fire, and should be prepared in *balneo mariæ.* A milk and vegetable diet is insisted on occasionally with it, but a generous diet will assist it much more.

Sarsaparilla, when alone of no utility, occasionally proves so when combined with soda; and Peruvian bark, with sarsaparilla, is occasionally serviceable.

Coltsfoot, or the *Tussilago farfari,* is now seldom or ever given, although Dr. Cullen affirms that, from giving some ounces every day, it in several instances occasioned the healing of scrofulous sores.

Lime-water, and the once extolled muriate of barytes, and oxide of zinc, are occasionally serviceable, but seldom exhibited in the present day.

Lastly, *iodine,* which has been given very generally, and very largely, has not been found to have done more than soda, except that it irritates the fauces, and, like conium, occasionally affects the head.

Of the External Applications.

When scrofula on the surface is tumid and inflamed, the antiphlogistic applications are all useful, especially the liquor plumbi acetatis dilutus, the liquor ammoniæ acetatis, well diluted; very dilute spirit of wine; very dilute acetic acid; sea-water; weak solutions of muriate of soda, to imitate sea-water; and these cold, so long as there is no pus formed. It is a subject that requires great consideration, whether warm applications should ever be applied; and also, when the suppuration or tumour is matured, whether the lancet should be used, unless it is in parts where nature should not be trusted to, lest the abscess burst into important viscera, or will not burst at all. The applications which some are very partial to, are, bread poultices, with a little vinegar or salt-water, poultices of sea-wrack, the *Fucus vesiculosus,* sea-tang, the salsolas, &c.; all of which act by the saline matter they contain.

It is of great importance, in the application and use of the several internal remedies, to begin always with small doses, carefully guarding against stimulating the system; but in the gentle way, and afterwards augmenting the dose with due caution: for if the system be stimulated violently, more debility results, and the mischief is increased. Scrofula is strictly a chronic disease: it never has been, nor ever can be, cured rapidly; and wherever any good has been produced upon it, it has always been by lenient means, and steady and patient perseverance.

SCROPHULA. See *Scrofula.*

SCROPHULA'RIA. (*a, æ.* f.; from *scrofula,* the king's evil: so called from the unequal tubercles upon its roots, like scrofulous tumours.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Angiospermia.* The figwort.

Scrophularia aquatica. Greater water-

figwort. Water-betony. *Betonica aquatica.* The leaves of this plant, *Scrophularia—foliis cordatis obtusis, petiolatis, decurrentibus; caule membranis angulato; racemis terminalibus,* of Linnæus, are celebrated as correctors of the ill flavour of senna. They were, also, formerly in high estimation against piles, tumours of a scrofulous nature, inflammations, &c.

Scrophularia minor. See *Ranunculus ficaria.*

Scrophularia nodosa. The figwort. *Scrophularia vulgaris. Millemorbia. Scrophularia.* Common figwort or kernel-wort. The root and leaves of this plant, *Scrophularia — foliis cordatis, trinervatis; caule obtusangulo,* of Linnæus, have been celebrated both as an internal and external remedy against inflammations, the piles, scrofulous tumours, and old ulcers; but they are now only used by the country people.

Scrophularia vulgaris. See *Scrophularia nodosa.*

SCROTAL. *Scrotalis.* Belonging to the scrotum.

Scrotal hernia. A protrusion of any part of an abdominal viscus or viscera into the scrotum. See *Hernia.*

SCROTIFO'RMIS. (From *scrotum,* the covering of the testicle, and *forma.*) Scrotiform: purse-like; bag-like. Applied to the nectary of the genus *Satyrium.*

SCROTOCE'LE. (*e, es.* f.; from *scrotum,* and κηλη, a tumour.) A rupture or hernia in the scrotum.

SCRO'TUM. (*um, i.* n.; *quasi scortum,* a skin or hide.) *Bursa testium. Oscheus. Oscheon. Orchea,* of Galen. The common integuments which cover the testicles.

SCRU'PULUS. (Diminutive of *scrupus,* a small stone.) A scruple, or weight of 20 grains.

SCULTETUS, John, was born at Ulm, in 1595. His principal work is entitled *Armamentarium Chirurgicum,* with plates of the instruments; which was published after his death, and has passed through many editions.

SCURF. *Furfura.* Small exfoliations of the cuticle, or scales like bran, which take place after some eruptions on the skin, a new cuticle being formed underneath during the exfoliation.

SCURVY. See *Scorbutus.*

Scurvy-grass. See *Cochlearia officinalis.*

Scurvy-grass, lemon. See *Cochlearia.*

Scurvy-grass, Scotch. See *Convolvulus.*

SCUTIFORM. (*Scutiformis;* from σκυτος, a shield, and ειδος, resemblance.) Shield-like. See *Thyroid.*

Scutiform cartilage. See *Thyroid.*

SCUTELLA. A little dish or cup. Applied to the round, flat, or shallow fruit of the calyculate algæ, seen in *Lichen stellaris.*

SCUTELLA'RIA. (*a, æ.* f.; from *scutella,* a small dish, or saucer, apparently in allusion to the little concave appendage which crowns the calyx. Some have thought it to be more directly derived from *scutellum,* a little shield, to which they have compared the shield.) The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

Scutellaria galericulata. The systematic name of the scull-cap. *Tertianaria.* The *Scutellaria — foliis cordato-lanceolatis, crenatis; floribus axillaribus,* of Linnæus, which is common in the hedges and ditches of this country. It has a bitter taste and a garlic smell, and is said to be serviceable against that species of ague which attacks the patient every other day.

Scutellaria lateriflora. This plant, according to Dr. Lyman Spalding, of New York in America, is a preventative against the effects of the bite of the mad dog. See *Poison.*

SCUTE'LLUM. (*um, i.* n.) A little shield: sometimes used for the fructification of lichens, instead of *scutella.*

SCUTULATUS. Applied to the ring-worm, or *porrigo scutulata.*

SCY'BALUM. (*um, i.* n. Σκυβαλον.) Dry hard excrement: applied to such as has become hard, and formed into small rounded nodules, like sheep's dung, or larger. There are two kinds of scybala noticed: —

1. *Feculent.* These are small balls, varying in size from a pea to a walnut, formed of excrement which has become dry, and can be cut into pieces, when they are found to be of the same material throughout.

2. *Oleaginous.* These are obviously of a fatty consistence; are mostly round, of a cream colour, slightly translucent. May not this species be a modification of, or a mixture with, cholesterine?

Scymetar-shape. See *Acinaciformis.*

SCY'PHIFER Glass-shaped; as is the fructification of some of the lichens.

SCY'THICUS. (From *Scythia,* its native soil.) An epithet of the liquorice-root, or any thing brought from Scythia.

SEA. *Mare.* The air of the sea, the motion of the vessels, the exhalation from the tar, as well as the water of the ocean, and its contents, all come under the attention of the physician.

1. *Sea-air* is prescribed in a variety of complaints, being considered as more medicinal and salubrious than that on land, though not known to possess in its composition a greater quantity of oxygene. This is a most powerful and valuable remedy. It is resorted to with the happiest success against most cases of debility, and particularly against scrofulous diseases affecting the external parts of the body. See *Bath, cold.*

2. *Sea-sickness.* A nausea or tendency to vomit, which varies, in respect of duration, in different persons upon their first going to sea. With some it continues only for a day or two; while with others it remains throughout the voyage. The diseases in which sea-sickness is principally recommended are asthma and consumption.

3. *Sea-water.* This is arranged amongst the simple saline waters. Its chemical analysis gives a proportion of one of saline contents to about twenty-three and one fourth of water; but on our shores it is not greater than one of salt to about thirty of water. Sea-water on the British coast may therefore be calculated to contain in the wine pint, of muriated soda 186·5 grains, of muriated magnesia 51, of selenite 6 grains; total 243½ grains, or half an ounce and 3½ grains of saline contents. The disorders for which the internal use of sea-water has been and may be resorted to, are, in general, the same for which all the simple saline waters may be used. The peculiar power of sea-water and sea-salt as a discutient, employed either internally or externally, in scrofulous habits, is well known, and is attended with considerable advantage when judiciously applied.

Sea-belts. (So called from the supposed resemblance of its leaves to a belt or girdle.) See *Fucus saccharinus*.

Sea-coral. See *Corallina officinalis*.

SEA GREEN. See *Glaucosus*.

Sea-holly. See *Eryngium*.

Sea-moss. See *Conferva rupestris*, and *Corallina officinalis*.

Sea-oak. See *Fucus vesiculosus*.

Sea-onion. See *Scilla*.

Sea-salt. See *Sodæ murias*.

Sea-wax. A white, solid, tallowy-looking fusible substance; called also Maltha; soluble in alkohol: found on the Baikal lake, in Siberia.

Sea-wrack. See *Fucus vesiculosus*.

Sealed earth. See *Sigillata terra*.

SEAM. See *Sutura*.

SEARCHING. The operation of introducing a metallic instrument through the urethra into the bladder, for the purpose of ascertaining whether the patient has the stone or not.

SEBACEOUS. (*Sebaceus;* from *sebum*, suet.) Suety: applied to glands, which secrete a suety humour.

SEBACIC. (*Sebacicus;* from *sebum*, suet.) Of or belonging to suet, or such fat-like substances.

Sebacic acid. (*Acidum sebacicum:* so called because found largely in suet.) The sebacic acid may be obtained by distilling suet, lard, &c.; it is inodorous; its taste is slight, but it perceptibly reddens litmus paper; its specific gravity is above that of water, and its crystals are small white needles of little coherence. Exposed to heat, it melts like fat, is decomposed, and partially evaporated. The air has no effect upon it. It is much more soluble in hot than in cold water; hence boiling water saturated with it, assumes a nearly solid consistence on cooling. It combines with earthy, alkaline, and metallic bases, and forms salts called sebates.

Sebadilla. See *Cevadilla*.

SEBATE. (*Sebas, atis.* m.; from *sebum*, suet.) The name of the neutral compound of the acid of fat with a salifiable base.

Sebesten. (An Egyptian word.) See *Cordia myxa*.

SECA'LE. (*e, i.* neut.; a name in Pliny, which some etymologists, among whom is De Theis, derive from the Celtic *segal*. This, says he, comes from *sega*, a sickle, in the same language, and thence *seges*, the Latin appellation of all grain that is cut with a similar instrument. Those who have looked no farther for an etymology than the Latin *seco*, to cut or mow, have come to the same conclusion.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria;* Order, *Digynia*. Rye.

2. The common name of the seed of the *Secale cereale*, of Linnæus.

Secale cereale. The systematic name of the rye-plant. Rye-corn is principally used as an article of diet, and, in the northern countries of Europe, is employed for affording an ardent spirit. Rye-bread is common among the northern parts of Europe: it is less nourishing than wheat, but a sufficiently nutritive and wholesome grain. It is, more than any other grain, strongly disposed to acescency: hence it is liable to ferment in the stomach, and to produce purging, which people on the first using it commonly experience.

Secale cornutum. *Secale corniculatum. Clavus secalinus. Mutterkorn kornzapfeu*, of the Germans. *Ergot; Seigle ergote* of the French. A black, curved, morbid excrescence, like the spur of a fowl, which is found in the spike of the *Secale cerealis* of Linnæus, especially in hot climates, when a great heat suddenly succeeds to much moisure. The seed, which has this diseased growth, gives off, when powdered, an odour which excites sneezing, and titillates the nose, like tobacco. It has a mealy, and then a rancid, nauseous, and biting taste, which remains a long time, and causes the mouth and fauces to become dry; which sensation is not removed by watery fluids, but is soon relieved by milk. The cause of this excrescential disease in rye appears to be an insect which penetrates the grain, feeds on its amylaceous part, and leaves its poison in the parenchyma: hence it is full of small foramina or perforations made by the insect.

The secale cornutum has a singular effect on the animal economy. The meal or flour, sprinkled on a wound, coagulates the blood, excites a heat and then a numbness in the part, and soon after in the extremities. Bread which contains some of it, does not ferment well, nor bake well, and is glutinous and nauseous. The bread when eaten produces intoxication, lassitude, a sense of something creeping on the skin, weakness of the joints, with convulsive movements occurring periodically. This state is what is called *raphania*, and *convulsiones cerealiæ*. Of those so affected, some can only breathe in an upright posture, some become maniacal, others epileptic, or tabid, and some have a thirst not to be quenched; and livid eruptions and cutaneous ulcers are not uncommon. The disease con-

tinues from ten days to two or three months and longer. Those who have formication, pain, and numbness of the extremities in the commencement, generally lose the feeling in these parts, and the skin, from the fingers to the fore-arm, or from the toes to the middle of the tibia, becomes dry, hard, and black, as if covered with soot. This species of mortification is called *Necrosis cerealis*.

As a medicine, the secale cornutum is given internally to excite the action of the uterus in an atonic state of that organ, producing amenorrhœa, &c. and during parturition. Given in the dose of ten grains, it soon produces a desire to make water, and the labour pains quickly follow ; but it is a dangerous medicine, the effect not being controllable.

The antidote to the ill effects produced in the mouth and fauces by eating bread which has this poison, is milk. Against the convulsions, vomits, saline purgatives, glysters, submuriate of mercury as a purgative, are first to be given; and, after the primæ viæ have been duly cleaned, stimulants of camphire, ammonia, and æther with opium. To the necrosis, rectified oil of turpentine is very beneficial in stopping its progress, and then warm stimulating fomentations and poultices.

SECONDARY. Something that acts as second or in subordination to another. Thus, in diseases, we have *secondary symptoms*. See *Primary*.

Secondary fever. That febrile affection which arises after a crisis, or the discharge of some morbid matter, as after the declension of the small-pox or the measles.

SECRETION. (*Secretio, onis*. f.) A function in an animal body, arranged by physiologists under the head of natural actions. It is by this function that a part of the blood escapes from the organs of circulation, and diffuses itself without or within ; either preserving its chemical properties, or dispersing after its elements have undergone another order of combinations.

The secretions are arranged by Bostock into the *aqueous, albuminous, mucous, gelatinous, fibrinous, oleaginous, resinous*, and *saline*. Magendie's arrangement is into three sorts :—

1. The *exhalations*.
2. The *follicular secretions ;* and,
3. The *glandular secretions*.

EXHALATIONS.

The exhalations take place as well within the body as at the skin, or in the mucous membranes : thence their division into *external* and *internal*.

Internal Exhalations.—Whenever large or small surfaces are in contact, an exhalation takes place ; whenever fluids are accumulated in a cavity without any apparent opening, they are deposited there by exhalations : the phænomenon of exhalation is also manifested in almost every part of the animal economy. It exists in the serous, the synovial, the mucous membranes; in the cellular tissue, the interior of vessels, the adipose cells, the interior of the eye, of the ear, the parenchyma of many of the organs, such as the thymus, thyroid glands, the *capsulæ suprarenales*, &c. &c. It is by exhalation that the watery humour, the vitreous humour, the liquid of the labyrinth, are formed and renewed.

Serous Exhalation.—All the viscera of the head, of the chest, and the abdomen are covered with a serous membrane, which also lines the sides of these cavities, so that the viscera are not in contact with the sides, or with the adjoining viscera, except by the intermediation of this same membrane; and, as its surface is very smooth, the viscera can easily change their relation with each other, and with the sides. The principal circumstance which keeps up the polish of their surface is the exhalation of which they are the seat : a very thin fluid constantly passes out of every point of the membrane, and mixing with that of the adjoining parts, forms with it a humid layer that favours the frictions of the organs.

It appears that this facility of sliding upon each other is very favourable to the action of the organs; for as soon as they are deprived of it by any malady of the serous membrane, their functions are disordered, and they sometimes cease entirely.

In the state of health, the fluid secreted by the serous membranes appears to be the serum of the blood, a certain quantity of albumen excepted. Independently of the serosity, a fluid is found in many parts of the cellular tissue of a very different nature, which is the fat.

Under the relation of the presence of the fat, the cellular tissue may be divided into three sorts: that which contains it always, that which contains it sometimes, and that which never contains it. The orbit, the sole of the foot, the pulp of the fingers, that of the toes, always present fat ; the subcutaneous cellular tissue, and that which covers the heart, the veins, &c. present it often; lastly, that of the scrotum, of the eyelids, of the interior of the skull, never contain it.

The fat is contained in distinct cells that never communicate with the adjoining ones. It has been supposed, from this circumstance, that the tissue that contains, and that forms the fat, was not the same as that by which the serosity is formed; but as these fatty cells have never been shown, except when full of fat, this anatomical distinction seems doubtful. The size, the form, the disposition of these cells, are not less variable than the quantity of fat which they contain. In some individuals scarcely a few ounces exist, whilst in others there are several hundred pounds.

According to the last researches, the human fat is composed of two parts, the one fluid, the other concrete, which are themselves compounded, but in different proportions, of two new proximate principles.

Round the moveable articulations a thin membrane is found, which has much analogy with the serous membranes; but which, however, differs from them by having small reddish prolongations that contain numerous blood-

vessels. These are called *synovial fringes:* they are very visible in the great articulations of the limbs.

Serous exhalation takes place in the cellular membrane, the chambers of the eye, and the hyaloid membrane.

Bloody Exhalations.—This takes place in the cavernous bodies of the penis and of the clitoris, the urethra and the glands, the spleen and breasts. Many other interior exhalations exist also; as those of the cavities of the internal ear, of the parenchyma, of the thymus, of the thyroid gland; that of the cavity of the *capsulæ suprarenales,* &c. But the fluids formed in these different parts are scarcely understood: they have never been analysed, and their uses are unknown.

External Exhalations.—These are composed entirely of the exhalations of the *mucous membranes,* and of that of the skin, or *cutaneous transpiration.*

Exhalations of Mucous Membranes.—There are two mucous membranes: the one covers the surface of the eye, the lachrymal ducts, the nasal cavities, the sinuses, the middle ear, the mouth, all the intestinal canal, the excretory canals which terminate in it; lastly, the larynx, the trachea, and the bronchia. The other mucous membrane covers the organs of generation and of the urinary apparatus.

Cutaneous Transpiration.—A transparent liquid, of an odour more or less strong, salt, acid, usually passes through the innumerable openings of the epidermis. See *Perspiration.*

FOLLICULAR SECRETIONS.

The follicles are divided into *mucous* and *cutaneous,* and into *simple* and *compound.* The simple mucous follicles are seen upon nearly the whole extent of the mucous membranes, where they are more or less abundant: however, there are points of considerable extent of these membranes where they are not seen.

The bodies that bear the name of fungous papillæ of the tongue, the tonsils, the glands of the cardia, the prostate, &c. are considered by anatomists as collections of simple follicles. The fluid that they secrete is little known: it appears analogous to the mucus, and to have the same uses. In almost all the points of the skin, little openings exist, which are the orifices of small hollow organs, with membraneous sides, generally filled with an albuminous and fatty matter, the consistence, the colour, the odour, and even the savour of which are variable, according to the different parts of the body, and which is continually spread upon the surface of the skin. These small organs are called the follicles of the skin; one of them, at least, exists at the base of each hair, and generally the hairs traverse the cavity of a follicle in their direction outwards.

The follicles form that mucous and fatty matter which is seen upon the skin of the cranium and on that of the pavilion of the ear: the follicles also secrete the *cerumen* in the auditory canal. That whitish matter, of considerable consistence, that is pressed out of the skin of the face in the form of small worms, is also contained in follicles: it is the same matter which, by its surface being in contact with the air, becomes black, and produces the numerous spots that are seen upon some persons' faces, particularly on the sides of the nose and cheeks.

The follicles also appear to secrete that odorous, whitish matter, which is always renewed at the external surface of the genital parts.

By spreading on the surface of the epidermis, of the hair of the head, of the skin, &c. the matter of the follicles support the suppleness and elasticity of those parts, renders their surface smooth and polished, favours their frictions upon one another. On account of its unctuous nature, it renders them less penetrable by humidity, &c.

GLANDULAR SECRETIONS.

The number of glands is considerable: the action of each bears the name of glandular secretion. There are six secretions of this sort: that of the tears, of the saliva, of the bile, of the pancreatic fluid, of the urine, of the semen, and, lastly, that of the milk. We may add the action of the mucous glands, and of the glands of Cowper.

It was at one time the common doctrine among physiologists, as well chemical as mechanical, that all the vast variety of animal productions which are traced in the different secretory organs, whether wax, or tears, or milk, or bile, or saliva, were formerly contained in the circulating mass; and that the only office of these organs was to *separate* them respectively from the other materials that entered into the very complex crasis of the blood; whence, indeed, the name of *secernents* or *secretories,* which mean nothing more than *separating powers.* This action was by the chemists supposed to depend on peculiar attractions, or the play of affinities, which was the explanation advanced by some; or on peculiar ferments, conveyed by the blood to the secernent organ, or pre-existing in it, which was the opinion of others. The mechanical physiologists, on the contrary, ascribed the separation to the peculiar figure or diameter of the secretory vessels, which, by their make, were only fitted to receive particles of a given form, as prisms where the vessels were triangular, and cubes where they were square. Such was the explanation of Des Cartes: while Boerhaave, not essentially wandering from the the same view, supposed the more attenuate secretions to depend upon vessels of a finer bore, and the more viscid upon those of a larger diameter.

Modern chemistry, however, has completely exploded all these and many other hypotheses founded upon the same common principle, by proving that most of the secerned materials are not formally existent in the blood; and, consequently, that it is not, strictly speaking, by an act of separation, but of new arrangement or recomposition, that they are produced out of its elements. And hence physiologists have been

led to a critical enquiry into the fabric of the secerning organ, but hitherto without much satisfaction. In its simplest state it seems, as far as it can be traced, to consist of nothing more than single vessels possessing a capillary orifice, as in the Schneiderian membrane. In a somewhat more compound form we find this orifice opening into a follicle, or minute cavity, of an elliptic shape; and, in a still more complicated make, we meet with a glandular apparatus, more or less glomerate, consisting of a congeries of secernent vessels, with or without follicles, and occasionally accompanied with a basin or reservoir for a safe deposit of the secreted or elaborated matter against the time of its being wanted, of which the gall-bladder furnishes us with a well-known example. But in none of these instances are we able to discover any peculiar effect produced by this complication of machinery, beyond that of affording the means of accumulation: for, large as is the organ of the liver, it is in the penicilli, or the pori biliarii alone that the bile is formed and completely elaborated: the liver is a vast bundle or combination of these, and hence affords an opportunity for a free formation of bile in a collective state, but it has not been ascertained that it affords any thing more. And although in the gall-bladder we find this fluid a little varied after its deposit, and rendered thicker, yellower, and bitterer, the change is nothing more than what must necessarily follow from absorption, or the removal of a part of the finer particles of the bile. The conglomerate glands of the mammæ offer us the same results; for the milk here secreted is as perfect milk in every separate lactiferous tube, as when it flows in an accumulated form from the nipple. And hence follicles themselves may be nothing more than minute reservoirs for the convenient accumulation of such fluids as are deposited in them till they are required for use. Mucus and sebum are inspissated by retention, but they rarely undergo any other change. We are obliged, therefore, to conclude, with Sir Everard Home, that the "organs of secretion are principally made up of arteries and veins; but there is nothing in the different modes in which these vessels ramify that can in any way account for the changes in the blood out of which secretions arise."

These organs, however, are largely supplied with twigs of small nerves, and it has been an idea long entertained by physiologists that secretion is chiefly effected through their instrumentality. Sir Everard Home, in his paper inserted in the volume of the Philosophical Transactions, has observed, "that in fishes which are capable of secreting the electric fluid the nerves connected with the electrical organs exceed those that go to all the other parts of the fish, in the proportion of twenty to one:" and, in confirmation of this view of the subject, it may be remarked, that there are no parts of the body more manifestly affected, and few so much so, as the secretory organs, by mental emotion. The whole surface of the skin is sometimes bedewed with drops of sweat, and even of blood, by a sudden paroxysm of agony of mind: grief fills the eyes with tears: fear is well known to be a powerful stimulant to the kidneys, and very generally to the alvine canal: anger gives an additional flow, perhaps an additional acrimony, to the bile, and, if urged to violence, renders the saliva poisonous; and disappointed hope destroys the digestion, and turns the secreted fluids of the stomach acid.

All this should seem to prove that the secretory organs are chiefly influenced by the sensorial system; yet Haller has long ago observed that the larger branches of the nerves seldom enter into them, and seem purposely to avoid them: the secernent glands have little sensibility; and the secretions of plants, which have no nervous system, are as abundant and diversified, and as wonderful in every respect, as those of animals.

The means, therefore, by which the very extensive and important economy of secretion is affected, seem hitherto, in a very considerable degree, to have eluded all investigation. We behold, nevertheless, the important work proceeding before us, and are in some degree acquainted with its machinery.

The most simple, and, at the same time, perhaps, the most copious of the fluids, which are in this manner separated from the blood, is that discharged by very minute secernent vessels, supposed to be terminal or exhalant arteries, which open into all the cavities of the body, and pour forth a fine breathing vapour, or halitus, as it is called, which keeps their surfaces moist, and makes motion easy—an effluvium which must have been noticed by every one who has ever attended the cutting up of a bullock in a slaughter-house. It is well known that arteries terminate in two ways—in minute veins, and in exhalant vessels. The former termination can often be followed up by injections, and occasionally traced by the microscope; but no microscopic experiment has hitherto enabled the anatomist to discover the orifices of the exhalant branches of arteries. Their existence, however, is proved, as Mr. Cruikshank has observed, by their sometimes, and especially when enlarged in diameter or acted upon by a more than ordinary *vis à tergo*, pouring forth blood instead of vapour, of which we have a striking instance in bloody sweat; as also in the menstrual flux, which, though not blood itself, proceeds from the mouths of the exhalant arteries of the uterus, periodically altered in their diameter and secernent power.

In different periods of life, many of the secretions vary considerably in their sensible properties, or relative quantity. Thus the bile of the fœtus is sweet, and only acquires a bitter taste after birth. In infancy perspiration flows more profusely than during manhood; and the testes, which secrete nothing before the age of puberty, at this time acquire activity, and again lose their power in old age.

There are also many of the secernent organs that, in case of necessity, become a substitute for each other. Thus the perspirable matter of the skin, when suppressed by a sudden chill or any other cause, is often discharged by the kidneys; the catamenia by the lungs; and the serum accumulated in dropsies by the intestines.

The secretions are, moreover, very much affected and increased by any violent commotion of the system generally. In hysteria the flow of urine is greatly augmented, while the absorption of bile seems diminished; and hence the discharge is nearly colourless. In violent agitation of the mind, we have already observed that the juices of the stomach become acid; and sometimes the secernents of the skin, and sometimes those of the larger intestines, are stimulated into increased action; whence colliquative perspiration, looseness, or both. The heat and commotion of a fever will sometimes produce the same effect, and sometimes a contrary; the skin being dry, parched, and pricking.

There are some parts of the body that waste and become renewed far more rapidly than others: the fat than the muscles; the muscles than the bones; and probably the bones than the skin.

It is from this mysterious power of reproduction, appertaining to every part of the system, that we are so often able to renew the substance and function of parts that have been wasted by fevers or atrophy, or abruptly destroyed or lopped off by accident.

In the progress of this general economy, every organ and part of the body secretes for itself the nutriment it requires, from the common pabulum of the blood which is conveyed to it, or from secretions which have already been obtained from the blood, and deposited in surrounding cavities, as fat, gelatine, and lymph. And it is probable that the several organs of secretion, like the eye, the ear, and the other distinct organs of sense, are peculiarly affected by peculiar stimulants, and excited to some diversity of sensation.

In Germany, this idea has been pursued so far as, in some hypotheses, and particularly that of M. Hubner, to lay a foundation for the doctrine of a sixth sense, to which has been given the name of "self-feeling," or "general feeling." The sensations, however, we are at present alluding to, are not so much general on those of the whole self, as particular or limited to the organs in which they originate; and seem rather to be a result of different modifications of the fluid that causes the common sense of touch, than produced by distinct sensorial secretions. In most parts of the system these modifications are so inconsiderable as to elude our notice, but in others we have the fullest proof of such an effect; for we see the stomach evincing a sense of hunger, the fauces of thirst, the genital organs of venereal orgasm. And, in like manner, we find the bladder stimulated by cantharides, and the intestinal canal by purgatives; and we may hence conjecture that every other part of the system, where any kind of secretion is going forwards, is endowed with a like peculiarity of irritability and sensibility, though not sufficiently keen to attract our attention.

It is hence we meet with that surprising variety of secretions which are furnished not only by different, but even by the same animal in different parts of the body. Hence sugar is secreted by the stomach, and sometimes by the kidneys; sulphur by the brain; wax by the ears; lime by the salivary glands, the secretories of the bones, and, in a state of disease, by the lungs, the kidneys, the arteries, and the exhalents of the skin; milk by the breasts; semen by the testes; the menstrual fluid by the uterus; urine by the kidneys; bile by the liver; muriate of soda by the secernents of almost every organ; and sweat from every part of the surface.

Hence some animals, as the bee, secrete honey; others, as the *coccus ilicis*, a large store of wax; others, as the viper and scorpion, gum, which is the vehicle of their poison; others thread, as the spider and some species of slug; and many silk, as the silk-worm and the *Pinna*, or nacre; whence Réaumur denominates the pinna the sea silk-worm: it is common to some of the Italian coasts, and its silky beard or byssus is worked at Palermo into very beautiful silk stuffs. There are great numbers of worms, insects, and fishes that secrete a very pure, and some of them a very strong phosphorescent light, so as, in some regions, to enkindle the sea, and in others the sky, into a bright blaze at night. Many animals secrete air: man himself seems to do so under certain circumstances, but fishes of various kinds more largely, as those furnished with air-bladders, which they fill or exhaust at pleasure, and the *Sepia* or cuttle-fish, with numerous other sea-worms; and by this power they raise or sink themselves as they have occasion. The cuttle-fish secretes also a natural ink, which it evacuates when pursued by an enemy, and thus converts it into an instrument of defence; for, by blackening the water all around, it obtains a sufficient concealment and easily effects its escape. Other animals, and these also chiefly fishes, secrete a very large portion of electric matter, so as to convert their bodies into a powerful battery. The torpedo-ray was well known by the Romans to possess this extraordinary power; and the *Gymnotus electricus*, or electric-eel, has since been discovered to possess it in a much larger proportion. The genus tetradon, in one species, secretes an electric fluid; in another, an irritating fluid that stings the hand that touches it; and, in a third, poisonous matter diffused through the whole of its flesh.

From the same cause we meet with as great and innumerable a variety of secretions among plants; as camphires, gums, balsams, resins: and, as in animals, we often meet with very different secretions, in very different parts of the same plant. Thus the *Mimosa nilotica* secerns from its roots a fluid as offensive as

that of assafœtida; in the sap of its step an astringent acid; its glands give forth gum arabic; and its flower an odour of a very grateful fragrance.

Sectio cæsarea. See *Cæsarian operation.*

Sectio franconia. See *Lithotomy.*

SECUNDINES. The after-birth, and membranes which are expanded from its edge, and which form a complete involucrum of the fœtus and its waters, go under the term of secundines. See *Placenta.*

SECUNDUM ARTEM. According to art. A term frequently used in prescription, and denoted by the letters S. A., which are usually affixed when the making up of the recipe in perfection requires some uncommon care and dexterity.

SECU'NDUS. Applied, by botanists, to leaves and parts of the fructification which are unilateral, all leaning towards one side; as the leaves and flowers of the *Convallaria majalis.*

Securidaca. (From *securis,* an axe: so called because its leaves resemble a small axe.) See *Hyosciamus niger.*

SECURIFORM. (*Securiformis;* from *securis,* an axe, and *forma,* resemblance.) Shaped like an axe.

SEDATIVE. (*Sedativus;* from *sedo,* to ease or assuage.) That which has the power of diminishing the animal energy, without destroying life. Medicines which possess this power are arranged into *sedativa soporifica,* as opium, papaver, hyoscyamus; and *sedativa refrigerantia,* as neutral salts, acids, &c.

Sedative salt. See *Boracic acid.*

Sedentaria ossa. The bones on which we sit,—the os coccygis and ischia.

SEDENTA'RIUS. (*us, ii.* m.) 1. One who leads a sedentary life, or who follows a sedentary trade.

2. That on which we sit.

SEDGE. See *Iris pseudacorus.*

SEDIMENT. The heavy parts of liquids which fall to the bottom.

Sediment, lateritious. See *Lateritious sediment.*

SEDLITZ. *Seydschutz.* The name of a village of Bohemia, in the circle of Saartz, where Hoffmann discovered a simple saline mineral water, *Aqua Sedlitziana.* From chemical analysis it appears that it is strongly impregnated with sulphate of magnesia; and it is to this, along with, probably, the small quantity of muriate of magnesia, that it owes its bitter and saline taste, and its purgative properties. The diseases in which this water is recommended are, crudities of the stomach, hypochondriasis, amenorrhœa, and the anomalous complaints succeeding the cessation of the catamenia, œdematous tumours of the legs in literary men, hæmorrhoidal affections, and scorbutic eruptions. See *Sedlitz powder.*

Sedlitz powder. A very useful and fashionable compound, which, when mixed with a quarter of a pint or more of pure water, effervesces, and forms a pleasant aperient, in imitation of Sedlitz water. It is composed of dried carbonate of soda and dried tartaric acid, which are mostly in separate parcels.

SE'DUM. (*um, i.* n.; from *sedo,* to assuage: so called because it allays inflammation.) The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Pentagynia.*

Sedum acre. Wall-pepper. Stone-crop. *Illecebra. Vermicularis. Piper murale. Sedum minus.* The plant thus called is, in its recent state, extremely acrid, like the hydropiper: hence, if taken in large doses, it acts powerfully on the primæ viæ, proving both emetic and cathartic; applied to the skin as a cataplasm, it frequently produces vesications and erosions. Boerhaave therefore imagines that its internal employment must be unsafe; but experience has discovered that a decoction of this plant is not only safe, but of great efficacy in scorbutic complaints. For which purpose, a handful of the herb is directed, by Below, to be boiled in eight pints of beer, till they are reduced to four, of which three or four ounces are to be taken every, or every other morning. Milk has been found to answer this purpose better than beer. Not only ulcers simply scorbutic, but those of a scrofulous or even cancerous tendency, have been cured by the use of this plant; of which Marquet relates several instances. He likewise found it useful, as an external application, in destroying fungous flesh, and in promoting a discharge in gangrenes and carbuncles. Another effect for which this plant is esteemed, is that of stopping intermittent fevers.

Sedum majus. See *Sempervivum.*

Sedum minus. See *Sedum acre.*

Sedum telephium. The systematic name of the orpine. *Faba crassa. Telephium. Fabaria crassula. Anacampseros.* The plant which bears these names in various pharmacopœias, is the *Sedum—foliis planiusculis serratis, corymbo folioso, caule erecto,* of Linnæus. It was formerly ranked as an antiphlogistic, but is now forgotten.

SEED. See *Semen.*

SEED-BUD. See *Germen.*

SEED-COATS. See *Arillus.*

SEED-LOBES. See *Cotyledon.*

SEED-VESSEL. See *Pericarpium.*

SEEING. See *Vision.*

SEGMENT. Sometimes applied to leaves that are divided into many shreds or slices, as those of fennel.

SEGMOID. *Segmoides.* The valves of the pulmonary artery have been so called from their resembling segments of circles.

SEGREGATA. The last order of the Class *Syngenesia,* in which the flowers are doubly compound, each floret or assemblage of florets having a partial calyx.

Seignette's salt. (So called, because first prepared and made known by Peter Seignette, who lived at Rochelle in France, towards the end of the seventeenth century.) See *Soda tartarisata.*

SELA'GO. See *Lycopodium selago.*

SELENIC. *Selenicus.* Appertaining to selenium.

SELENIC ACID. *Acidum selenicum.* If selenium be heated to dryness, it forms, with nitric acid, a volatile and crystallisable compound, called selenic acid, which unites to some of the metallic oxides producing salts, called *seleniates.*

SELENITES. (From σεληνη, the moon.) 1. Sparry gypsum, a sulphate of lime.

2. A white stone having a figure upon it resembling a moon.

SELE'NIUM. (*um, ii.* n.; from σεληνη, the moon: so called from its usefulness in lunacy.) 1. A kind of peony.

2. A new elementary body, extracted by Berzelius from the pyrites of Fahlun, which, from its chemical properties, he places between sulphur and tellurium, though it has more properties in common with the former than with the latter substance.

Self-conceit. See *Pathemata animi.*

SELF-HEAL. See *Prunella.*

SELINE. (*e, es.* f.; from σεληνη, the moon: because they are opake, and look like little moons.) A disease of the nails, in which white spots are occasionally seen in their substance.

SELINIC. (*Selinicus;* from the plant called *selinum.*) Appertaining to the plant called selinum.

SELI'NUM. (*um, i.* n.; the ancient generic name of Theophrastus and Dioscorides, whose Σελιον is said to be derived from παρα το εν ελει φυεσθαι, on account of its growing in mud; whence Homer's ελεοθρεπ]ον σελινον. De Theis says, that *selinum* is derived from σεληνη, the moon, because of the shape of its growing seeds; and that it is the foundation of many other compound names of umbelliferous plants among the Greeks, as ορεοσελινον, πετροσελινον, &c.) The name of a genus of plants. Class, *Pentandria;* Order, *Digynia.*

SE'LLA. (*a, æ.* f. *Sella, quasi sedda;* from *sedeo,* to sit.) A saddle.

SELLA TURCICA. (So called from its supposed resemblance to a Turkish saddle.) *Ephippium.* A cavity in the sphenoid bone, containing the pituitary gland, surrounded by the four clinoid processes.

SELTZER. The name of a place in Germany, Neider Seltzer, about ten miles from Frankfort on the Maine, where a saline mineral water rises, which is slightly alkaline, highly acidulated with carbonic acid, containing more of this volatile principle than is sufficient to saturate the alkali, and the earths which it holds in solution. It is particularly serviceable in relieving some of the symptoms that indicate a morbid affection of the lungs; in slow hectic fever, exanthematous eruptions of the skin, foulness of the stomach, bilious vomiting, acidity and heartburn, spasmodic pains in any part of the alimentary canal, and bloody or highly offensive stools. On account of its property in relieving spasmodic pains, and from its rapid determination to the kidneys, and perhaps its alkaline contents, it has been sometimes employed with great advantage in diseases of the urinary organs, especially those that are attended with the formation of calculus. A large proportion of the Seltzer water, either genuine or artificial, that is consumed in this country is for the relief of these disorders. Even in gonorrhœa, either simple or venereal, Hoffmann asserts that advantage is to be derived from this medicine. The usual dose is from half a pint to a pint.

SEMECA'RPUS. (*us, i.* m.; from σημειοω, to mark, and καρπος, a fruit: a name evidently derived from the use that is made of its nut in the East Indies to mark table-linen and articles of apparel.) The name of a genus of plants. Class, *Pentandria;* Order, *Trigynia.*

SEMECARPUS ANACARDIUM. The marking-nut tree. This tree is supposed to afford the Malacca bean. See *Avicenna.*

SEMEIO'SIS. (From σημειοω, to notify.) See *Semeiotic.*

SEMEIOTIC. (*Semeioticus,* from *semiotice.*) *Semeiosis.* That which treats on the signs of diseases.

SEMEIOTICE. (*e, es.* f.; from σημειον, a sign.) That part of pathology which considers the signs of disease. It considers the nature of the symptoms of diseases, their degree of violence, their mode of accession, their continuance and course, in order that, by considering them and other circumstances connected with them, the judgment may be formed respecting the condition of the disease, and the probable tendency and termination of it. All the circumstances, therefore, of the persons, constitution, and habits; the knowledge of what may have formerly taken place and what now exists, form a part of semeiotics: for, without such enquiry and consideration, the judgment is not likely to be correctly formed, as to the probable tendency, duration, or termination of a disease. It is divided, therefore, into,

1. The *diagnosis,* or consideration of the signs or nature of the symptoms, with a view of ascertaining what the disease is; and these signs, which thus tell us what the disease is, are called diagnostic.

2. The *prognosis,* or the judgment respecting the course, tendency, and termination of a disease.

SE'MEN. (*en, inis.* n.; from *sero,* to sow.) I. The seed or prolific liquor of animals secreted in the testicles, and carried through the epididymis and vas deferens into the vesiculæ seminales, to be emitted *sub coitu* into the female vagina, and there, by its aura, to penetrate and impregnate the ovulum in the ovarium.

In castrated animals, and in eunuchs, the vesiculæ seminales are small and contracted; and a little lymphatic liquor, but no semen, is found in them. The semen is detained for some time in the vesiculæ seminales, and ren-

dered thicker from the continual absorption of its very thin part, by the oscula of the lymphatic vessels. In lascivious men, the semen is sometimes, though rarely, propelled by nocturnal pollution from the vesiculæ seminales, through the ejaculatory ducts (which arise from the vesiculæ seminales, perforate the urethra transversely, and open themselves by narrow and very nervous mouths at the sides of the caput gallinaginis,) into the urethra, and from it to some distance. But in chaste men the greatest part is again gradually absorbed from the vesiculæ seminales through the lymphatic vessels, and conciliates strength to the body. The smell of semen is specific, heavy, affecting the nostrils, yet not disagreeable. The same odour is observed in the roots of the orchis, the iuli of chestnuts, and the antheræ of many plants. The smell of the semen of quadrupeds, when at heat, is so penetrating as to render their flesh fœtid and useless, unless castrated. Thus the flesh of the stag, *tempore coitus*, is unfit to eat. The taste of semen is fatuous, and somewhat acrid. In the testes its consistence is thin and diluted; but in the vesiculæ seminales, viscid, dense, and rather pellucid: and by venery and debility it is rendered thinner.

Specific gravity. The greatest part of the semen sinks to the bottom in water, yet some part swims on its surface, which it covers like very fine threads mutually connected together in the form of a cobweb.

Colour. In the testicles it is somewhat yellow, and in the vesiculæ seminales it acquires a deeper hue. That emitted by pollution or coition, becomes white from its mixture with the whitish liquor of the prostate gland during its passage through the urethra. In those people who labour under jaundice, and from the abuse of saffron, the semen has been seen yellow, and, in an atrabiliary young man, black.

Quality. Semen exposed to the atmospheric air, loses its pellucidity, and becomes thick, but after a few hours it is again rendered more fluid and pellucid than it was immediately after its emission. This phænomenon cannot arise from water or oxygene attracted from the air. At length it deposits phosphate of lime, and forms a corneous crust.

Experiments with semen prove that it turns the syrup of violets green, and dissolves earthy, neutral, and metallic salts. Fresh semen is insoluble in water, until it has undergone the above changes in atmospheric air. It is dissolved by alkaline salts. By ætherial oil it is dried into a pellucid pellicle, like the cortex of the brain. It is dissolved by all acids, except the oxymuriatic, by which it is coagulated in the form of white flakes. It is also acted upon by alkohol of wine.

It is found to be composed of water, 900; animal mucilage, 60; soda, 10; and phosphate of lime, 30.

Examined by the microscope, a multitude of animalcula are observed in it, which appear to have a round head and a long tail: these animalcula move with considerable rapidity; they seem to fly the light, and to seek the shade. It has also an odorous principle, which flies off immediately from fresh semen. It appears to consist of a peculiar vital principle, and by the ancients was called *aura seminis.*

Use. 1. Emitted into the female vagina, *sub coitu*, it possesses the wonderful and stupendous power of impregnating the ovulum in the female ovarium. The odorous principle, or aura spermatica only, appears to penetrate through the cavity of the uterus and Fallopian tubes to the female ovarium, and there to impregnate the albuminous latex of the mature ovulum by its vital power. The other principles of the semen appear to be only a vehicle of the seminal aura. 2. In chaste men, the semen returning through the lymphatic vessels into the mass of the blood, gives strength to the body and mind: hence the bull is so fierce and brave, the castrated ox so gentle and weak; hence every animal languishes *post coitum*; and hence tabes dorsalis from onanism. 3. It is by the stimulus of the semen absorbed at the age of puberty into the mass of the humours that the beard and hair of the pubes, but in animals the horns, are produced; and the weeping voice of the boy changed into that of the man.

II. The seed of plants, or nucleus formed in the germen of a plant, for the purpose of propagating its species, — the sole "end and aim" of all the organs of fructification. Every other part is in some manner subservient to the forming, perfecting, or dispersing of these.

A seed consists of several parts, some of which are more essential than others; viz.

1. The *hilum*, or scar.

2. The *funiculus umbilicalis*, or filament, by which the immature seed is connected to the receptacle.

3. The *testa*, or *tunica seminis.*

4. The seed-lobes, or *cotyledons.* These parts are beautifully seen by macerating the seeds of a kidney, or other bean, or gourd, in water.

The less essential parts are,

1. The *arillus.* 4. The *capsula.*
2. The *pappus.* 5. The *ala.*
3. The *cauda.*

From the difference in the form, surface, situation, and number, rise the following distinctions of seeds:—

1. *Semina arillata*; as in *Jasminum.*

2. ——— *paposa*; as in *Leontodon taraxacum.*

3. ——— *caudata*; as in *Clematis vitalba.*

4. ——— *calyculata*, covered with a bony calyx; as in *Coix lachryma.*

5. ——— *alata*; as in *Bignonia.*

6. ——— *hamosa*, furnished with one or three hooks; as in *Daucus muricatus.*

7. ——— *lanata*, covered with wool; as in *Bombax*, *Gossipium*, and *Anemone hortensis.*

8. ——— *rotunda*; as in *Pisum* and *Brassica.*

9. *Semina rotundo-compressa;* as *Ervum lens.*
10. ——— *oblonga;* as in *Boerhaavia diffusa.*
11. ——— *conica;* as in *Bellium.*
12. ——— *ovata;* as in *Quercus robur.*
13. ——— *triquetra;* as in *Rheum,* and *Rumex.*
14. ——— *lanceolata;* as in *Fraxinus.*
15. ——— *acuminata;* as in *Cucumis sativus.*
16. ——— *reniformia;* as in *Phaseolus.*
17. ——— *aculeata;* as *Ranunculus arvensis.*
18. ——— *cochleata;* as in *Salsola.*
19. ——— *cymbiformia;* as in *Calendula officinalis.*
20. ——— *linearia;* as in *Crucianella.*
21. ——— *aristata;* as in *Holcus saccharatus.*
22. ——— *echinata;* as in *Verbena lapulacea.*
23. ——— *hispida;* as *Daucus carota.*
24. ——— *hirsuta;* as in *Scandix trichosperma.*
25. ——— *muricata;* as *Ranunculus parviflorus.*
26. ——— *glabra;* as in *Galium montanum.*
27. ——— *rugosa;* as in *Lithospermum arvense.*
28. ——— *callosa;* as in *Citrus medica.*
29. ——— *lapidea;* as in *Lithospermum.*
30. ——— *colorata;* as in *Chærophyllum aureum.*
31. ——— *striata;* as in *Conium maculatum.*
32. ——— *sulcata;* as in *Scandix odorata.*
33. ——— *transversim sulcata;* as in *Picris.*
34. ——— *nuda;* as in the gymnospermial plants.
35. ——— *tecta;* as in angiospermial plants.
36. ——— *nidulantia,* adhering to the external surface; as in *Fragaria vesca.*
37. ——— *pendula,* suspended by a filament external to the seed-vessel; as in *Magnolia grandiflora.*
38. ——— *pauca,* when few in number.
39. ——— *plurima,* many; as in *Papaver.*

The parts of a seed when germinating are,
1. *Cotyledones.*
2. *Corculum.*

The variety of forms of seeds are not without their uses; and the various modes by which seeds are dispersed, cannot fail to strike an observing mind with admiration. "Who has not listened," says Sir James Smith, "in a calm and sunny day, to the crackling of furze bushes, caused by the explosion of their little elastic pods; nor watched the down of innumerable seeds floating on the summer breeze, till they are overtaken by a shower, which, moistening their wings, stops their further flight, and at the same time accomplishes its final purpose, by immediately promoting the germination of each seed in the moist earth? How little are children aware, as they blow away the seeds of dandelion, or stick burs, in sport, on each others' clothes, that the are fulfilling one of the greatest ends of Nature! Sometimes the calyx, beset with hooks, forms the bur; sometimes hooks encompass the fruit itself. Pulpy fruits serve quadrupeds and birds as food, while their seeds, often small, hard, and indigestible, pass uninjured by them through the intestines, and are deposited, far from their original place of growth, in a condition peculiarly fit for vegetation. Even such seeds as are themselves eaten, like the various sorts of nuts, are hoarded up in the cracked ground, and occasionally forgotten, or the earths wells and encloses them. The ocean itself serves to waft the larger kinds of seeds from their native soil to far distant shores."

Semen adjowaen. A seed imported from the East, of a pleasant smell, a grateful aromatic taste, somewhat like savory. It possesses exciting, stimulating, and carminative virtues, and is given in the East in nervous weakness, dyspepsia, flatulency, and heartburn.

Semen agave. An East Indian seed exhibited there in atonic gout.

Semen contra. See *Artemisia.*

Semen sanctum. See *Artemisia.*

SEMI. (From ημισυ, half.) *Semi,* in composition, universally signifies half; as *semicupium,* a half-bath, or bath up to the navel; *semilunaris,* in the shape of a half-moon.

SEMI-AMPLEXICAULIS. Half, or in part only, embracing the stem.

SEMICIRCULAR. *Semicircularis.* Of the shape of half a circle.

Semicircular canals. These canals are three in number, and take their name from their figure. They belong to the organ of hearing, and are situated in the petrous portion of the temporal bone, and open into the vestibulum.

SEMICU'PIUM. (*um, ii.* n.) A half-bath, or such as receives only the hips or extremities.

SEMICYLINDRICAL. *Semicylindricalis.* Flat on one side, round on the other; as the leaves of the *Conchium gibbosum.*

SEMIFLOSCULOSIS. See *Syngenesia.*

Semi-interosseus indicis. See *Abductor indicis manus.*

SEMILUNAR. *Semilunaris.* Half-moon shaped.

Semilunar valves. The three valves at the beginning of the pulmonary artery and aorta are so termed, from their half-moon shape.

SEMI-MEMBRANO'SUS. A muscle of the thigh, so called from the long flat membrane-like tendon at its upper part. It arises from the outer surface of the tuberosity of the ischium, by a broad flat tendon which is three inches in length. It then begins to grow fleshy, and runs at first under the long head of the biceps, and afterwards between that muscle and the semi-tendinosus. At the low-

er part of the thigh it becomes narrower again, and terminates in a short tendon, which is inserted chiefly into the upper and back part of the head of the tibia, but some of its fibres are spread over the posterior surface of the capsular ligament of the knee. Between this capsular ligament and the tendon of the muscle we find a small bursa mucosa. The tendons of this and the last-described muscle form the inner ham-string. This muscle bends the leg, and seems likewise to prevent the capsular ligament from being pinched.

Semi-nervosus. See *Semi-tendinosus.*

Seminis cauda. See *Cauda seminis.*

Seminis ejaculator. See *Accelerator urinæ.*

Semiopal. See *Opal.*

Semi-orbicular. *Semiorbicularis.* The shape of half a globe.

Semi-orbicularis oris. See *Orbicularis oris.*

Semi-spinalis colli. *Semi-spinalis sive transverso-spinalis colli,* of Winslow. *Spinalis cervicis,* of Albinus. *Spinalis colli,* of Douglas. *Transversalis colli,* of Cowper. A muscle situated on the posterior part of the neck, which turns the neck obliquely backwards, and a little to one side. It arises from the transverse processes of the uppermost six vertebræ of the back by as many distant tendons, ascending obliquely under the complexus, and is inserted into the spinous processes of all the vertebræ of the neck, except the first and last.

Semi-spinalis dorsi. *Semi-spinalis externus seu transverso-spinalis dorsi,* of Winslow. *Semi-spinatus,* of Cowper. A muscle situated on the back, which extends the spine obliquely backwards. It arises from the transverse processes of the seventh, eighth, ninth, and tenth vertebræ of the back, by as many distinct tendons, which soon grow fleshy, and then become tendinous again, and are inserted into the spinous processes of all the vertebræ of the back above the eighth, and into the lowermost of the neck, by as many tendons.

Semi-spinalis externus. See *Semi-spinalis dorsi.*

Semi-spinatus. See *Semi-spinalis dorsi.*

Semi-tendinosus. This muscle, which is the *semi-nervosus,* of Douglas and Winslow, is situated obliquely along the back part of the thigh. It arises tendinous and fleshy from the inferior, posterior, and outer part of the tuberosity of the ischium, in common with the long head of the biceps cruris, to the posterior edge of which it continues to adhere, by a great number of oblique fibres, for the space of two or three inches. Towards the lower part of the os femoris, it terminates in a round tendon, which passes behind the inner condyle of the thigh bone, and, becoming flat, is inserted into the upper and inner part of the ridge of the tibia, a little below its tuberosity. This tendon sends off an aponeurosis, which helps to form the tendinous fascia that covers the muscles of the leg. This muscle assists in bending the leg, and at the same time draws it a little inwards.

SEMPERVIRENS. Evergreen. Applied to leaves which are permanent through one, two, or more winters, so that the branches are never stripped; as the ivy, fir, laurel, bay, &c.

SEMPERVI'VUM. (*um, i.* n.; from *semper,* always, and *vivo,* to live: so called because it is always green.) 1. The name of a genus of plants in the Linnæan system. Class, *Dodecandria;* Order, *Polygynia.*

2. The pharmacopœial name of some plants.

Sempervivum acre. The stone-crop is occasionally so termed. See *Sedum acre.*

Sempervivum tectorum. The systematic name of the house-leek, or sengreen; called also, *Sedum majus, Æonion, Aizoum, Aizoon,* and *Barba Jovis.* The leaves of this plant have no remarkable smell, but discover to the taste a mild subacid austerity: they are frequently applied by the vulgar to bruises and old ulcers.

SENAC, John, was born in Gascony, about the close of the seventeenth century. He left some works, which will probably maintain a lasting reputation, particularly his treatise on the *Structure, Function, and Diseases of the Heart.* An edition of Heister's Anatomy, with some interesting Observations, was published by him when young. A paper on *Drowning,* in the Memoirs of the Academy of Sciences, refuting certain erroneous opinions respecting the cause of death, and the treatment founded upon them, is also due to him; as well as some other minor publications.

SENE'CIO. (*o, onis.* m.; from *senesco,* to grow old: so called because it has a greyish down upon it, like the beard of old men.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua.*

2. The pharmacopœial name of the *Senecio vulgaris.*

Senecio Jacobæa. St. James's wort. Ragwort. *Jacobæa.* The leaves of this common plant have a roughish, bitter, subacrid taste, extremely nauseous. A decoction is said to have been of infinite service in the cure of epidemic camp dysentery. A poultice made of the fresh leaves is said to have a surprising effect in removing pains of the joints, and to remove the sciatica, or hip gout, in two or three applications, when ever so violent. The root is of an astringent nature. A decoction of it was formerly good for wounds and bruises.

Senecio madraspatanus. See *Senecio pseudo-china.*

Senecio pseudo-china. Bastard China. *China supposita. Senecio madraspatanus.* This tree grows in Malabar. The root greatly resembles the China root in appearance and qualities.

Senecio vulgaris. Groundsel. *Erigerum. Senecio. Erigeron.* This very common plant is frequently applied bruised to inflammations and ulcers, as a refrigerant and antiscorbutic.

SENECTA ANGUIUM. The cast skin of a serpent. Its decoction is said to cure deafness.

SENECTUS. See *Age.*

SE'NEGA. (*ka*, and *ga*, *æ*. f.: so called because the Seneca or Senegaw Indians use it against the bite of the rattlesnake.) See *Polygala senega.*

Senegal gum. See *Mimosa senegal.*

Senegaw milkwort. See *Polygala senega.*

SE'NEKA. See *Senega.*

SENGREEN. See *Sempervivum.*

SE'NNA. (*a*, *æ*. f.; from *senna*, an Arabian word, signifying acute: so called from its sharp-pointed leaves.) See *Cassia*

SENNA ALEXANDRINA. See *Cassia.*

SENNA ITALICA. See *Cassia senna.*

SENNA PAUPERUM. Bastard senna, or milk-vetch, — the *Colutea arborescens* of Linnæus, the leaves of which purge and vomit.

SENNA SCORPIUM. The scorpion senna, a species of emerus.

SENNERTUS, DANIEL, was born at Breslaw in 1572. He was a voluminous writer, and has been represented by some as a mere compiler; but his works are valuable, as containing a full and clear epitome of ancient learning; and, besides, display much judgment, and freedom in criticising their doctrines, which, indeed, involved him in many controversies.

SENSATION. *Sensatio.* Sensation, or feeling, is the consciousness of a change taking place in any part, from the contact of a foreign body with the extremities of our nerves. The seat of sensation is in the pulp of the nerves.

The impression produced on any organ by the action of an external body constitutes sensation. This sensation, transmitted by nerves to the brain, is perceived, that is, felt by the organ; the sensation then becomes *perception:* and this first modification implies, as must be evident, the existence of a central organ, to which impressions produced on the senses are conveyed. The cerebral fibres are acted on with greater or less force by the sensations propagated by all the senses influenced at the same time; and we could only acquire confused notions of all bodies that produce them, if one particular and stronger perception did not obliterate the others, and fix our attention. In this collective state of the mind on the same subject, the brain is weakly affected by several sensations which leave no trace behind. It is on this principle that, having read a book with great attention, we forget the different sensations produced by the paper and character.

When a sensation is of short duration, the knowledge we have of it is so weak, that soon afterwards there does not remain any knowledge of having experienced it. In proportion as a sensation, or an idea, which is only a sensation transformed or perceived by the cerebral organ, has produced in the fibres of this organ a stronger or weaker impression, the remembrance of it becomes more or less lively and permanent. Thus we have a *reminiscence* of it, that is, call to mind that we have already been affected in the same manner; *a memory*, or the act of recalling the object of the sensation with some of its attributes, as colour, volume, &c.

When the brain is easily excitable, and, at the same time, accurately preserves impressions received, it possesses the power of representing to itself ideas with all their connections, and all the accessory circumstances by which they are accompanied, of reproducing them in a certain degree, and of recalling an entire object, while the memory only gives us an idea of its qualities. This creative faculty is called *imagination.* When two ideas are brought together, compared, and their analogy considered, we are said to form a *judgment;* several judgments connected together, constitute reasoning.

Besides the sensations that are carried from the organs of sense to the brain, there are others, internal, that seem to be transmitted to it by a kind of sympathetic reaction. It is well known what uneasiness the affection of certain organs conveys to the mind; how much an habitual obstruction of the liver is connected with a certain order of ideas: these internal sensations are the origin of our moral faculties, in the same manner as impressions that are conveyed by the organs of sense are the source of intellectual faculties. We are not on that account to place the seat of the passions of the mind in the viscera; it is only necessary to remember that the appetites, whence arise the passions, reside in their respective organs, and are a phænomenon purely physical, while passion consists, at the same time, in the intellectual exertion. Thusan accumulation of semen in the cavities that are employed as a reservoir for it, excites the appetite for venery, very distinct from the passion of love, although it may be frequently the determinate cause of it.

The senses may be enumerated under the following heads, viz. the sense of vision, hearing, smelling, tasting, touching.

SENSIBILITY. *Sensibilitas.* That action of the brain by which we receive impressions, either from within or from without. What is said of sensation generally, is applicable to sensibility: for this reason, we only mention here that this faculty exerts itself in two ways very different. In the first, the phænomenon happens unknown to us; in the second, we are aware of it, we perceive the sensation. It is not enough that a body may act upon one of our senses, that a nerve transmit to the brain the impression which is produced — it is not enough that this organ receive the impression: in order that there may be really a sensation, the brain must perceive the impression received. An impression thus perceived is called a perception, or an idea.

These two modes of sensibility may be easily verified upon ourselves. For example, it is easy to see that a number of bodies have a continual action upon our senses without

our being aware of it: this depends in a great measure upon habit.

Sensibility is infinitely variable: in certain persons it is very obtuse; in others it is very elevated: generally a good organisation keeps between the extremes.

Sensibility is vivid in infancy and youth; it continues in a degree something less marked until past the age of manhood; in old age it suffers an evident diminution; and very old persons appear quite insensible to all the ordinary causes of sensations.

All parts possessed of a power of producing a change, so as to excite a sensation, are called *sensible;* those which are not possessed of this property, *insensible.* To the insensible parts by nature belong all our fluids, the blood, bile, saliva, &c. and many of the solids, the hair, epidermis, nails, &c.; but the sensible parts are the skin, eyes, tongue, ear, nose, muscles, stomach, intestines, &c.

SENSO'RIUM. (*um, ii.* n.) The organ of any of the senses. See *Cerebrum.*

Sensorium commune. See *Cerebrum.*

SE'NSUS. (*us, ûs.* m.; *à sentiendo.*) The senses are distinguished into external and internal. The external senses are seeing, hearing, tasting, smelling, and feeling. The internal, imagination, memory, judgment, attention, and the passions.

Senticosæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as resemble the bramble, rose, &c.

SENTICO'SUS. (From *sentis,* a brier.) Thorny; brier-like.

SENTIENT. *Sentiens.* This term is applied to those parts which are more susceptible of feeling than others; as the sentient extremities of the nerves, &c.

SENTIMENTALISM. See *Alusia.*

SENTIS. A thorn: applied to plants of the brier kind, which are prickly.

Sentis caninus. See *Rosa canina.*

SEPARATE. In the language of botany, the stamens and pistils of monœcious plants are said to be separate when they are found upon the same plant, but in different flowers. Thus, in *Cucumis, Buxus,* and other genera, some of the flowers contain stamens, and others have pistils, but none of them contain both together.

Separato'rium. (From *separo,* to separate.) 1. An instrument for separating the pericranium from the skull.

2. A chemical vessel for separating essential parts of liquids.

SEPES. A hedge: applied to plants which have a hedge-like appearance.

SE'PIA. (*a, æ.* f.) The name of a genus of fish, of the Class, *Vermes;* Order, *Mollusca.* The cuttle-fish.

Sepia officinalis. The cuttle-fish. *Sepium. Præcipitans magnum.* The shell of this fish is a phosphate of lime, and is often mixed into tooth-powders.

Sepiæ os. See *Sepia officinalis.*

Sepiariæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of woody plants, which form a hedge-like appearance: the flowers are mostly a thymus or panicle.

SEPIA'RIUS. (From *sepes,* a hedge.) Appertaining to a hedge.

SE'PIUM. See *Sepia officinalis.*

SEPTA'RIA. *Ludi Helmontii.* Spheroidal concretions that vary from a few inches to a foot in diameter. When broken in a longitudinal direction, the interior of the mass is observed intersected by a number of fissures, sometimes empty, sometimes filled with calcareous spar. The body of the concretion is ferruginous marl. From these septaria is manufactured that excellent material for building under water, called Parke's cement, or Roman cement.

SEPTFOIL. See *Tormentilla.*

SEPTIC. (*Septicus;* from σηπω, to putrefy.) Relating to putrefaction.

SE'PTUM. (*um, i.* n.; from *sepio,* to separate.) A partition: applied to membranes, bones, &c. which divide parts; as *septum narium,* &c.

Septum cerebelli. A process of the dura mater, dividing the cerebellum perpendicularly into two principal parts.

Septum cerebri. The falciform process of the dura mater is sometimes so called. See *Falciform process.*

Septum cordis. The partition between the two ventricles of the heart.

Septum lucidum. *Septum pellucidum.* The thin and tender portion of the brain, dividing the lateral ventricles from each other.

Septum narium. The partition between the nostrils.

Septum pellucidum. See *Septum lucidum.*

Septum thoracis. See *Mediastinum.*

Septum transversum See *Diaphragm.*

SERA'PIAS. (*as, adis.* f.; from *Serapis,* a lascivious idol: so called because it was thought to promote venery; or from the testiculated shape of its roots.) 1. The name of a genus of plants in the Linnæan system. Class, *Gynandria;* Order, *Diandria.*

2. The dried root of the *Orchis morio,* called salep.

Serapi'num. See *Sagapenum.*

SERAPION, of Alexandria, lived about 280 years before Christ, and is affirmed by Celsus to have been the founder of the empiric sect of physicians; though others have attributed the origin of this sect to Philinus.

SERAPION, John, an Arabian physician who lived between the time of Mesue and Rhazes, towards the middle of the ninth century, and is supposed to have been the first writer on physic in the Arabic language. Haly Abbas describes his writings as containing only the cure of diseases, without any precepts concerning the preservation of health, or relating to surgery: and they are frequently quoted by Rhazes.

SERENE-DROP. See *Amaurosis.*

SERICEUS. Silky.

SERI'CUM. Silk. A species of hairy pubescence of plants, which consists of a white shining silkiness: hence the leaves of the *Potentilla anserina*, *Alchemilla alpina*, &c. are called *folia sericea*.

SERI'PHIUM. (*um, ii.* n.: seems to have been applied to this genus on account of the analogy, in its habit and foliage, with the *Artemisia pontica* of Pliny, called by the Greeks, Σερεφιον. The origin of this name may be traced to *Seriphion*, or, as it is now called, *Serpho*, an island in the Ægean sea, the soil of which is of so dry and sterile a nature, as only to abound in plants of this rough kind.) The name of a genus of plants. Class, *Syngenesia*; Order, *Polygamia segregata*. Flix-weed.

SE'RIS. Σερις. Endive.

SERMOUNTAIN. See *Laserpitium*.

SEROSITY. Synonymous with serum.

SEROUS. (*Serosus*; from *serum*.) Relating to serum.

Serous apoplexy. See *Apoplexy*.

SERPENTA'RIA. (*a, æ.* f.; so called from the resemblance of the roots of the plant which first bore this name to the tail of the rattle-snake.) See *Aristolochia serpentaria*.

Serpentaria gallorum. See *Arum*.

Serpentaria hispanica. See *Scorzonera*.

Serpentaria virginiana. See *Aristolochia serpentaria*.

SERPENTINE. 1. In *Mineralogy*, a hard mineral, of which there are two kinds, the common and precious. The common is of a green colour, and is found in various mountains in Scotland and Ireland. Of the precious, there are two species: the splintery, found in Corsica, and is cut into snuff-boxes; and the conchoidal, which is of a leek-green colour.

2. In *Botany*,—See *Repandus*.

Serpentum lignum. See *Ophioxylum*.

Serpentum radix. See *Ophiorrhiza*.

SERPI'GO. (From *serpo*, to creep: because it creeps on the surface of the skin by degrees.) A ringworm, or tetter. See *Herpes*.

SERPY'LLUM. (*um, i.* n.; from ερπω, to creep, or *à serpendo*, by reason of its creeping nature.) See *Thymus serpyllum*.

Serpyllum citratum. See *Thymus*.

Serpyllum vulgare. See *Thymus*.

SERRA'TA. (*a, æ.* f.; from *serra*, a saw: so called from its serrated leaves.) See *Serratula*.

SERRA'TULA. (*a, æ.* f.; from *serra*, a saw: so called from its serrated leaves.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia æqualis*.

Serratula amara. The systematic name of a species of saw-wort, which i said to cure agues.

Serratula arvensis. The common creeping way-thistle. *Carduus arvensis*. *Carduus hæmorrhoidalis*. *Cirsium arvense*. *Ceanothus*. This plant was formerly used in an application to resolve scirrhous tumours, and is now considered useful against piles.

SERRA'TUS. (From *serra*, a saw.) Serrated. 1. Applied to leaves when the teeth are sharp, and resemble those of a saw, pointing towards the extremity of the leaf, as in *Urtica*; and to the *petals* of the *Dianthus arboreus*, and *Cystus polyfolius*.

Some leaves are called *duplicato-serrate*: these are doubly serrate, having a series of smaller serratures, intermixed with the larger; as in *Campanula trachelium*.

2. In *Anatomy*, applied to a muscle and other parts, from their serrated appearances.

Serratus anticus. See *Pectoralis minor*.

Serratus magnus. *Serratus major anticus*, of Douglas and Cowper. *Serratus major*, of Winslow. This muscle is so named by Albinus. Douglas calls it *Serratus major anticus*, but improperly, as it is seated at the side, and not at the anterior part of the thorax. It is a broad fleshy muscle, of a very irregular shape, and is in part covered by the subscapularis, pectoralis, and latissimus dorsi. It arises, by fleshy digitations, from the eight superior ribs, and is inserted fleshy into the whole basis of the scapula internally, between the insertion of the rhomboides and the origin of the subscapularis, being folded, as it were, about the two angles of the scapula. This muscle may easily be divided into two and even three portions. The latter division has been adopted by Winslow. The first of these portions is the thick and short part of the muscle that arises from the first and second ribs, and is inserted into the upper angle of the scapula, its fibres ascending obliquely backwards. The second portion arises from the second rib, behind the origin of the first portion, and likewise from the third and fourth ribs: this portion is thin and short, and its fibres run nearly in a horizontal direction, to be inserted into the basis of the scapula. The third, and most considerable portion, is that which arises from the fifth, sixth, seventh, and eighth ribs, and is inserted into the lower angle of the scapula. The serratus magnus serves to move the scapula forwards; and it is chiefly by the contraction of this muscle that the shoulder is supported, when loaded with any heavy weight. The ancients, and even many of the moderns, particularly Douglas and Cowper, supposed its chief use to be to dilate the thorax, by elevating the ribs; but it can only do this when the scapula is forcibly raised.

Serratus major anticus. See *Serratus magnus*.

Serratus minor anticus. See *Pectoralis minor*.

Serratus posticus inferior. This is a thin muscle, of considerable breadth, situated at the bottom of the back, under the middle part of the latissimus dorsi. It arises by a broad thin tendon, in common with that of the last-mentioned muscle, from the spinous processes of the two, and sometimes of the three inferior dorsal vertebræ, and from three

and sometimes four of those of the lumbar vertebræ. It then becomes fleshy, and ascending a little obliquely outwards and forwards, divides into three, and sometimes four fleshy slips, which are inserted into the lower edges of the three or four inferior ribs, at a little distance from their cartilages. Its use seems to be to pull the ribs downwards, backwards, and outwards.

SERRATUS SUPERIOR POSTICUS. This is a small, flat, and thin muscle, situated at the upper part of the back, immediately under the rhomboideus. It arises, by a broad thin tendon, from the lower part of the ligamentum colli, from the spinous process of the last vertebræ of the neck, and the two or three uppermost of the back, and is inserted into the second, third, fourth, and sometimes fifth ribs, by as many distinct slips. Its use is to expand the thorax, by pulling the ribs upwards and outwards.

SERRULA'TUS. (From *serrula*, a little saw.) Serrulate, or minutely serrate: applied to such saw-like edged leaves which have their teeth very fine; as in *Polygonum amphibium*.

SERTULA CAMPANA. See *Trifolium melilotus*.

SE'RUM. (*um*, *i*. n.; from *serus*, late: because it is the remainder of the milk, after its better parts have been taken from it.) 1. The whey of milk.

2. The yellow and somewhat greenish fluid, which separates from the blood when cold and at rest. See *Blood*.

SERUM ALUMINOSUM. Alum whey.

SERUM LACTIS. See *Whey*.

SERVETUS, MICHAEL, was born in 1509, and was cruelly burnt alive, in Geneva, in 1553. Servetus is numbered among those anatomists who made the nearest approach to the doctrine of the circulation of the blood: in his work entitled his *Apology*, which led to his death, the passage of the blood through the lungs is clearly stated. He was a man of great learning, and unfeigned piety, and generally admired for his worth and talents, and the discoveries which he made in medicine, as well as other branches of knowledge.

Service-tree. See *Sorbus aucuparia*.

SESAMOID. (*Sesamoideus*; from σησαμη, an Indian grain, and ειδος, likeness.) Like the sesamum seed.

SESAMOID BONES. *Ossa sesamoidea*. The little bones which are found at the articulations of the great toes, and sometimes at the joints of the thumbs; now and then we meet with them upon the condyles of the os femoris, at the lower extremity of the fibula, under the os cuboides of the tarsus, &c. They do not exist in the fœtus; but, as we advance in life, begin first to appear in a cartilaginous state, and, at length, in adult subjects, are completely ossified. Age and hard labour seem to add to the number and size of these bones, and, being most commonly found wherever the tendons and ligaments are most exposed to pressure from the action of the muscles, they are now generally considered by anatomists as the ossified parts of tendons and ligaments. These bones are usually smooth and flat on the side of the bone on which they are placed; their upper surface is convex, and, in general, adheres to the tendon that covers it, and of which it may, in some measure, be considered as a part. Although their formation seems to be owing to accidental circumstances, yet, as the two at the first joint of the great toe are much larger than the rest, and are seldom wanting in an adult, it would seem as if these bones were of some utility; perhaps by removing the tendons farther from the centre of motion, and thus increasing the power of the muscles. The ossa sesamoidea of the great toe and thumb seem likewise to be of use, by forming a groove for lodging the flexor tendons secure from compression.

Sesamoidal bones. See *Sesamoid bones*.

SE'SAMUM. (*um*, *i*. n.; an Egyptian word.) 1. The name of a genus of plants in the Linnæan system.

2. The pharmacopœial name of the oriental sesamum. See *Sesamum orientale*.

SESAMUM ORIENTALE. *Sesamum*. The seeds of this plant are in much esteem in South Carolina, where they are called *oily grain*; they are made into soups and puddings, after the manner of rice. Toasted over the fire, they are mixed with other ingredients, and stewed into a delicious food. The fresh seed affords a considerable quantity of a warm pungent oil, otherwise not unpalatable. In a year or two the pungency leaves it, when the oil is used for sallad, &c. The seeds of the *Sesamum indicum* are used in the same manner. The leaves are also used medicinally in some countries, being of a mucilaginous quality.

SE'SELI. (*i*. indeclinable n.; παρα το σαωσαι ελλον: because it is salutary for young fawns.) 1. The name of a genus of plants. Class, *Pentandria*; Order, *Digynia*.

2. An old name of the hart-wort. See *Laserpitium siler*.

SESELI CRETICUM. There is great confusion amongst the species of the seseli. The plant which bears this epithet in the pharmacopœias is the *Tordylium officinale*, of Linnæus. The seeds are said to be diuretic.

SESELI MASSILIENSE. See *Seseli tortuosum*.

SESELI TORTUOSUM. The hart-wort of Marseilles. *Seseli massiliense*. The seeds of this plant are directed for medicinal use, and have a warm biting taste, and a greater degree of pungency than those of the *Laserpitium*.

SESQUI. This word, joined with any number, weight, measure, &c., signifies one integer and a half; as *sesqui granum*, a grain and a half.

SESSILE. (*Sessilis*; setting close.) A term applied to any part of a plant that is not elevated on any kind of stalk: hence *flores sessiles*, *folia sessilia*, &c.

SETA. (*a*, *æ*. f.; from χαιτα, a bristle.) A bristle.

I. In *Anatomy*, a long rigid hair, such as is on the neck of swine.

II. A bristle, as applied in botanical language to a hollow, rigid, sharp-pointed pubescence, which either wounds the finger when it is pressed upon it, or gives a very harsh, scabrous, or prickly character to the surface of the stem, or of the leaves when the finger is rubbed over them.

Bristles are often arranged into *aculei* in elementary works, but they have more affinity to hairs. They are simple and compound.

1. *Setæ simplices* are of two kinds, awl-shaped and spindle-shaped.

a. The *subulate* is the most common of the simple bristles: it is slightly curved, and gradually tapering from the base to the apex, which is rigid and very sharp. These bristles, when they all incline in the same direction, produce the scabrous character of some leaves, as in *Symphytum orientale*. A variety of the awl-shaped bristle, found on the stem and branches of the sensitive plant, is barbed on its sides; and another variety, as exemplified on the leaves of the *Borago officinalis*, is seated on a vesicular tubercle containing a fluid, which is ejected through the bristle when it is compressed, so as to wound the finger, and which, being left in the wound, excites inflammation in the part. But the sting of the nettle is the best example of this form of bristle.

b. The *fusiform* is, as its name implies, thickest in the centre, and accumulated at each end. It lies parallel to the surface of the leaf, to which it is affixed by a very small footstalk, is hollow, and contains a coloured liquid, which apparently enters it through the footstalk. This form of bristle is peculiar to the genus *Malpighia*.

2. *Setæ compositæ*. These are almost always solid. The term comprehends two species of bristles, *furcatæ* and *fasciculatæ*.

a. The forked are, in some instances, merely rigid hair-like bodies, terminating in two or three diverging points, as in *Thrincia hispida*; but in other instances, as the stems and leaves of the hop plant, the stalk of the bristle, which is supported on a firm cellular tubercle, is very short, and its forking extremities resemble two flattish awl-shaped bristles, pointing in opposite directions.

b. The *fasciculated* consist of a number of simple, straight bristles, diverging from a papillary knob; as in *Cactus flagelliformis*.

There is still another species of pubescence which cannot properly be arranged with the pilus or seta: it is found on a species of house-leek, extending like a very fine thread, stretching from the tip of one leaf to that of another, and resembling so exactly a spider's web, that the plant has been named *Arachnoideum*. — *Thompson*.

Bristles are also distinguished into *erect*, as in *Leontodon hirtum*; *hamose*, as in the pericarp of the *Arctium lappa*; *stellate* and *plumose*. The bristles of plants have received other denominations:—

1. *Striga*, that variety of the subulate which is seen in *Borago officinalis*.

2. *Hamus*, that which is hooked at its extremity; as in *Galium aperine*, *Caucalis daucoides*, &c.

3. *Glochis*, when several sharp tooth-like processes are turned back from the apex of the bristle.

5. *Arista*, a long bristle proceeding from the husk of grasses; as in *Hordeum vulgare*.

6. The fruitstalk of mosses, which is either solitary, aggregate, terminal, axillary, or lateral.

SETA'CEUM. (*um*, *i*. n.; from *seta*, a bristle: because horse-hairs were first used to keep open the wound.) See *Seton*.

SETACEOUS. *Setaceus*. Bristly. Applied to various parts of plants; as the petals of *Trapæolum majus*.

SETIFO'RMIS. Setiform; bristly. Applied to parts of plants; as the nectary of the *Periploca græca*.

SETON. *Setaceum*. An artificial ulcer made under the skin by means of an instrument called the seton needle, which carries with it a portion of thread or silk, that is moved backwards or forwards, and thus keeps up a constant irritation.

SETOSUS. Setose; bristly. Applied to parts of plants; as the receptacle of the *Echinops sphærocephalus*, and of *Centaurea*.

SETTERWORT. See *Helleborus fœtidus*.

SEVERINUS, Marcus Aurelius, was born in Calabria, in 1580. Many publications were written by him, evincing much boldness and originality of thought. His treatise on *Abscesses*, in eight books, passed through many editions. He paid considerable attention to comparative anatomy, on which subject some of his works are composed.

SE'VUM. Suet. See *Fat*.

Sevum ceti. See *Physeter macrocephalus*.

Sevum ovile. *Sevum ovillum*. Mutton suet.

SEXUAL. *Sexualis*. Appertaining to the sexes.

Sexual actions. Sexual functions. Those functions proper to each sex, by which the species is propagated; as the excretion of semen in men; menstruation, conception, the evolution of the fœtus, parturition, &c. in women.

Sexual organs. See *Generation, organs of*, *Stamen*, and *Pistillum*.

Sexual system of plants. This system, as invented by the immortal Linnæus, is founded on the parts of fructification, viz. the stamens and pistils. These having been observed with more accuracy since the discovery of the uses for which Nature has assigned them, a new set of principles has been derived from them, by means of which the distribution of plants has been brought to a greater precision, and rendered more comformable to true philosophy, in this system, than in any one of those which preceded it. The author does not pretend to call it a natural system; he gives it as artificial only,

and modestly owns his inability to detect the order pursued by nature in her vegetable productions: but of this he seems confident, that no natural order can ever be framed without taking in the materials out of which he has raised his own; and urges the necessity of admitting artificial systems for convenience, till one truly natural shall appear. Linnæus has given us his *Fragmenta Methodi Naturalis*, in which he has made a distribution of plants under various orders, putting together in each such as appear to have a natural affinity to each other: this, after a long and fruitless search after the natural method, he gives as the result of his own speculation, for the assistance of such as may engage in the same pursuit.

Not able to form a system after the natural method, this great man was more fully convinced of the absolute necessity of adopting an artificial one. For the student to enter into the advantages this system maintains over all others, it is necessary that he be instructed in the science of botany, which will amply repay him for his enquiry. See *Classification*, and *Fructification*.

Such flowers as want the stamens, and have the pistil, are termed *female*.

Those which have the stamens, and want the pistils, are called *male*.

Flowers which have both stamens and pistils are said to be *hermaphrodite*.

Neuter flowers are such as have neither stamens nor pistils.

Hermaphrodite flowers are sometimes distinguished into *male hermaphrodites* and *female hermaphrodites*. This distinction takes place when, although the flower contains the parts belonging to each sex, one of them proves abortive or ineffectual: if the defect be in the stamina, it is a female hermaphrodite; if in the pistil, a male one.

Plants, in regard to sex, take also their denominations in the following manner:—

1. *Hermaphrodite plants* are such as bear flowers *upon the same root* that are all hermaphrodite.

2. *Androgynous plants*, are such as, *upon the same root*, bear both male and female flowers, distinct from each other, that is, in separate flowers.

3. *Male plants*, such as bear male flowers only upon the same root.

4. *Female plants*, such as bear female flowers only upon the same root.

5. *Polygamous plants*, such as, either on the same or on different roots, bear hermaphrodite flowers, and flowers of either or both sexes.

SEYDSCHUTZ. See *Sedlitz*.

SHADDOCK. The fruit of the *Citrus decumana*; a species of orange.

SHAFT. See *Stylus*.

SHAGGY. See *Hirsutus*, and *Chorion*.

SHALLOT. Eschalotte. The *Allium ascalonicum*, of Linnæus; an useful esculent root, possessing all the virtues of garlic, with less pungency.

SHARP. 1. See *Acutus*.

2. Samuel, an able and distinguished surgeon in the middle of the last century but one. He contributed to the improvement of his art by two valuable publications, which passed through many editions, and were translated into several foreign languages. The first of these was a *Treatise on the Operations of Surgery*, with an Introduction on the Nature and Treatment of Wounds, &c. The other work was entitled, *A Critical Enquiry into the present State of Surgery*, first printed in 1750.

Sharp-pointed. See *Mucronatus*.

Sharp-pointed dock. See *Rumex acutus*.

SHAW, Peter, a physician of considerable reputation in the early part of the last century. His first publication was entitled *New Practice of Physic*, in two volumes, 1726, containing a brief Description of Diseases, and their Treatment. He then published an *Enquiry into the Virtues of the Scarborough Spa Waters*; and, about the same time, his *Chemical Lectures*, which was deemed a scientific work, and translated into French. He also edited the Edinburgh Dispensatory; and gave to the world some other minor publications.

SHEATH. See *Vagina*, and *Spatha*.

SHEATHING. See *Vaginans*.

SHEDDING. See *Caducus*.

Shedding-teeth. See *Teeth*.

SHELL. See *Testæ preparatæ*, and *Legumen*.

SHERBET. A compound liquor prepared for punch before the spirit is added.

Shield-laver. See *Ulva umbilicalis*.

SHINGLES. (A corruption of the French word *ceingle*, which means a belt.) See *Herpes*.

SHOOT. See *Surculus*.

Short-sightedness. See *Myopia*.

SHRIMP. See *Cancer crangon*.

SHRIVELLING. See *Marcescens*.

SHRUB. 1. A low bushy tree. See *Frutex*.

2. A spirituous liquor composed of the juice of oranges, mixed with brandy and rum.

SHRUBBY. See *Fruticosus*.

SI'AGON. Σιαγων. The jaw.

Siagona'gra. (From σιαγων, the jaw, and αγρα, a seizure.) The gout in the jaw.

SIALAGOGUE. (*Sialagogus*; from σιαλον, saliva, and αγω, to expel.) That which excites an uncommon flow of saliva: such are mercurial preparations, pyrethrum, &c. They are divided into *sialagoga topica*, as scilla, nicotiana, piper, &c.; and *sialagoga interna*, as the various preparations of mercury.

SIBBENS. A name in Scotland for a disease resembling syphilis.

SIBERITE. Red tourmaline.

Si'ccans. (From *sicco*, to dry.) Having a drying property: applied to medicines.

Siccha'sia. (From σικχος, weak, weary.) An unpleasant lassitude and debility peculiar to women with child.

SICKNESS. Sickness of stomach occurs

under three forms, — nausea, retching, and vomiting.

Nausea is a tendency to vomit, but there is no rejection. It depends on a disposition in the peristaltic motion of the bowels and stomach to become inverted: if the inversion take place, retching and vomiting result; but if it do not, the effect is merely a nausea. These affections may exist separately, for the cause may be of a kind or strength sufficient to throw the stomach at once into a state of violent inversion, and consequently to produce vomiting without the intermediate changes. It is nevertheless curious, and of great importance, to observe the different and opposite effects produced on the animal frame by these stages of one and the same thing. Nausea lowers the pulse, contracts the small vessels, occasions cold perspiration, severe rigors, and trembling, and diminishes, as long as it lasts, the action, and even the general powers of life. The act of retching, and vomiting more especially, on the contrary, rouses rather than depresses; puts to flight all the preceding symptoms, and often restores the system to itself.

Nausea and vomiting are sometimes idiopathic affections, but more frequently symptomatic and sympathetic: hence they occur in colic, cholera, in the accession of fevers, repelled gout, many affections of the head.

From such a variety of causes, it is but natural to conclude the remedies must be very various. The sympathetic and symptomatic affections require the removal of the primary disease. The best palliatives against all nauseas and vomiting, are carbonic acid gas, in form of an effervescing saline draught, and small doses of opium. Lemon ice, or very cold lemonade, is often serviceable, and more especially if made with a strong infusion of the *Mentha viridis*.

Sickness, country. See *Nostalgia.*

Sickness, home. See *Nostalgia.*

Sickness, love. See *Pathemata animi.*

SI'CULA. (Diminutive of *sica*, a short sword: so called from its dagger-like root.) The beet.

SICYE'DON. (From σικυος, a cucumber.) A transverse fracture, like a cucumber broken in two parts.

SICYO'NE. (From σικυος, a cucumber or gourd: so named from its resemblance to a gourd.) A cucurbit.

SIDERA'TIO. (*o, onis.* f.; from *sidus*, a planet: because it was thought to be produced by the influence of the planets.) An apoplexy; a blast; a slight erysipelas.

SIDERUM. Phosphuret of iron.

SIENITE. A compound granular aggregated rock, composed of felspar and hornblende, and sometimes quartz and black mica. The hornblende is the characteristic ingredient, and distinguishes it perfectly from granite, with which it is often confounded; but the felspar, which is almost always red, and seldom inclines to green, forms the most abundant and essential ingredient of the rock. Some varieties contain a very considerable portion of quartz and mica, but little hornblende. This is particularly the case with the Egyptian varieties, and hence these are often confounded with real granite.

SIGESBE'CKIA. (*a, æ.* f.; so named by Linnæus himself, in memory of his antagonist, Dr. J. G. Sigesbeck, Superintendent of the Physic Garden at Petersburg, who raised various objections against the sexes of plants.) The name of a genus of plants. Class *Syngenesia*; Order, *Polygamia superflua.*

SIGESBECKIA ORIENTALIS. The systematic name of a plant which is said to be useful in removing strangury, and in calculous diseases, gout, and fluor albus.

SIGHT. See *Vision.*

Sight by day. See *Hemeralopia.*

Sight by night. See *Nyctalopia.*

Sight, dimness of. See *Caligo.*

Sight, lateral. See *Dysopia.*

SIGILLA'TUS. Sealed: applied formerly to several earths, which were formed into little cakes and stamped or sealed, and were called *terræ sigillatæ.*

SIGI'LLUM. (*um, i.* n.; diminutive of *signum*, a sign.) A seal or image.

SIGILLUM BEATÆ MARIÆ. An old name of black briony, or *Tamus communis.*

SIGILLUM HERMETICUM. See *Hermetic seal.*

SIGILLUM SOLOMONIS. (Called *sigillum* because there is the resemblance of an impression on the root.) See *Convallaria polygonatum.*

SIGMOID. (*Sigmoides*; from the Greek letter σιγμα, anciently written C, and ειδος, a likeness.) Resembling the Greek letter sigma. Applied to several parts, as the valves of the heart, the cartilages of the trachea, the semilunar apophysis of the bones, and the flexure or turn of the colon.

Sigmoid flexure. See *Intestine.*

Sigmoid process. Valves of the heart.

SIGNA CRITICA. See *Crisis.*

SIGNA DIAGNOSTICA. See *Diagnosis.*

SI'GNUM. A sign: applied to symptoms. See *Semeiotice.*

SI'LER. See *Laserpitium siler.*

SILEX. (*ex, icis.* m. and f.; from χαλιξ.) A flint.

SI'LICA. (*a, æ.* f.; from *selag*, Hebrew.) One of the primitive earths, and the principal constituent part of the silex or flint, and of a very great number of the compound earths and stones forming the immense mass of the solid nucleus of the globe. It is the basis of almost all the scintillating stones, such as *flint, rock crystal, quartz, agate, calcedony, jasper,* &c. The sand of rivers, and of the sea-shore, chiefly consist of it. It is deposited in vegetable substances, forming petrified wood, &c. It is likewise precipitated from certain springs in a stalactical form. It has been discovered in several waters in a state of solution, and is found in many plants, particularly grasses and equisetums. A good method of obtaining silica exceedingly pure is to separate it from fluoric acid.

In consequence of Sir H. Davy's researches on the metallic bases of the alkalies and earths, this earth has been recently regarded as a compound of a peculiar combustible principle with oxygene. If we ignite powdered quartz with three parts of pure potash in a silver crucible, dissolve the fused compound in water, add to the solution a quantity of acid, equivalent to saturate the alkali, and evaporate to dryness, we shall obtain a fine gritty powder, which, being well washed with hot water, and ignited, will leave pure silica. By passing the vapour of potassium over silica in an ignited tube, Sir H. Davy obtained a dark-coloured powder, which apparently contained silicon, or silicium, the basis of the earth. Like boron and carbon, it is capable of sustaining a high temperature without suffering any change.

SILICON. The base of silica.

SILI'CULA. (*a, æ.* f.; a diminutive of *siliqua.*) A pouch, or pod, that is scarcely longer than broad. It is,

1. *Orbiculate,* in *Thlaspi arvense.*
2. *Cordate,* in *Isatis armena.*
3. *Obcordate,* in *Thlaspi bursæ pastoris, alpestre,* and *Myagrum perfoliatum.*
4. *Lanceolate,* in *Lepidium alpinum,* and *Isatis tinctoria.*
5. *Angulate,* in *Myagrum ægyptiacum.*
6. *Emarginate,* in *Cochlearia.*
7. *Drupaceous,* if the membrane is double, soft externally, and hard within; as in *Erucago,* and *Bunias.*

SILICULOSA. The name of the first order of the *Tetradynamian* class of the Linnæan system of plants, containing such as have a broad short pod.

SILICUM. (*um, i.* n.; from *silex,* a flint.) The base of the earth called *silica.* See *Silica.*

SILIGO. (*o, inis.* f. Σιλιγνις.) Fine wheat or rye.

SI'LIQUA. (*a, æ.* f.; from *silo,* a nose turned up, a hooked nose.) A long, dry, membranaceous pericarpium, pod, or seed-vessel, of two valves, separated by a linear receptacle, along the edges of each of which the seeds are arranged alternately. The dissepiment is a partition dividing a siliqua and silicula into two loculaments, or cells. Botanists distinguish a pod into,

1. *Round;* as in *Fumaria lutea.*
2. *Compressed,* with levelled valves; as in *Cheiranthus annuus.*
3. *Four-edged;* as in *Erysimum, Cheiranthus erysimoides,* and *Brassica orientalis.*
4. *Articulate,* in *Raphanus raphanistrum.*
5. *Tortulose,* which has elevated nodes here and there; as in *Raphanus sativus.*
6. *Rostrate,* having the partition very prominent at the apex; as in *Sinapis alba.*

Siliqua dulcis. See *Ceratonia siliqua.*

Siliqua hirsuta. See *Dolichos pruriens.*

SILIQUA'STRUM. (From *siliqua,* a pod: named from its pods.) Judas-tree. The capsicum, or Guinea pepper, was so termed by Pliny. See *Capsicum.*

Siliquosa indica. An American plant. Its juice is alexipharmic.

Siliquosæ. 1. The name of the second order of the class *Tetradynamia,* of the Linnæan system of plants, containing such as have long pods.

2. The name of an order in Linnæus's Fragments of a Natural Method, consisting of such as have a siliqua or silicula, the flower tetradynamous and cruciate.

SILIQUO'SUS. (From *siliqua,* a pod.) Having pods.

SILK-WORM. See *Bombyx.*

Silk-worm, acid of. See *Bombic acid.*

Si'lphium. (*Zalaph,* Arabian.) Assafœtida, or the plant which affords it.

SILVER. *Argentum.* A metal found both native and mineralised, and combined with lead, copper, mercury, cobalt, sulphur, arsenic, &c. Its principal ores are the following:—*Native silver; antimoniated silver; sulphuret of silver; sulphuretted oxide of silver and antimony; muriate of silver; native oxide of silver,* &c. It is found in different parts of the earth. The mines of the Erzgebürge or the metalliferous rocks of Mexico and Potosi, Bohemia, Norway, Transylvania, &c. are the richest.

Native silver possesses all the properties of this metal, and it appears in series of octahedra inserted in one another; in small capillary flexible threads intwined together; in plates; or in masses. The colour of native silver is white, often tarnished. Silver alloyed with gold forms the *auriferous native silver ore.* The colour of this ore is a yellowish white. It has much metallic lustre. The *antimoniated silver ore* belongs to this class. Silver, combined with sulphur, forms the *sulphuretted oxide of silver,* or *vitreous silver ore.* This ore occurs in masses, sometimes in threads, and sometimes crystallised in cubes or regular octahedra. Its colour is dark bluish grey, inclined to black. Its fracture is uneven, and its lustre metallic. It is soft enough to be cut with a knife. It is sometimes found alloyed with antimony (grey silver ore). Silver united to muriatic acid forms the *corneous silver ore* (*muriate of silver*), which appears under different colours and shapes. Silver united to oxygene constitutes the *calciform silver ore,* of which there are several varieties. The colour of these ores is a lead-grey, or greyish black. They occur massive, disseminated, and crystallised.

Germany, and other countries of Europe, but more especially Peru and Mexico in South America, contain the principal silver mines. There are, however, silver mines in Ireland, Norway, France, and many other parts in the world.

Method of obtaining Silver.—Different methods are employed in different countries to extract silver from its ores. In Mexico, Peru, &c. the mineral is pounded, roasted, washed, and then triturated with mercury in vessels filled with water. A mill is employed to keep the whole in agitation. The silver combines by that means with the mercury. The alloy thus obtained is afterwards washed,

to separate any foreign matters from it, and then strained and pressed through leather. This being done, heat is applied to drive off the mercury from the silver, which is then melted and cast into bars or ingots.

In order to extract silver from sulphuretted or vitreous silver ore, the mineral is roasted, and then melted with lead and borax, or some other flux to assist the fusion. By the first operation the sulphur is volatilised, and by the second the silver is obtained, though for the most part alloyed with other metals, from which it is separated by cupellation, or fusion with lead or bismuth.

Silver is the whitest of all metals, considerably harder than gold, very ductile and malleable, but less malleable than gold; for the continuity of its parts begins to break when it is hammered out into leaves of about the hundred and sixty thousandth of an inch thick, which is more than one third thicker than gold leaf; in this state it does not transmit the light. Its specific gravity is from 10·4 to 10·5. It ignites before melting, and requires a strong heat to fuse it. The heat of common furnaces is insufficient to oxidise it; but the heat of the most powerful burning lenses vitrifies a portion of it, and causes it to emit fumes, which, when received on a plate of gold, are found to be silver in the metallic state. It has likewise been partly oxidised by twenty successive exposures to the heat of the porcelain furnace at Sevres. By passing a strong electric shock through a silver wire, it may be converted into a black oxide; and, by a powerful galvanic battery, silver leaf may be made to burn with a beautiful green light. Lavoisier oxidised it by the blowpipe and oxygene gas; and a fine silver wire burns in the kindled united stream of oxygene and hydrogene gases. The air alters it very little, though it is disposed to obtain a thin purple or black coating from the sulphureous vapours which are emitted from animal substances, drains, or putrefying matters. This coating, after a long series of years, has been observed to scale off from images of silver exposed in churches; and was found, on examination, to consist of silver united with sulphur.

There seems to be only one *oxide of silver*, which is formed by intense ignition in an open vessel.

Silver combines with *chlorine*, when the metal is heated in contact with the gas. This chloride is, however, usually prepared by adding muriatic acid or a muriate to nitrate of silver.

The *sulphuret of silver* is a brittle substance, of a black colour and metallic lustre. It is formed by heating to redness thin plates of silver stratified with sulphur. It consists of 13·875 silver + 2 sulphur.

Silver is soluble in the sulphuric acid when concentrated and boiling, and the metal in a state of division.

The nitric acid, if somewhat diluted, dissolves silver with great rapidity, and with a plentiful disengagement of nitrous gas.

The nitric acid dissolves more than half its weight of silver, and the solution is very caustic; that is to say, it destroys and corrodes animal substances very powerfully.

The solution of silver, when fully saturated, deposits thin crystals as it cools, and also by evaporation. These are called *lunar nitre*, or *nitrate of silver*. A gentle heat is sufficient to fuse them, and drive off their water of crystallisation. In this situation the nitrate, or rather subnitrate, for the heat drives off part of the acid, is of a black colour, may be cast into small sticks in a mould, and then forms the lunar caustic used in surgery.

The *sulphate of silver*, which is formed by pouring sulphuric acid into the nitric solution of silver, is sparingly soluble in water; and on this account forms crystals, which are so small that they compose a white powder.

The muriatic acid precipitates from nitric acid the saline compound called *luna-cornea*, or horn-silver; which has been so distinguished because, when melted and cooled, it forms a semitransparent and partly flexible mass, resembling horn.

If any salt with base of alkali, containing the muriatic acid, be added to the nitric solution of silver, the same effect takes place by double affinity; the alkaline base uniting with the nitric acid, and the silver falling down in combination with the muriatic acid.

Sulphuretted hydrogene soon tarnishes the surface of polished silver, and forms on it a thin layer of sulphuret.

The alkaline sulphurets combine with it by heat, and form a compound, soluble in water. Acids precipitate sulphuret of silver from this solution.

Phosphorus left in a nitric solution of silver, becomes covered with the metal in a dendritic form.

Most metallic substances precipitate silver in the metallic state from its solution.

Silver unites with *gold* by fusion, and forms a pale alloy, as has been already mentioned, in treating of that metal. With platina it forms a hard mixture, rather yellower than silver itself, and of difficult fusion.

Silver very readily combines with *mercury*. A very sensible degree of heat is produced, when silver-leaf and mercury are kneaded together in the palm of the hand. With *lead* it forms a soft mass, less sonorous than pure silver. With *copper* it becomes harder and more sonorous, at the same time that it remains sufficiently ductile. This mixture is used in the British coinage. The mixture of silver and *iron* has been little examined. With *tin* it forms a compound, which has been said to be brittle. With *bismuth*, *arsenic*, *zinc*, and *antimony*, it forms brittle compounds.

The uses of silver are well known: it is chiefly applied to the forming of various utensils for domestic use, and as the medium of exchange in money. Its disposition to assume a black colour by tarnishing, and its softness, appear to be the chief objection to its use in

the construction of graduated instruments for astronomical and other purposes, in which a good white metal would be a desirable acquisition. The nitrate of silver, besides its great use as a caustic, has been employed as a medicine. See *Argenti nitras*.

SILVER-WEED. See *Potentilla*.

SIMAROU'BA. (*a, æ.* f.; a patronymic name of America.) See *Quassia*.

SI'MIÆ LAPIS. See *Bezoar simiæ*.

SIMPLE. *Simplex*. Applied very generally in every department of nature to designate that which is not compound.

Simple affinity. See *Affinity, simple*.

Simple attraction. See *Affinity, simple*.

Simple leaf. See *Leaf*.

Simple substance. See *Element*.

SI'NAPE. See *Sinapis nigra*.

SINAPELÆ'UM. (*um, i.* n.; from σιναπι, mustard, and ελαιον, oil.) Oil of mustard.

SINA'PI. See *Sinapis*.

SINA'PIS. (*is, is.* f., and *e, is.* n., and *i.* n. indeclinable; so called because, σινει ωπας, it hurts the eyes.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetradynamia*; Order, *Siliquosa*. Mustard.

2. The pharmacopœial name of the black mustard. See *Sinapis nigra*.

SINAPIS ALBA. The systematic name of the white mustard plant, which is directed for medicinal use in the Edinburgh pharmacopœia. It is somewhat less pungent than the black species. See *Sinapis nigra*.

SINAPIS NIGRA. The systematic name of the common black mustard: called also, *Napus, Eruca, Sinape*, and *Sinapi*.

Sinapis — siliquis glabris racemo appressis, of Linnæus. The seeds of this species of mustard, which are directed by the London College, and those of the *Sinapis alba*, which are preferred by that of Edinburgh, manifest no remarkable difference to the taste, nor in their effects, and therefore answer equally well for medicinal and culinary purposes. They have an acrid, pungent taste, and, when bruised, this pungency show its volatility by powerfully affecting the organs of smell. Mustard is considered as capable of promoting appetite, assisting digestion, attenuating viscid juices, and, by stimulating the fibres, it proves a general remedy in paralytic affections. Joined to its stimulant qualities, it frequently, if taken in considerable quantity, opens the body, and increases the urinary discharge, and hence it has been found useful in dropsical complaints. Externally, flour of mustard is frequently used, mixed with vinegar, as a stimulant or sinapism.

SINAPI'SMUS. (*us, i.* m.; from *sinapis*, of which it is made.) *Sinapismum. Cataplasma sinapeos.* A sinapism, or mustard poultice. A term given to a mixture of mustard and vinegar, in form of poultice, generally applied to the calves of the legs or soles of the feet, as a stimulant, and employed in low states of fevers and other diseases, and intended to supersede the use of a blister. See *Cataplasma sinapis*.

SINA'PIUM. (*um, ii.* n.; from σιναπι, mustard.) An infusion or decoction of mustard-seed.

SI'NCIPUT. (*ut, itis.* n.) The forepart of the head. See *Caput*.

SI'NE PARI. Several muscles, veins, arteries, &c. are so called which are without a fellow. See *Azygos*.

Single elective attraction. See *Affinity*.

SINGU'LTUS. (*us, ûs.* m.) The hiccough. A convulsive motion of the diaphragm and parts adjacent. The most common cause is some accidental irritation of the stomach from food or wind, and hence it is so common amongst children. It is also produced by the irritation of worms, acidity and bilious condition of the stomach. These excite the diaphragm to a spasmodic contraction, to which it must be predisposed by debility. It is usually removed in children by warm carminatives, and in youths and adults by a little cold water, camphire julep, or volatile alkali.

It is sometimes, however, very troublesome, and is then mostly a symptomatic or sympathetic affection. In the latter state, it results from gall-stones, hepatic diseases, ulcers of the stomach, and many diseases of the abdominal viscera. Hiccough is one of the nervous symptoms which sometimes becomes habitual, and will not yield to remedies. An instance occurred, in a delicate young lady, whose digestive organs had been a long time in an ill condition, in which a hiccough continued for ten months, very strong and agitating during the day, but more passive during the night. During the whole of this period, there were seldom more than three hours' uninterrupted sleep in the night; and the debility soon became so great as to oblige her to keep in bed. No medicines nor topical applications did any good. When opiates produced sleep, the disease returned on waking. She was at last cured by a fright. Many similar cases are on record.

SINUA'TUS. Sinuated: indented. Applied to leaves which are cut into rounded or wide openings, deeply scolloped, as it were, the lobes standing asunder, as if part of the leaf had been cut off; as that of the oak and turnip, and as in *Statice sinuata*.

SI'NUS. (*us, ûs.* m.) I. A cavity or depression.

II. In *Surgery*, a long, narrow, hollow track, leading from some abscess, diseased bone, &c.

III. The veins of the dura mater are termed sinuses. They are several in number, the principal of which are, 1. The *longitudinal sinus*, which rises anteriorly from the crista galli, ascends and passes between the two laminæ of the falciform process to where this process ends. It then opens into, 2. *Two lateral sinuses*, distinguished into right and left, which lie in the crucial spine of the os occipitis. 3. The *inferior longitudinal*, which

is a small sinus situated at the acute inferior margin of the falx.

SINUS COXÆ. The acetabulum.

SINUS GENÆ PITUITARIUS. See *Antrum of Highmore*.

Sinus, lateral. See *Lateral sinuses.*

Sinus, longitudinal. See *Longitudinal sinus.*

Sinus, maxillary. See *Antrum.*

SINUS MULIEBRIS. The vagina.

SINUS VENÆ PORTARUM. The entrance into the liver.

SI'PHILIS. See *Syphilis.*

SIPHO'NIA. (*a, æ.* f.; from σιφων, a pipe: alluding to the uses made of the exudation of the tree, called Indian rubber.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Monadelphia.*

SIPHONIA ELASTICA. The systematic name of the elastic resin-tree. See *Caoutchouc.*

SIRI'ASIS. (*is, is.* f.; from σιρος, a cavity.) An inflammation of the brain, said to be peculiar to children, and attended with a hollowness of the eyes and depression of the fontanella.

SI'RIUM MYRTIFOLIUM. The tree which is supposed by some to afford the yellow saunders. See *Santalum album.*

SI'SARUM. (From *sisa,* a Hebrew word.) See *Sium sisarum.*

SI'SER. (*er, eris.* m. and n.) See *Sium sisarum.*

SI'SON. (*on, i.* n. Σισων. A name adopted by Dioscorides.) The name of a genus of plants. Class, *Pentandria;* Order, *Monogynia.*

SISON AMMI. The plant which affords the ammi verum of the shops. The seeds of this plant, *Sison — foliis tripinnatis, radicalibus linearibus, caulinis setaceis, stipularibus longioribus,* of Linnæus, have a grateful smell, somewhat like that of origanum, and were formerly administered as a carminative.

SISY'MBRIUM. (*um, ii.* n.; from σισυβος, fringe: so named from its fringed roots.) The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliquosa.*

SISYMBRIUM NASTURTIUM. The systematic name of the water-cress: called also, *Nasturtium aquaticum, Laver odoratum, Cratevæ sium, Cressi,* and *Cardamines.*

This indigenous plant, *Sisymbrium — siliquis declinatis, foliis pinnatis, foliolis subcordatis,* of Linnæus, grows plentifully in brooks and stagnant waters. The leaves have a moderately pungent taste, emit a quick penetrating smell, like that of mustard-seed, but much weaker. Water-cresses obtain a place in the materia medica for their antiscorbutic qualities, which have been long very generally acknowledged by physicians. The most pleasant way of administering them is in form of a salad.

SISYMBRIUM SOPHIA. The systematic name of the herb sophia: which is also called, *Sophia chirurgorum.* It is now almost banished from practice, though formerly in high estimation in the cure of wounds. It has been given internally in hysterical affections and uterine hæmorrhages, and the seeds are said to be efficacious in destroying intestinal worms.

SITIOLOGY. (*Sitiologia, æ.* f.; from σιτος, aliment, and λογος, a discourse or treatise.) A doctrine or treatise on aliment.

SITIS. (*is, is.* f.) See *Thirst.*

SI'UM. (*um, i.* n.; from σειω, to move: from its agitation in water.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

2. The pharmacopœial name of the creeping water parsnip. See *Sium nodiflorum.*

SIUM AROMATICUM. The amomum is sometimes so called.

SIUM NINSI. The systematic name of the plant, the root of which is called, *radix ninsi, Ninzin,* and *Nindsin.* This root was long supposed to be the same as ginseng. It now appears, however, to be the produce of this plant. It possesses similar, though weaker properties, than ginseng.

SIUM NODIFLORUM. The systematic name of the creeping water-parsnep; called also, *Berula gallica.* This plant was admitted into the London Pharmacopæia in the character of an antiscorbutic. It is not nauseous, and children take it readily if mixed with milk.

SIUM SISARUM. The siser or skirret. The root of this plant is eatable, but now out of use, though cultivated in the days of Gerarde and Parkinson. Its flavour is said to be aromatic, with a sweetness not acceptable to every palate, and of a flatulent and indigestible quality.

SKATE. See *Raia batis.*

SKELETON. *Sceletos.* When the bones of the body are dried and preserved in their natural situation, and deprived of the flesh, the assemblage is called a skeleton; and the assemblage of all the bones of the animal, when hung in their respective situations by means of wire, is denominated an artificial skeleton, in opposition to a natural one, when the bones are retained in their proper places by means of their natural ligaments. See *Os.*

SKIN. The skin, commonly so called, though apparently a simple membrane, is in reality laminated, and consists of three membranes: the outermost is called the scarf-skin; immediately under this is a pulpy membrane called the rete mucosum, which is between the true and the scarf skins. See *Epidermis, Rete Mucosum,* and *Cutis.*

Skin, scarf. See *Epidermis.*

SKINK. See *Scincus.*

SKIRRET. See *Sium sisarum.*

SKORODITE. An arsenate of iron, without copper, of a green colour, found in quartz and hornstone in primitive rocks in Saxony.

SKULL. *Cranium.* The skull, or that bony box which contains the brain. It forms the forehead, and every part of the head, except the face. It consists of eight bones, namely, one os frontis, one os occipitis, one

os sphenoides, one os ethmoideum, two ossa temporalia, and two ossa parietalia.

Slaters. See *Oniscus asellus.*

SLAVERING. See *Drivelling.*

SLEEP. *Somnus.* That state of the body in which the internal and external senses and voluntary motions are not exercised. The end and design of sleep is both to renew, during the silence and darkness of the night, the vital energy which has been exhausted through the day, and to assist nutrition.

When the time of being awake has continued for sixteen or eighteen hours, we have a general feeling of fatigue and weakness; our motions become more difficult, our senses lose their activity, the mind becomes confused, receives sensations indistinctly, and governs muscular contraction with difficulty. We recognise, by these signs, the necessity of *sleep*: we choose such a position as can be preserved with little effort: we seek obscurity and silence, and sink into the arms of oblivion.

The man who slumbers loses successively the use of his senses. The sight first ceases to act by the closing of the eyelids, the smell becomes dormant only after the taste, the hearing after the smell, and the touch after the hearing; the muscles of the limbs, being relaxed, cease to act before those that support the head; and these before those of the spine. In proportion as these phænomena proceed, the respiration becomes slower and more deep; the circulation diminishes; the blood proceeds in greater quantity to the head; animal heat sinks; the different secretions become less abundant. Man, although plunged in this sopor, has not, however, lost the feeling of his existence: he is conscious of most of the changes that happen in him, and which are not without their charms: ideas, more or less incoherent, succeed each other in his mind: he ceases, finally, to be sensible of existence —he is *asleep*.

During sleep, the circulation and respiration are retarded, as well as the different secretions, and, in consequence, digestion becomes less rapid.

It is not well explained on what foundation many authors say that absorption alone acquires more energy. Since the nutritive functions continue in sleep, it is evident that the brain has ceased to act, only with regard to muscular contraction, and as an organ of intelligence; and that it continues to influence the muscles of respiration, the heart, the arteries, the secretions, and nutrition.

Sleep is *profound* when strong excitants are necessary to arrest it: it is *light* when it ceases easily.

Sleep, such as it has been described, is perfect; that is, it results from the suspension of the action of the relative organs of life, and from the diminution of the action of the nutritive functions; but it is not extraordinary for some of the relative organs of life to preserve their activity during sleep, as it happens when one sleeps standing: it is also frequent for one or more of the senses to remain awake, and transmit the impressions which it perceives to the brain; it is still more common for the brain to take cognisance of different internal sensations that are developed during sleep, as wants, desires, pain, &c. The understanding itself may be in exercise in man during sleep, either in an irregular and incoherent manner, as in most dreams, or in a consequent and regular manner, as it happens in some persons happily organised.

The turn which the ideas assume during sleep, or the nature of dreams, depends much on the state of the organs. If the stomach is overcharged with indigested food, the respiration difficult on account of position, or other causes, dreams are painful, fatiguing; if hunger is felt, the person dreams of eating agreeable food; if it is the venereal appetite, the dreams are erotic, &c. The character of dreams is no less influenced by habitual occupations of the mind: the ambitious dreams of success or disappointments, the poet makes verses, the lover sees his mistress, &c. It is because the judgment is sometimes correctly exercised in dreams, with regard to future events, that in times of ignorance the gift of divination was attributed to them.

Nothing is more curious in the study of sleep than the history of *sleep-walkers.*

Those individuals being first profoundly asleep, rise all at once, dress themselves, see, hear, speak, employ their hands with ease, perform certain exercises, write, compose, then go to bed, and preserve, when they awake, no recollection of what happened to them. What difference is there, then, between a sleep-walker of this kind, and a man awake? A very evident difference,—the one is conscious of his existence, and the other is not.

Many hypotheses have been offered on the proximate cause of sleep, as the depression of the laminæ of the cerebrum, the afflux of blood to the brain, &c. Sleep, which is the immediate effect of the laws of organisation, cannot depend on any physical cause of this kind. Its regular return is one of the circumstances that contributes the most to the preservation of health: its suppression, even for a short time, is often attended with serious inconvenience, and in no case can it be carried beyond certain limits.

The ordinary duration of sleep is variable; generally, it is from six to eight hours. Fatigue of the muscular system, strong exertions of the mind, lively and multiplied sensations, prolong it, as well as habits of idleness, the immoderate use of wine, and of too strong aliments. Infancy and youth, whose life of relation is very active, have need of longer repose. Riper age, more frugal of time, and tortured with cares, devote to it but a small portion. Very old people present two opposite modifications: either they are almost always slumbering, or their sleep is very light; but the reason of this latter is not to be found in the foresight they have of their approaching end.

By uninterrupted peaceable sleep, restrained within proper limits, the powers are restored, and the organs recover the facility of action; but if sleep is troubled by disagreeable dreams, and painful impressions, or even prolonged beyond measure, very far from repairing, it exhausts the strength, fatigues the organs, and sometimes becomes the occasion of serious diseases, as idiotism and madness.

SLEEPLESSNESS. See *Agrypnia*.

SLICKENSIDES. The specular variety of galena is so called in Derbyshire.

SLOE. See *Prunus sylvestris*.

SMALLAGE. See *Apium graveolens*.

SMALL-POX. See *Variola*.

SMALT. See *Zaffre*.

SMARAGDITE. See *Diallage*.

SMARAGDUS. 1. See *Emerald*.

2. Smaragdine: emerald colour. Applied generally, in *Natural History*, to designate a pure green colour. See *Colour*.

SMELL. *Olfactus*. There escapes from almost every body in nature certain particles of an extreme tenuity, which are carried by the air often to a great distance. These particles constitute odours. There is one sense destined to perceive and appreciate them. Thus an important relation between animals and bodies is established.

All bodies of which the atoms are fixed are called inodorous.

The difference of bodies is very great relative to the manner in which odours are developed. Some permit them to escape only when they are heated; others only when rubbed. Some again produce very weak odours, whilst others produce only those which are highly powerful. Such is the extreme tenuity of odoriferous particles, that a body may produce them for a very long time without losing weight in any sensible degree.

Every odoriferous body has an odour peculiar to itself.

As these bodies are very numerous, there have been attempts made to class them, which have nevertheless all failed.

Odours can be distinguished only into weak and strong, agreeable and disagreeable. We can recognise odours which are musky, aromatic, fœtid, rancid, spermatic, pungent, muriatic, &c. Some are fugitive, others tenacious. In most cases an odour cannot be distinguished but by comparing it with some known body. There have been attributed to odours properties which are nourishing, medical, and even venomous; but in the cases which have given rise to these opinions, might not the influence of odours have been confounded with the effects of absorption? A man who pounds jalap for some time will be purged in the same manner as if he had actually swallowed part of it. This ought not to be attributed to the effects of odours, but rather to the particles which, being spread around, float in the air, and are introduced either with the saliva or with the breath. We ought to attribute to the same cause the drunkenness of persons who are exposed for some time to the vapours of spirituous liquors. The air is the only vehicle of odours: it transports them to a distance: they are also produced, however, *in vacuo*, and there are bodies which project odoriferous particles with a certain force. This matter has not yet been carefully studied: it is not known if, in the propagation of odours, there be any thing analogous to the divergence, the convergence, to the reflection, or the refraction of the rays of light. Odours mix or combine with many liquids, as well as solids. This is the means employed to fix or preserve them. Liquids, gases, vapours, as well as many solid bodies reduced to powder, possess the property of acting on the organs of smell.

Apparatus for Smelling.—The olfactory apparatus ought to be represented as a sort of sieve, placed in the passage of the air, as it is introduced into the chest, and intended to stop every foreign body that may be mixed with the air, particularly the odours.

This apparatus is extremely simple: it differs essentially from that of the sight and the hearing, since it presents no part anterior to the nerve, destined for the physical modification of the external impulse: the nerve is to a certain degree exposed. The apparatus is composed of the pituitary membrane, which covers the nasal cavities of the membrane which covers the *sinuses*, and of the olfactory nerve.

The pituitary membrane covers the whole extent of the nostrils, increases the thickness of the spongy bones very much, is continued beyond their edges and their extremities, so that the air cannot traverse the nostrils but in a long narrow direction. This membrane is thick, and adheres strongly to the bones and cartilages that it covers. Its surface presents an infinity of small projections, which have been considered by some as nervous *papillæ*, by others as mucous follicles, but which, according to all appearance, are vascular.

These small projections give to the membrane an appearance of velvet. The pituitary is agreeable and soft to the touch, and it receives a great number of vessels and nerves. The passages through which the air proceeds to arrive at the *fauces* deserve attention.

These are three in number. They are distinguished in anatomy by the names of inferior, middle, and superior passages. The inferior is the broadest and the longest, the least oblique and least crooked; the middle one is the narrowest, almost as long, but of greater extent from top to bottom. The superior is much shorter, more oblique, and narrower. It is necessary to add to these the interval, which is very narrow, and which separates the partition of the external side of the nostrils in its whole extent. These canals are so narrow, that the least swelling of the pituitary renders the passage of the air in the nostrils difficult, and sometimes impossible.

The two superior passages communicate with certain cavities, of dimensions more or less considerable, which are hollowed out of the

bones of the head, and are called *sinuses*. These *sinuses* are the *maxillary*, the *palatine*, the *sphenoidal*, the *frontal*, and those which are hollowed out of the *ethmoid bone*, better known by the name of the ethmoidal cells.

The *sinuses* communicate only with the two superior *meatus*, or passages.

The *frontal*, the *maxillary sinus*, the anterior cells of the *ethmoid bone*, open into the middle *meatus*; the *sphenoidal*, the *palatine sinus*, the posterior cells of the *ethmoid*, open into the superior *meatus*. The *sinuses* are covered by other soft membranes, very little adherent to the sides, and which appear to be of the mucous kind. It secretes more or less abundantly a matter called *nasal mucus*, which is continually spread over the pituitary, and seems very useful in smelling. A more considerable extent of the *sinus* appears to coincide with a greater perfection of the smell. This is at least one of the most positive results of comparative physiology.

The olfactory nerve springs, by three distinct roots, from the posterior, inferior, and internal parts of the anterior lobe of the brain. Prismatic at first, it proceeds towards the perforated plate of the *ethmoid bone*. It swells all at once, and then divides itself into a great number of small threads, which spread themselves upon the *pituitary* membrane, principally on the superior part of it.

It is important to remark, that the filaments of the olfactory nerves have never been traced upon the inferior *spongy bones*, upon the internal surface of the middle *meatus*, nor in any of the *sinuses*. The *pituitary* membrane receives not only the nerves of the first pair, but also a great number of threads, which spring from the internal aspect of the *spheno-palatine ganglion*. These threads are distributed in the *meatus*, and in the inferior part of the membrane. It covers, also, for a considerable length, the ethmoidal thread of the nasal nerve, and receives from it a considerable number of filaments. The membrane which covers the sinus receives also a number of nervous ramifications.

The *nasal fossæ* communicate outwardly by means of the nostrils, the form and size of which are very variable. The nostrils are covered with hair on the inside, and are capable of being increased in size by muscular action. The nasal fossæ open into the *pharynx* by the posterior nostrils.

Mechanism of Smelling.— Smell is exerted essentially at the moment when the air traverses the nasal fossæ in proceeding towards the lungs. We very rarely perceive any odour when the air proceeds from the lungs; it happens sometimes, however, particularly in organic diseases of the lungs.

The mechanism of smell is extremely simple. It is only necessary that the odoriferous particles should be stopped upon the pituitary membrane, particularly in the places where it receives the threads of the olfactory nerves.

As it is exactly in the superior part of the nasal fossæ, where the extremes are so narrow, that they are covered with mucus, it is also natural that the particles should stop there.

We may conceive the utility of mucus. Its physical properties are such that it appears to have a much greater affinity with the odoriferous particles than with air: it is also extremely important to the olfactory sense, that the *nasal mucus* should always preserve the same physical properties. Whenever they are changed, as it is observed in different degrees of *coryza*, the smell is either not exerted at all, or in a very imperfect manner.

After what has been said of the distribution of the olfactory nerves, it is evident that the odours that reach the upper part of the nasal cavities will be perceived with greater facility and acuteness: for this reason, when we wish to feel more acutely, and with greater exactness, the odour of any body, we modify the air in such a manner that it may be directed towards this point. For the same reason, those who take snuff endeavour also to make it reach the upper part of the nasal fossæ. The internal face of the *ossa spongiosa* appears well disposed to stop the odours at the instant the air passes. And, as there is an extreme sensibility in this point, we are inclined to believe that here the smell is exerted, though the filaments of the first pair have not been traced so far.

Physiologists have not yet determined the use of the external nose in smelling: it appears intended to direct the air charged with odours towards the superior part of the *nasal cavities*.

Those persons who have their noses deformed, particularly if broken,—those who have small nostrils directed forward, have in general almost no smell. The loss of the nose, either by sickness or accident, causes almost entirely the loss of smell. Such people recover the benefit of this sense by the use of an artificial nose.

The only use of the sinuses which is generally admitted, is that of furnishing the greater part of the nasal mucus. The other uses which are attributed to them are, to serve as a depôt to the air charged with odoriferous particles, to augment the extent of the surface which is sensible to odours, and to receive a portion of the air that we inspire for the purpose of putting the power of smell in action, &c. These are far from being certain.

Vapours and gases appear to act in the same manner upon the pituitary membrane as odours. The mechanism of it ought, however, to be a little different. Bodies reduced to a coarse powder have a very strong action on this membrane; even their first contact is painful; but habit changes the pain into pleasure, as is seen in the case of taking snuff. In medicine, this property of the pituitary membrane is employed for the purpose of exciting a sharp instantaneous pain.

In the history of smell, the use of those hairs with which the nostrils and the nasal fossæ are provided, must not be forgotten.

Perhaps they are intended to prevent the entrance of foreign bodies along with the air into the nasal fossæ. In this case, they would bear a strong analogy to the eyelashes, and the hairs with which the ear is provided.

It is generally agreed that the olfactory nerve is especially employed in transmitting to the brain the impressions produced by odoriferous bodies; but there is nothing to prove that the other nerves, which are placed upon the *pituitary*, as well as those near it, may not concur in the same function. — *Magendie's Physiology.*

SMELLIE, William, was born in Scotland, where he practised midwifery for many years, and then settled in London. He introduced many improvements in the instruments employed in that branch of the profession, and established some useful rules for their application. He was the first writer who, by accurately determining the shape and size of the pelvis, and of the head of the fœtus, and considering its true position *in utero*, clearly pointed out the whole progress of parturition; and his opinions were subsequently confirmed, especially by his pupil, the celebrated Dr. W. Hunter. In 1752, he published the substance of his lectures in an octavo volume; to which he added, two years after, a second volume of cases; and a third appeared, about five years after his death, in 1768. In 1754, he also published a set of *Anatomical Plates*, of a large folio size, to elucidate his doctrines farther.

SMELT. See *Salmo eperlanus.*

SMI'LAX. (*ax, acis.* f.; from σμιλευω, to cut: so called from the roughness of its leaves and stalk.) The name of a genus of plants in the Linnæan system. Class, *Diœcia;* Order, *Octandria.* Rough bind-weed.

Smilax china. The systematic name of the China root tree. *China. China orientalis. Sankira. Guaquara. Smilax aspera Chinensis.* China root. It was formerly in esteem, as sarsaparilla now is, in the cure of the venereal disease, and cutaneous disorders.

Smilax, Chinese. See *Smilax china.*

Smilax sarsaparilla. The systematic name of the plant which affords the sarsaparilla. *Sarsaparilla. Smilax aspera Peruviana. Sarsa. Carivillandi. Iva pecanga. Macapatli. Zarza. Zarzaparilla. Salsaparilla. Zarcaparilla.* The root of this plant, *Smilax — caule aculeato angulato, foliis inermibus ovatis retuso mucronatis trinerviis*, of Linnæus, has a farinaceous, somewhat bitter taste, and no smell. About two centuries ago it was introduced into Spain, as an undoubted specific in syphilitic disorders; but owing to difference of climate, or other causes, it has not answered the character which it had acquired in the Spanish West Indies. It is now considered as capable of improving the general habit of body, after it has been reduced by the continued use of mercury.

To refute the opinion that sarsaparilla possesses antisyphilitic virtues, Mr. Pearson, of the Lock Hospital, divides the subject into two distinct questions. 1. Is the sarsaparilla root, when given alone, to be safely relied on in the treatment of lues venerea? The late Mr. Bloomfield, his predecessor, and during some year his colleague, at the Lock Hospital, has given a very decided answer to this question: — "I solemnly declare," says he, "I never saw a single instance in my life where it cured that disorder without the assistance of mercury, either at the same time with it, or when it had been previously taken before the decoction was directed." Pearson's experience, during many years, coincides entirely with the observations of Bloomfield. He has employed the sarsaparilla, in powder, and in decoctions, in an almost infinite variety of cases, and feels himself fully authorised to assert, that this plant has not the power of curing any one form of the lues venerea. The sarsaparilla, indeed, like the guaiacum, is capable of alleviating symptoms derived from the venereal virus; and it sometimes manifests the power of suspending, for a time, the destructive ravages of that contagion: but where the poison has not been previously subdued by mercury, the symptoms will quickly return; and, in addition to them, we often see the most indubitable proofs that the disease is making an actual progress, during the regular administration of the vegetable remedy.

2. When the sarsaparilla root is given in conjunction with mercury, does it render the mercurial course more certain and efficacious? In replying to this query, it is necessary to observe that the phrase, "to increase the efficacy of mercury," may imply, that a smaller quantity of this mineral antidote will confer security on an infected person, when sarsaparilla is added to it; or it may mean, that mercury would be sometimes unequal to the cure, without the aid of sarsaparilla. If a decoction of this root did indeed possess so admirable a quality, that the quantity of mercury necessary to effect a cure might be safely reduced whenever it was given during a mercurial course, it would form a most valuable addition to our Materia Medica. This opinion has been, however, unfortunately falsified by the most ample experience; and whoever shall be so unwary as to act upon such a presumption, will be sure to find his own and his patient's expectations egregiously disappointed.

If the sarsaparilla root be a genuine antidote against the syphilitic virus, it ought to cure the disease when administered alone; but, if no direct proof can be adduced of its being equal to this, any arguments founded on histories where mercury has been previously given, or where both the medicines were administered at the same time, must be ambiguous and undecisive.

It appears probable that Sir William Fordyce, and some other persons, entertained a notion, that there were certain venereal symptoms which commonly resisted the potency of mercury, and that the sarsaparilla was an appropriate remedy in these cases. This opinion, it is presumed, is not correct, for it mili-

tates against all Mr. P. has ever observed of the progress and treatment of the lues venerea. Indeed those patients who have lately used a full course of mercury, often complain of nocturnal pains in their limbs: they are sometimes afflicted with painful enlargements of the elbow and knee joints; or they have membraneous nodes, cutaneous exulcerations, and certain other symptoms, resembling those which are the offspring of the venereal virus.

It may and does often happen, that appearances like these are mistaken for a true venereal affection, and, in consequence of this error, mercury is administered, which never fails to exasperate the disease. Now, if a strong decoction of sarsaparilla root be given to persons under these circumstances, it will seldom fail of producing the most beneficial effects: hence it has been contended, that symptoms derived from the contagion of lues venerea, which could not be cured by mercury, have finally yielded to this vegetable remedy. It must be acknowledged, that representations of this kind have a specious and imposing air; nevertheless, Mr. Pearson endeavours to prove, that they are neither exact nor conclusive. If any of the abovenamed symptoms should appear near the conclusion of a course of mercury, when that medicine was operating powerfully on the whole system, it would be a strange and inexplicable thing if they could possibly be derived immediately from the uncontrolled agency of the venereal virus.

This would imply something like a palpable contradiction, that the antidote should be operating with sufficient efficacy to cure the venereal symptoms, for which it was directed, while, at the same time, the venereal virus was proceeding to contaminate new parts, and to excite a new order of appearances.

One source, and a very common one, to which some of the mistakes committed upon this subject may be traced, is a persuasion that every morbid alteration which arises in an infected person is actually tainted with the venereal virus, and ought to be ascribed to it as its true cause.

Every experienced surgeon must, however, be aware, that very little of truth and reality exists in a representation of this kind. The contagious matter and the mineral specific may jointly produce, in certain habits of body, a new series of symptoms, which, strictly speaking, are not venereal, which cannot be cured by mercury, and which are sometimes more to be dreaded than the simple and natural effects of the venereal virus.

Some of the most formidable of these appearances may be sometimes removed by sarsaparilla, the venereal virus still remaining in the system; and, when the force of that poison has been completely subdued by mercury, the same vegetable is also capable of freeing the patient from what may be called the sequelæ of a mercurial course.

The root of the sarsaparilla is sometimes employed in rheumatic affections, scrofula, and cutaneous complaints, where an acrimony of the fluids prevails.

SMY'RNION HORTENSE. See *Imperatoria ostruthium.*

SMY'RNIUM. (*um, ii.* n.; so called from σμυρνα, myrrh, the smell of the seed resembling that of myrrh very much.) The name of a genus of plants. Class, *Pentandria;* Order, *Digynia.*

SMYRNIUM OLUSATRUM. The plant called Alexanders; also denominated, *Hipposelinum, Macerona, Macedonisium, Herba alexandrina, Grielum,* and *Agrioselinum.* This plant was formerly cultivated in our gardens, for culinary use, but is now superseded by celery. The seeds are bitter and aromatic, and the roots are more powerfully bitter. They stand recommended as resolvents, diuretics, and emmenagogues, though seldom used in medical prescriptions.

SMYRNIUM ROTUNDIFOLIUM. The blanched leaves of this species are said to be more agreeable than those of the olusatrum.

SNAIL. See *Limax.*

Snail-seeded glasswort. See *Salsola kali.*

SNAKE. *Anguis.* The *Coluber natrix,* of Linnæus. The flesh was formerly made into broth as a restorative.

Snake, rattle. See *Coluber.*

Snake-killing birthwort. See *Aristolochia anguicida.*

Snakeroot. See *Aristolochia serpentaria,* and *Polygala senega.*

Snakeweed. See *Polygonum bistorta.*

Snakewood. See *Colubrinum lignum.*

SNAP-DRAGON. See *Antirrhinum.*

SNEEZEWORT. (So called, because the dried flowers and roots, when powdered, cause sneezing when applied to the nose.) See *Achillea ptarmica.*

SNEEZING. *Sternutatio.* A convulsive action of the muscles of the chest from irritation of the nostrils. It is a convulsive motion of the respiratory organs; and very seldom requires medical assistance. It sometimes, however, is otherwise; and cases are recorded in foreign, and particularly German works, of its having been sometimes both permanent and violent: sometimes periodical and fatal. The *Ephemerides Naturæ Curiosorum* contain one instance in which the sneezings continued for three hundred times in a single paroxysm. The most common cause of sneezing, is irritation of the Schneiderian membrane from snuff, or some sharp or acrimonious gas, or some secretion from the membrane itself, as the mucus of catarrh, measles, &c. But the severest cases are usually produced by sympathy with some remote part, as the lungs and stomach.

Sneezing, produced in the ordinary way, though convulsive, is a natural and healthy action, intended to throw off instinctively, from the delicate membrane of the nostrils, whatever irritable or offensive material may chance to be lodged there. When sneezing is frequently repeated, the nostrils should be

syringed with warm water; and, if this be insufficient, a thin mucilage of acacia gum may be passed up with a pencil brush, or pellets of lint: solutions of opium are also proper; the smelling at opium and camphire, &c.

SNIPE. See *Scolopax gallinago.*

SNORING. See *Sterlor.*

SNUFF. See *Nicotiana tabacum.*

SOAP. See *Sapo.*

Soap-berry. See *Saponaria officinalis.*

SOAP, MOUNTAIN. A pale brownish black mineral, which has a greasy feel; writes, but does not soil.

SOAP-STONE. See *Steatite.*

SOAP-TREE. See *Saponaria.*

SOAP-WORT. See *Saponaria.*

SOCOTORINE. (*Socotorinus*; from *Socotra.*) That which comes from Socotra; as Socotorine aloes. See *Aloë.*

SO'DA. (*a, æ.* f.; an Arabian word.) The name now universally given to the mineral alkali.

This alkali is obtained from several sources, but principally from plants growing on the sea-coast. It occurs in the mineral kingdom, united with sulphuric, muriatic, and boracic acids; it is also found in large quantities in Egypt, combined with carbonic acid. It appears to be deposited in large impure masses, under the surface of the earth, in various countries, from which it is extracted by running waters. Thus it is found, after the spontaneous evaporation of the water, mixed with sand in the bottom of lakes in Hungary; in the neighbourhood of Bilin in Bohemia; and in Switzerland. It occurs also in China, and near Tripoli; in Syria, Egypt, Persia, and India. It frequently oozes out of walls, and crystallises on their surface. Like potash, it is procured by lixiviation from the ashes of burnt plants, but only from those which grow upon the sea-shores. The variety of plants employed for this purpose is very considerable. In Spain, soda is procured from different species of the *Salsola* and *Salicornia*, and the *Batis maritima.* The *Zostera maritima* is burnt in some places on the borders of the Baltic. In this country we burn the various species of *Fuci*, and their alkali is called *kelp*; and in France they burn the *Chenopodium maritimum.* See *Soda impura.*

The alkali thus procured is more or less pure, according to the nature of the particular plant from which it is obtained. The greatest part, however, is a subcarbonate of soda.

To procure pure soda, we must boil a solution of the pure carbonate with half its weight of quicklime, and after subsidence decant the clear ley, and evaporate in a clean iron or silver vessel, till the liquid flows quietly like oil. It must then be poured out on a polished iron plate. It concretes into a hard white cake, which is to be immediately broken in pieces, and put up, while still hot, in a phial, which must be well corked. If the carbonate of soda be somewhat impure, then, after the action of lime, and subsequent concentration of the ley, alkohol must be digested on it, which will dissolve only the caustic pure soda, and leave the heterogeneous salts. By distilling the alkohol in a silver alembic, the alkali may be obtained pure.

This white solid substance is, however, not absolute soda, but a hydrate, consisting of about 100 soda + 28 water; or of nearly 77 + 23, in 100. If a piece of this soda be exposed to the air, it softens and becomes pasty; but it never deliquesces into an oily-looking liquid, as potash does. The soda in fact soon becomes drier, because, by absorption of carbonic acid from the air, it passes into an efflorescent carbonate. Soda is distinguishable from potash by sulphuric acid, which forms a very soluble salt with the former, and a sparingly soluble one with the latter; by muriate of platina and tartaric acid, which occasion precipitates with potash salts, but not with those of soda.

The basis of soda is a peculiar metal, called *sodium*, discovered by Sir H. Davy in 1807, a few days after he discovered potassium, which may be procured in exactly the same manner as potassium, by electrical or chemical decomposition of the pure hydrate. A rather higher degree of heat, and greater voltaic power, are required to decompose soda than potash. Sodium resembles potassium in many of its characters. It is as white as silver, possesses great lustre, and is a good conductor of electricity. It enters into fusion at about 200° Fahr., and rises in vapour at a strong red heat. Its specific gravity is, according to Gay Lussac and Thénard, 0·972, at the temperature of 59° F. In the cold, it exercises scarcely any action on dry air, or oxygene. But when heated strongly in oxygene or chlorine, it burns with great brilliancy. When thrown upon water, it effervesces violently, but does not inflame, swims on the surface, gradually diminishes with great agitation, and renders the water a solution of soda. It acts upon most substances in a manner similar to potassium, but with less energy. It tarnishes in the air, but more slowly; and, like potassium, it is best preserved under naphtha.

Sodium forms two distinct combinations with oxygene: one is pure soda, the hydrate of which is above described; the other is the orange oxide of sodium, observed, like the preceding oxide, first by Sir Humphrey Davy in 1807, but of which the true nature was pointed out, in 1810, by Gay Lussac and Thénard.

Pure soda may be formed by burning sodium in a quantity of air, containing no more oxygene than is sufficient for its conversion into this alkali; *i. e.* the metal must be in excess: a strong degree of heat must be employed.

Pure soda, or hydrate of sodium, is of a grey colour, it is a non-conductor of electricity, of a vitreous fracture, and requires a strong red heat for its fusion. When a little water is added to it, there is a violent action between the two bodies; the soda becomes white, crystalline in its appearance, and much

more fusible and volatile. It is then the substance commonly called *pure* or *caustic soda*.

The other oxide or peroxide of sodium may be formed by burning sodium in oxygene, in excess. It is of a deep orange colour, very fusible, and a non-conductor of electricity. When acted on by water, it gives off oxygene, and the water becomes a solution of soda. It deflagrates when strongly heated with combustible bodies.

The proportions of oxygene in the hydrate of sodium, and in the orange peroxide of sodium, are easily learned by the action of sodium on water and on oxygene. If a given weight of sodium, in a little glass tube, be thrown by means of the finger under a graduated inverted jar filled with water, the quantity of hydrogene evolved will indicate the quantity of oxygene combined with the metal to form soda; and when sodium is slowly burned in a tray of platina (lined with dry common salt), in oxygene in great excess, from the quantity of oxygene absorbed the composition of the peroxide may be learned. From Sir H. Davy's experiments, compared with those of Gay Lussac and Thénard, it appears, that the prime equivalent of sodium is 3·0, and that of dry soda, or protoxide of sodium, 4·0; while the orange oxide or deutoxide is 5·0. The numbers given by Thénard are, for the first, 100 metal + 33·995 oxygene; and for the second, 100 metal + 67·990 oxygene.

Another oxide is described containing less oxygene; it is therefore a suboxide. When sodium is kept for some time in a small quantity of moist air, or when sodium in excess is heated with hydrate of soda, a dark greyish substance is formed, more inflammable than sodium, and which affords hydrogene by its action upon water.

Only one combination of sodium and chlorine is known. This is the important substance, *common salt*. It may be formed directly by combustion, or by decomposing any compound of chlorine by sodium. Sodium has a much stronger attraction for chlorine than for oxygene: and soda, or its hydrate, is decomposed by chlorine, oxygene being expelled from the first, and oxygene and water from the second.

Potassium has a stronger attraction for chlorine than sodium has; and one mode of procuring sodium easily, is by heating together to redness common salt and potassium. There is no known action between sodium and *hydrogene* or *azote*.

Sodium combines readily with *sulphur*, and with *phosphorus*, presenting similar phænomena to those presented by potassium. The sulphurets and phosphurets of sodium agree in their general properties with those of potassium, except that they are rather less inflammable. They form, by burning, acidulous compounds of sulphuric and phosphoric acid and soda.

Potassium and sodium combine with great facility, and form peculiar compounds, which differ in their properties, according to the proportions of the constituents. By a small quantity of sodium, potassium is rendered fluid at common temperatures, and its sp. gr. is considerably diminished. Eight parts of potassium, and one of sodium, form a compound that swims in naphtha, and that is fluid at the common temperature of the air. Three parts of sodium, and one of potassium, make a compound fluid at common temperatures. A little potassium destroys the ductility of sodium, and renders it very brittle and soft. Since the prime of potassium is to that of sodium as 5 to 3, it will require the former quantity of potassium to eliminate the latter quantity of sodium from the chloride. The attractions of potassium, for all substances that have been examined, are stronger than those of sodium.

Soda is the basis of common salt, of plate and crown glass, and of all hard soaps.

The compounds of soda used in medicine are the following:—

1. Sodæ acetas.	7. Sodæ murias.
2. ——— boras.	8. ——— phosphas.
3. ——— carbonas.	9. ——— sulphas.
4. ——— bicarbonas.	10. ——— tartras.
5. ——— subcarbonas.	11. Soda tartarizata.
6. —————— ex-siccata.	12. Sapo durus.

Soda, acetate of. See *Sodæ acetas.*

Soda, borate of. See *Borax.*

Soda boracicata. See *Borax.*

Soda, carbonate of. See *Sodæ carbonas.*

Soda hispanica. See *Soda impura.*

Soda hispanica purificata. See *Sodæ subcarbonas.*

Soda, hyperoxymuriate of. See *Sodæ chloras.*

Soda impura. Impure soda. *Soda. Barilla. Bariglia. Barillor. Anatron. Natron. Anaton. Nitrum antiquorum. Aphronitrum. Baurach. Sal alkalinus fixus fossilis. Carbonas sodæ impurus. Subcarbonas sodæ impura.* Barilla is the term given, in commerce, to the impure mineral alkali, or imperfect carbonate of soda, imported from Spain and the Levant. It is made by burning to ashes different plants that grow on the sea-shore, chiefly of the genus *Salsola.* Many have referred it to the *Salsola kali*, of Linnæus; but various other plants, on being burned, are found to afford this alkali, and some in a greater proportion than this: these are,

1. The *Salsola sativa. Salsola sonda*, of Lofling. *Kali hispanicum supinum annuum sedi-foliis brevibus. Kali d'Alicante.* This grows abundantly on that part of the Spanish coast which is washed by the Mediterranean Sea. This plant is deservedly first enumerated by Professor Murray, as it supplies all the best soda consumed in Europe, which by us is called Spanish or Alicant soda, and by the Spanish merchants Barilla de Alicante.

2. *Salsola soda. Kali majus cochleato semine. Le Salicor.* This species, which grows on the French Mediterranean coast, is much used in Languedoc for the preparation of this salt, which is usually exported to Sicily and Italy.

3. *Salsola tragus*, affords an ordinary kind of soda, with which the French frequently mix that made in Languedoc. This adulteration is also practised by the Sicilians, who distinguish the plant by the term salvaggia.

4. *Salicornia herbacea*, is common in salt marshes, and on the sea-shore all over Europe. Linnæus prefers the soda obtained from this plant to that of all the others; but, though the quantity of alkali which it yields is very considerable, it is mixed with much common salt.

5. *Salicornia arabica*, and also the *Mesembryanthemum nodiflorum*, and *Plantago squarrosa*. All these, according to Alpinus, afford this alkali. It has also been procured from several of the fuci, especially *F. vesiculosus*, and distinguished here by the name of kelp. Various other marine plants might also be noticed as yielding an impure soda by combustion; but the principal are confined to the genus salsola, and that of salicornia. The salsola kali, on the authority of Rawolf, is the species from which the salt is usually obtained in eastern countries, which is brought to us in hard porous masses, of a speckled brown colour. Kelp, a still more impure alkali, made in this country by burning various sea-weeds, is sometimes called British barilla. The marine plants collected for the purpose of procuring barilla in this country, are the *Salsola kali, Salicornia europæa, Zostera maritima, Triglochen maritimum, Chenopodium maritimum, Atriplex portulacoides et littoralis, Plantago maritima, Tamarix gallica, Eryngium maritimum, Sedum telephium, Dipsacus fullonum*, &c. &c.

It is to be regretted, that the different kinds of soda which are brought to European markets have not been sufficiently analysed to enable us to ascertain with tolerable certainty the respective value of each; and, indeed, while the practice of adulterating this salt continues, any attempts of this kind are likely to prove fruitless. The best information on this subject is to be had from Jessica, Mascorelle, Cadet, Bolare, and Sestini. In those places where the preparation of soda forms a considerable branch of commerce, as on the coast of the Mediterranean, seeds of the salsola are regularly sown in a proper situation near the sea, which usually shoot above ground in the course of a fortnight. About the time the seeds become ripe, the plants are pulled up by the roots, and exposed in a suitable place to dry, where their seeds are collected; this being done, the plants are tied up in bundles, and burnt in an oven constructed for the purpose, where the ashes are then, while hot, continually stirred with long poles. The saline matter, on becoming cold, forms a hard solid mass, which is broken in pieces of a convenient size for exportation.

According to chemical analysis, the impure sodas of commerce generally contain a portion of vegetable alkali, and neutral salts, as muriate of soda, and sulphate of potash, and not unfrequently some portion of iron is contained in the mass; they are, therefore, to be considered as more or less a compound, and their goodness to be estimated accordingly. The Spanish soda, of the best sort, is in dark-coloured masses, of a bluish tinge, very ponderous, sonorous, dry to the touch, and externally abounding with small cavities, without any offensive smell, and very salt to the taste; if long exposed to the air it undergoes a degree of spontaneous calcination. The best French soda is also dry, sonorous, brittle, and of a deep blue colour, approaching to black. The soda which is mixed with small stones, which gives out a fœtid smell on solution, and is white, soft, and deliquescent, is of the worst kind.

Soda, impure. See *Soda impura.*

Soda muriata. See *Sodæ murias.*

Soda, muriate of. See *Sodæ murias.*

Soda muriatica. See *Sodæ murias.*

Soda, phosphate of. See *Sodæ phosphas.*

Soda phosphorata. See *Sodæ phosphas.*

Soda, Spanish. See *Soda impura.*

Soda, subcarbonate of. See *Sodæ subcarbonas.*

Soda, subcarbonate of, dried. See *Sodæ subcarbonas exsiccata.*

Soda, sulphate of. See *Sodæ sulphas.*

Soda tartarizata. Tartarized soda; formerly known by the names of *sal rupellensis, sal polychrestum Seignetti*, and *natron tartarizatum.* Take of subcarbonate of soda, twenty ounces; supertartrate of potash, powdered, two pounds; boiling water, ten pints. Dissolve the subcarbonate of soda in the water, and add gradually the supertartrate of potash: filter the solution through paper, and evaporate it until a pellicle forms upon the surface; then set it by that crystals may form. Having poured away the water, dry these crystals upon bibulous paper. This salt consists of tartaric acid, soda, and potash, the soda only combining with the superabundant acid of the super salt: it is, therefore, a triple salt, and it has been judged by the London College more convenient to express this difference by the adjective *tartarizata*, than to introduce the three words necessary to its description. It possesses mildly cathartic, diuretic, and deobstruent virtues, and is administered in doses from one drachm to an ounce, as a cathartic, and in the dose of twenty to thirty grains in abdominal physconia, and torpidity of the kidneys.

Soda, tartarized. See *Soda tartarizata.*

Soda, tartrate of. See *Soda tartarizata.*

Sodæ acetas. Acetate of soda. A salt formed of a combination of acetic acid with the soda. Its virtues are similar to those of the acetate of potash.

Sodæ bicarbonas. Bicarbonate of soda; called also hypercarbonate of soda. It is made on a large scale in manufactories for the market. It may be prepared by saturating the solution of the preceding salt with carbonic acid gas, and then evaporating with a very gentle heat to dryness, when a white irregular saline mass is obtained. Its constituents are 4 soda, + 5·50 carb. acid, + 1·125

water, = 10·625; or in 100 parts, 37·4 soda, + 52 acid, + 10·6 water.

SODÆ BORAS. See *Borax*.

SODÆ CARBONAS. Carbonate of soda. Take of subcarbonate of soda, a pound; subcarbonate of ammonia, three ounces; distilled water, a pint. Having previously dissolved the soda in water, add the ammonia; then, by means of a sand-bath, apply a heat of 180° for three hours, or until the ammonia be driven off. Lastly, set the solution by to crystallise. The remaining solution may be evaporated and set by in the same manner, that crystals may again form. This salt bears to the subcarbonate of soda the same relation that the carbonate of potash does to its subcarbonate. It is prepared in the same way, possesses the same comparative advantages, and contains, in like manner, double the quantity of carbonic acid.

SODÆ HYDRIODAS. A salt composed of hydriodic acid and soda. It has been used externally in the cure of scrofulous tumours.

SODÆ MURIAS. Muriate of soda. It is found in Egypt, where it is collected from the surface of the earth, particularly after the desiccation of temporary lakes: it has been known from time immemorial by the name of *nitrum, natron,* or *natrum*. A great deal is prepared in Spain by incinerating the maritime plant salsola, from whence it is exported, and sold by the name of barilla. See *Barilla*. And it is manufactured in this country, as well as in France, from different species of sea-weeds. It is likewise found in mineral waters, and also in some animal fluids.

Muriate of soda crystallises in irregular or rhomboidal decaëdrons, formed by two quadrangular pyramids, truncated very near their bases. Frequently it exhibits only rhomboidal laminæ. Its specific gravity is 1·3591. Its taste is urinous, and slightly acrid, without being caustic. It changes blue vegetable colours to a green. It is soluble in less than its weight of boiling water, and twice its weight of cold. It is one of the most efflorescent salts known, falling completely to powder in a short time. On the application of heat it is soon rendered fluid from the great quantity of its water of crystallisation; but is dried by a continuance of the heat, and then melts. It is somewhat more fusible than the carbonate of potash, promotes the fusion of earths in a greater degree, and forms a glass of better quality. Like that, it is very tenacious of a certain portion of its carbonic acid. It consists, in its dry state, of 4 soda, + 2·75 acid, = 6·75.

But the crystals contain 10 prime proportions of water. They are composed of 22 soda, + 15·3 carbonic acid, + 62·7 water in 100 parts, or of 1 prime of soda = 4·1 of carbonic acid = 2·75, and 10 of water = 11·25, in whole 18.

Common salt, which is an impure muriate of soda, is found in large masses, or in rocks under the earth, in England and elsewhere. In the solid form it is called *sal gem*, or *rock salt*. If it be pure and transparent, it may be immediately used in the state in which it is found; but if it contain any impure earthy particles, it should be previously freed from them. In some countries it is found in incredible quantities, and dug up like metals from the bowels of the earth. In this manner has this salt been dug out of the celebrated salt mines near Bochnia and Wieliczka, in Poland, ever since the middle of the 13th century, consequently above these 500 years, in such amazing quantities, that sometimes there have been 20,000 tons ready for sale. In these mines, which are said to reach to the depth of several hundred fathoms, 500 men are constantly employed. The pure and transparent salt needs no other preparation than to be beaten to small pieces, or ground in a mill. But that which is more impure must be elutriated, purified, and boiled. That which is quite impure, and full of small stones, is sold under the name of rock salt, and is applied to ordinary uses. It may likewise be used for strengthening weak and poor brine-springs.

The waters of the ocean everywhere abound with common salt, though in different proportions. The water of the Baltic sea is said to contain one sixty-fourth of its weight of salt; that of the sea between England and Flanders contains one thirty-second part; that on the coast of Spain one sixteenth part; and between the tropics it is said, erroneously, to contain from an eleventh to an eighth part.

The water of the sea contains, besides the common salt, a considerable proportion of muriate of magnesia, and some sulphate of lime, of soda, and potash. The former is the chief ingredient of the remaining liquid which is left after the extraction of the common salt, and is called the mother water. Sea water, if taken up near the surface, contains also the putrid remains of animal substances, which render it nauseous, and in a long-continued calm cause the sea to stink.

The whole art of extracting salt from waters which contain it, consists in evaporating the water in the cheapest and most convenient manner. In England, a brine composed of sea water, with the addition of rock salt, is evaporated in large shallow iron boilers; and the crystals of salt are taken out in baskets. In Russia, and probably in other northern countries, the sea water is exposed to freeze; and the ice, which is almost entirely fresh, being taken out, the remaining brine is much stronger, and is evaporated by boiling. In the southern parts of Europe, the salt-makers take advantage of spontaneous evaporation. A flat piece of ground near the sea is chosen, and banked round, to prevent its being overflowed at high water. The space within the banks is divided by low walls into several compartments, which successively communicate with each other. At flood tide, the first of these is filled with sea water, which, by remaining a certain time, deposits its impurities, and loses part of its aqueous fluid. The

residue is then suffered to run into the next compartment, and the former is again filled as before. From the second compartment, after a due time, the water is transferred into a third, which is lined with clay, well rammed and levelled. At this period, the evaporation is usually brought to that degree, that a crust of salt is formed on the surface of the water, which the workmen break, and it immediately falls to the bottom. They continue to do this until the quantity is sufficient to be raked out, and dried in heaps. This is called *bay salt.*

Besides its use in seasoning our food, and preserving meat both for domestic consumption and during the longest voyages, and in furnishing us with the muriatic acid and soda, salt forms a glaze for coarse pottery, by being thrown into the oven where it is baked; it improves the whiteness and clearness of glass; it gives greater hardness to soap; in melting metals it preserves their surface from calcination, by defending them from the air; and is employed with advantage in some assays; it is used as a mordant, and for improving certain colours, and enters more or less into many other processes of the arts.

This salt is more abundant in nature than any other. It is found in abundance in the salt mines of this country, and in prodigious masses in the internal part of the earth, in Calabria, in Hungary, in Muscovy, and more especially Wieliczka, in Poland, near Mount Capax, where the mines are very large, and afford immense quantities of salt. It is also obtained by several artificial means from sea water, in which it is the saline material. It possesses antiseptic, diuretic, and resolvent qualities, and is frequently employed in form of clyster, fomentation, lotion, pediluvium, and bath, in obstipation, against worms, gangrène, scrofulous tumours, herpetic eruptions, arthritis, &c.

SODÆ PHOSPHAS. Phosphate of soda. Phosphorated soda. *Alkali minerale phosphoratum,* of Bergman. A compound of phosphoric acid and soda. It is cathartic in the dose of half an ounce to an ounce: dissolved in gruel it is not unpleasant; and it is said to be useful in scrofula, bronchocele, rachitis, and gout, in small doses.

SODÆ SUBBORAS. See *Borax.*

SODÆ SUBCARBONAS. Subcarbonate of soda; formerly called *natron præparatum* and *sal sodæ.* Take of impure soda, powdered, a pound; boiling distilled water, half a gallon. Boil the soda in the water for half an hour, and strain the solution: let the solution evaporate to two pints, and be set by, that crystals may form. Throw away the remaining solution. The pure crystals, thus formed of Alicant barilla, are colourless, transparent, lamellated, of a rhomboidal figure; and one hundred parts are found to contain twenty of alkali, sixteen of aërial acid, and sixty-four of water; but upon keeping the crystals for a length of time, if the air be not excluded, the water evaporates, and they assume the form of a white powder. According to Islin, one ounce of water, at the temperature of 62° of Fahr. dissolves five drachms and fifteen grains of the crystals. This salt consists of soda imperfectly saturated with carbonic acid, and is therefore called *sodæ subcarbonas.* It is given in doses of from ten grains to half a drachm as an attenuant and antacid; and, joined with bark and aromatics, it is highly praised by some in the cure of scrofula. It is likewise a powerful solvent of mucus, a deobstruent, and diuretic; and has been thought an antidote against oxide of arsenic and corrosive sublimate. The other diseases in which it is administered are those arising from an abundance of mucus in the primæ viæ, calculous complaints, gout, some affections of the skin, rickets, tinea capitis, crusta lactea, and worms. Externally, it is recommended by some in the form of lotion, to be applied to scrofulous ulcers.

SODÆ SUBCARBONAS EXSICCATA. Dried subcarbonate of soda. Take of subcarbonate of soda, a pound. Apply a boiling heat to the soda in a clean iron vessel, until it becomes perfectly dry, and constantly stir it with an iron rod. Lastly, reduce it into powder. Its virtues are similar to those of the subcarbonate.

SODÆ SULPHAS. Sulphate of soda. *Natron vitriolatum. Sal catharticus Glauberi.* Take of the salt which remains after the distillation of muriatic acid, two pounds; boiling water, two pints and a half. Dissolve the salt in the water; then add gradually as much subcarbonate of soda as may be required to saturate the acid: boil the solution away until a pellicle forms upon the surface; and, after having strained it, set it by, that crystals may form. Having poured away the water, dry these crystals upon bibulous paper.

Scherer mentions another mode by Funcke, which is, making 8 parts of calcined sulphate of lime, 5 of clay, and 5 of common salt, into a paste with water; burning this in a kiln; and then powdering, lixiviating, and crystallising.

It exists in large quantities under the surface of the earth in some countries, as Persia, Bohemia, and Switzerland; is found mixed with other substances in mineral springs and sea water; and sometimes effloresces on walls.

Sulphate of soda is bitter and saline to the taste. It is soluble in 2·85 parts of cold water, and 0·8 at a boiling heat. It crystallises in hexagonal prisms bevelled at the extremities, sometimes grooved longitudinally, and of very large size, when the quantity is great. These effloresce completely into a white powder if exposed to a dry air, or even if kept wrapped up in paper in a dry place; yet they retain sufficient water of crystallisation to undergo the aqueous fusion on exposure to heat, but by urging the fire, melt. Barytes and strontian take its acid from it entirely, and potash partially; the nitric and muriatic acids, though they have a weaker affinity for its base, combine with a part of it

when digested on it. Heated with charcoal, its acid is decomposed; and it has been employed to furnish soda. Pajot des Charmes has made some experiments on it in fabricating glass: with sand alone it would not succeed; but equal parts of carbonate of lime, sand, and dried sulphate of soda, produced a clear, solid, pale yellow glass.

It is composed of 5 acid + 4 base + 11·25 water in crystals: when dry, the former two primes are its constituents.

It possesses cathartic and diuretic qualities, and is in high esteem as a mild cathartic. It is found in the mineral kingdom formed by nature, but that which is used medicinally is prepared by art. The dose is from one drachm to one ounce.

SODALITE. A green coloured mineral, discovered in a bed of mica slate in West Greenland.

SODIUM. (*um, ii.* n.) See *Soda*.

SOL. (*Sol, solis.* m.) The sun. Gold was so called by the older chemists.

SOLA'MEN. (*en, inis.* n.; from *solor*, to comfort.) Anise-seed is named solamen intestinorum, from the comfort it affords in disorders of the intestines.

SOLANO'IDES. (From *solanum*, nightshade, and εἶδος, likeness.) Like to the solanum: bastard nightshade.

SOLA'NUM. (*um, i.* n.; from *solor*, to comfort, because it gives ease by its stupifying qualities.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the *Solanum nigrum.*

SOLANUM DULCAMARA. Bitter-sweet. Woody nightshade. *Dulcamara. Solanum scandens. Glycypicros, sive amaradulcis. Solanum lignosum.* Στρυχνος, of Theophrastus. *Solanum — caule inermi frutescente flexuosa; foliis superioribus hastatis; racemis cymosis*, of Linnæus. The roots and stalks of this nightshade, upon being chewed, first cause a sensation of bitterness, which is soon followed by a considerable degree of sweetness; and hence the plant obtained the name of bittersweet. The berries have not yet been applied to medical use: they seem to act powerfully upon the primæ viæ, exciting violent vomiting and purging. Thirty of them were given to a dog, which soon became mad, and died in the space of three hours; and, upon opening his stomach, the berries were discovered to have undergone no change by the powers of digestion. There can, therefore, be little doubt of the deleterious effects of these berries; and as they are very common in the hedges, and may be easily mistaken, by children, for red currants, which they somewhat resemble, this circumstance is the more worthy of notice. The stipites, or younger branches, are directed for use in the pharmacopœia, and they may be employed either fresh or dried, making a proportionate allowance in the dose of the latter for some diminution of its powers by drying. In autumn, when the leaves are fallen, the sensible qualities of the plant are said to be the strongest; and, on this account, it should be gathered in autumn rather than spring. Dulcamara does not manifest those strong narcotic qualities which are common to many of the nightshades: it is, however, very generally admitted to be a medicine of considerable efficacy. Murray says, it promotes all the secretions. Haller observes, that it partakes of the milder powers of the nightshade, joined to a resolvent and saponaceous quality; and the opinion of Bergius seems to coincide with that of Murray: — "Virtus: pellens urinam, sudorem, menses, lochia, sputa; mundificans." The diseases in which we find it recommended by different authors are extremely various; but Bergius confines its use to rheumatisms, retentio mensium, et lochiorum. Dulcamara appears, also, by the experiments of Razoux and others, to have been used with advantage in some obstinate cutaneous affections. Dr. Cullen says, "We have employed only the stipites, or slender twigs of this shrub; but, as we have collected them, they come out very unequal, some parcels of them being very mild and inert, and others of them considerably acrid. In the latter state, we have employed a decoction of them in the cure of rheumatism, sometimes with advantage, but at other times without any effect. Though the dulcamara is here inserted in the catalogue of diuretics, it has never appeared to us as powerful in this way; for, in all the trials made here, it has hardly ever been observed to be in any measure diuretic." This plant is generally given in decoction, or infusion; and, to prevent its exciting nausea, it is ordered to be diluted with milk, and to begin with small doses, as large doses have been found to produce very dangerous symptoms. Razoux directs the following: — ℞. Stipitum dulcam. rec. drac. ss ina quæ font. unc. 16 coquator ad unc. 8; This was taken in the dose of three or four drachms, diluted with an equal quantity of milk, every four hours. Linnæus directs two drachms, or half an ounce of the dried stipites, to be infused half an hour in boiling water, and then to be boiled ten minutes; and of this decoction he gives two tea-cupfuls morning and evening. For the formula of a decoction of this plant, according to the London Pharmacopœia, see *Decoctum dulcamaræ.*

SOLANUM FŒTIDUM. See *Datura.*

SOLANUM LETHALE. See *Atropa.*

SOLANUM LIGNOSUM. See *Solanum.*

SOLANUM LYCOPERSICUM. The love-apple plant. The fruit of this, called *Tomata*, and *love-apple*, is so much esteemed by the Portuguese and the Spaniards, that it is an ingredient in almost all their soups and sauces, and is by them considered cooling and nutritive.

SOLANUM MELONGENA. The systematic name of the mad-apple plant. Its oblong egg-shaped fruit is often boiled in their native places, in soups and sauces, the same as the love-apple; is accounted very nutritive, and is much sought after by the votaries of Venus.

Solanum nigrum. The systematic name of the garden nightshade, which is highly deleterious, and very common in waste places, and by the road-sides.

Solanum sanctum. The systematic name of the Palestine nightshade; the fruit of which is globular, and in Egypt much eaten by the inhabitants.

Solanum tuberrosum. The potato plant: called also, *Batatas*, *Solanum esculentum*, *Kippa*, *Kelengu*, *Papas americanus*, *Pappus americanus*, and *Convolvulus indicus*. A native of Peru, first brought into Europe by Sir Francis Drake, 1486, and planted in London. The root of this plant is now in use all over Great Britain, and in most parts of Europe, as an article of diet, and is as generally employed as bread.

Solanum vesicarium. See *Physalis alkekengi*.

SOLDANE'LLA. (*a*, *æ*. f.; *à solidando;* from its uses in healing fresh wounds.) The sea convolvulus. See *Convolvulus soldanella*.

SOLE. See *Pleuronectes solea*.

SO'LEN. Σωλην. A tube or channel. A cradle for a broken limb.

SOLENA'RIUM. (Diminutive of σωλην, a tube.) A catheter.

SO'LEUS. (*us*, *ei*. m.; from *solea*, a sole: from its shape being like the sole-fish.) See *Gastrocnemius internus*.

SOLIDA'GO. (*o*, *inis*. f.; from *solido*, to make firm: so called from its uses in consolidating wounds.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia superflua*. The herb comfrey.

Solidago virgaurea. The golden rod. *Virga aurea*. *Herba dorea*. *Conyza coma aurea*. *Symphytum*. *Petræum*. *Elichrysum*. *Consolida saracenica* and *aurea*. Golden rod. The leaves and flowers of this plant are recommended as aperients and corroborants in urinary obstructions, ulcerations of the kidneys and bladder, and it is said by some to be particularly useful in stopping internal hæmorrhages.

SOLID. In *Anatomy*, the solids are the bones, ligaments, membranes, muscles, nerves, and vessels.

SOLITA'RIUS. Solitary. Applied to leaves, stems, footstalks, worms in the body, &c. when either single on a plant, or only one in the same place.

SO'LIUM. (*um*, *ii*. n.; from *solus*, alone: so called because it infests the body singly.) A species of tape-worm. See *Tænia*.

SOLOMON. (*on*, *onis*. m.) A name applied to the root of the *Convallaria polygonatum*.

Solomon's seal. See *Convallaria*.

SOLSE'QUIUM. (*um*, *ii*. n.; from *sol*, the sun, and *sequor*, to follow: so called because it turns its flowers towards the sun.) See *Heliotropium*.

SOLUTION. *Solutio*. An intimate commixture of solid bodies with fluids, into one seemingly homogeneous liquor. The dissolving fluid is called a menstruum or solvent.

SOLUTI'VUS. (From *solvo*, to loosen.) Laxative; gently purgative.

SOLVENT. See *Menstruum*.

SOMMITE. See *Nepheline*.

SOMNAMBULISM. See *Oneirodynia*.

SOMNIFEROUS. (*Somniferus;* from *somnus*, sleep, and *fero*, to bring.) Having the power of inducing sleep.

SOMNOLE'NTIA. (*a*, *æ*. f.; from *somnus*, sleep.) Sleepiness.

SOMNUS. (*us*, *i*. m.) Sleep. See *Sleep*.

SO'NCHUS. (*us*, *i*. m. Παρα το σωον, χεειν; from its wholesome juice.) The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia æqualis*. The sow-thistle.

Sonchus arvensis. *Hieracium majus*. The greater hawkweed. A feeble astringent plant.

Sonchus oleraceus. The systematic name of the sow-thistle. Most of the species of sonchus abound with a milky juice, which is very bitter, and said to possess diuretic virtues. This is sometimes employed with that intention. Boiled, it may be eaten as a substitute for cabbage.

SOOT. See *Fuligo*.

SO'PHIA. (*a*, *æ*. f.; from σοφος, wise: so named from its great virtues in stopping fluxes.) See *Sisymbrium sophia*.

Sophia chirurgorum. See *Sisymbrium*.

SOPHISTICATION. *Sophisticatio*. The counterfeiting or adulterating any thing. This practice unhappily obtains with most dealers in drugs, &c.; and the cheat is carried on so artificially by many, as to prevent a discovery even by persons of the most discerning faculties.

SOPHO'RA. (*a*, *æ*. f.; a name of most whimsical origin. *Sophera* is, according to Prosper Alpinus, the Egyptian denomination of a species of cassia, the *Cassia sophera* of Linnæus, nearly related to this genus. Linnæus, spelling it *sophora*, calls it a *genus sophorum*, or of wise men; as teaching that separate stamens, in the papilionaceous family, if ever the limits of that family can be determined, afford so decisive a mark of discrimination, as almost to exclude the plants furnished with such from the same natural class, or order, with those the filaments of which are combined.) The name of a genus of plants. Class, *Decandria;* Order, *Monogynia*.

Sophora heptaphylla. A shrub, the root and seeds of which are sometimes called *anticholerica:* they are both intensely bitter, and said to be useful in cholera, colic, and dysury.

Sophroniste'res. (From σωφρονιζω, to become wise: so called because they do not appear till after puberty.) The last of the grinding-teeth.

SO'PIENS. (From *sopio*, to make sleep.) Having the property of procuring sleep.

SO'POR. (*or*, *oris*. m.) Profound sleep.

SOPORIFEROUS. (*Soporiferus;* from

sopor, sleep, and *fero*, to bear.) That which induces sleep.

So'ra. (Arabian.) The nettle-rash.

Sorbastre'lla. (From *sorbeo*, to suck up: because it stops hæmorrhages.) See *Pimpinella saxifraga*.

SORBATE. (*Sorbas, atis.* m.: so called because it has sorbic acid for its formation.) A sorbate, or compound of sorbic acid, with an alkaline base.

SORBIC. (*Sorbicus;* from *sorbus*, the tree so called.) Of or belonging to the wild service-tree, or mountain-ash.

Sorbic acid. (*Acidum sorbicum;* from *sorbus*, the mountain-ash, from the berries of which it is obtained.) The acid of apples, called malic, may be obtained most conveniently, and in greatest purity, from the berries of the mountain-ash, called *Sorbus*, or *Pyrus aucuparia:* and hence the present name, sorbic acid. This was supposed to be a new and peculiar acid by Donovan and Vauquelin, who wrote good dissertations upon it. But it now appears that the sorbic and *pure* malic acids are identical.

Bruise the ripe berries in a mortar, and then squeeze them in a linen bag. They yield nearly half their weight of juice, of the specific gravity of 1·077. This viscid juice, by remaining for about a fortnight in a warm temperature, experiences the vinous fermentation, and would yield a portion of alkohol. By this change, it has become bright, clear, and passes easily through the filter, while the sorbic acid itself is not altered. Mix the clear juice with filtered solution of acetate of lead. Separate the precipitate on a filter, and wash it with cold water. A large quantity of boiling water is then to be poured upon the filter, and allowed to drain into glass jars. At the end of some hours, the solution deposits crystals of great lustre and beauty. Wash these with cold water, dissolve them in boiling water, filter, and crystallise. Collect the new crystals, and boil them for half an hour in 2·3 times their weight of sulphuric acid, specific gravity 1·090, supplying water as fast as it evaporates, and stirring the mixture diligently with a glass rod. The clear liquor is to be decanted into a tall narrow glass jar, and, while still hot, a stream of sulphuretted hydrogene is to be passed through it. When the lead has been all thrown down in a sulphuret, the liquor is to be filtered, and then boiled in an open vessel to dissipate the adhering sulphuretted hydrogene. It is now a solution of sorbic acid.

When it is evaporated to the consistence of a syrup, it forms mammalated masses of a crystalline structure. It still contains a considerable quantity of water, and deliquesces when exposed to the air. Its solution is transparent, colourless, void of smell, but powerfully acid to the taste. Lime and barytes waters are not precipitated by solution of the sorbic acid, although the sorbate of lime is nearly insoluble. One of the most characteristic properties of this acid is the precipitate which it gives with the acetate of lead, which is at first white and flocculent, but afterwards assumes a brilliant crystalline appearance. With potash, soda, and ammonia, it forms crystallisable salts, containing an excess of acid.

SO'RBUS. (*um, i.* n. and *us, i.* f.; from *sorbeo*, to suck up: because its fruit stops fluxes.) The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Trigynia.* The service-tree.

Sorbus aucuparia. The wild service-tree. The berries of this plant are astringent, and, it is said, have been found serviceable in allaying the pain of calculous affections in the kidneys.

SO'RDES. (*es, is.* f.) When the matter discharged from ulcers is rather viscid, glutinous, of a brownish-red colour, somewhat resembling the grounds of coffee, or grumous blood mixed with water, it is thus named. *Sordes*, *Saines*, and *Ichor*, are all of them much more fœtid than purulent matter, and none of them are all together free from acrimony; but that which is generally termed *Ichor* is by much the most acrid of them, being frequently so sharp and corrosive as to destroy large quantities of the neighbouring parts.

Sore, bay. An endemic disease at the bay of Honduras, which Dr. Mosely considers as a true cancer, commencing with an ulcer.

Sore-throat. See *Cynanche.*

SORREL. See *Rumex acetosa.*

Sorrel, French. See *Rumex scutatus.*

Sorrel, round-leaved. See *Rumex scutatus.*

Sorrel, wood. See *Oxalis acetosella.*

SOUND. 1. An instrument which surgeons introduce through the urethra into the bladder, to discover whether there is a stone in this viscus or not: and so called because when it touches a stone a sound is heard.

2. See *Hearing.*

SOUR. Synonymous with acid.

Sour dock. See *Rumex acetosa.*

SOUTHERNWOOD. See *Artemisia abrotanum.*

SOW. See *Sus scrofa.*

Sow-bread. See *Cyclamen.*

SPA. A town in France, in the department of the Ourte, famous for its mineral water, which appears to be a very strongly acidulous chalybeate, containing more iron and carbonic acid than any other mineral spring. What applies to the use of chalybeates will apply to this water.

SPADIX. (*ix, icis.* m.) An elongated receptacle or flower-bearing column, which emerges, mostly, from a spathe or sheath, as it does in *Arum maculatum*, *Calla æthiopica*, and *palustris;* but the *Acorus calamus* has a spadix without any sheath.

The inflorescence of palms, and some other plants, is a *branched spadix;* as the *Chamærops humilis*, *Musa*, &c.

Spain, pellitory of. See *Anthemis pyrethrum.*

Spanish fly. See *Cantharis.*

Spanish liquorice. See *Glycyrrhiza.*

Spar, fluor. See *Fluor.*

Spar, ponderous. See *Heavy-spar,* and *Barytes.*

Spar, tabular. See *Tabular spar.*

SPARGANO'SIS. (*is, is.* f.; from σπαργαω, to swell.) 1. A swelling.

2. A milk abscess. Dioscorides applied this term to phlegmon of the breast, and also in a collective sense, to signify not only a milk abscess, but a variety of tumours, and other diseases, supposed to depend upon an overflow, suppression, misdirection, or depraved secretion of milk.

Sparry anhydrite. See *Anhydrite.*

SPARRY IRON. A carbonate of iron, of a pale yellowish grey colour, found in limestone in England, Scotland, and Ireland, and in large quantities in Hessia.

SPARSUS. Dispersed; irregularly scattered. Frequently applied to eruptions, glands, leaves, flower-stalks.

SPA'RTIUM. (*um, ii.* n. Σπαρδιον, of Dioscorides: so called from σπαρἴη, a rope; because of the use of the long, slender, tough branches, or bark, in making cordage.) The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria.*

Spartium scoparium. The systematic name of the common broom. *Genista.* The tops and leaves of this indigenous plant, *Spartium —foliis ternatis solitariisque, ramis inermibus angulatis,* of Linnæus, are the parts that are employed medicinally: they have a bitter taste, and are recommended for their purgative and diuretic qualities in hydropic cases.

SPA'SMA. (*a, atis.* n.; from σπαω, to draw.) That voluntary straining which takes place in any vehement exertion, contraction, or extension of a muscle, as in running, riding, or bearing heavy burdens. It differs from *spasmus.* *Spasma,* says Sauvages, *non est spasma, sed distractio,* &c.

Spasmi. Spasmodic diseases. The third order of the class *Neuroses,* of Cullen; characterised by a morbid contraction or motion of muscular fibres.

SPASMODIC. *Spasmodicus.* Belonging to a spasm or convulsion.

Spasmodic asthma. See *Asthma.*

Spasmodic colic. See *Colica.*

Spasmodic croup. See *Cynanche trachealis.*

Spasmodic stricture. See *Strictura.*

SPASMOLOGY. (*Spasmologia, æ.* f.; from σπασμος, a spasm, and λογος, a discourse.) A treatise on convulsions.

SPA'SMUS. (*us, i.* m.; from σπαω, to draw.) A cramp, spasm, or convulsion. An involuntary contraction of the muscular fibres, or that state of the contraction of muscles which is not spontaneously disposed to alternate with relaxation, is properly termed spasm. When the contractions alternate with relaxation, and are frequently and preternaturally repeated, they are called convulsions. Spasms are distinguished by authors into clonic and tonic spasms. In *clonic* spasms, which are the true convulsions, the contractions and relaxations are alternate, as in epilepsy; but in *tonic* spasms the member remains rigid, as in locked-jaw. See *Convulsion, Tonic spasm,* and *Tetanus.*

Spasmus cynicus. Sardonic laugh. A convulsive affection of the muscles of the face and lips on both sides, which involuntarily forces the muscles of those parts into a species of grinning distortion. If one side only be affected, the disorder is denominated tortura oris. When the masseter, buccinator, temporal, nasal, and labial muscles, are involuntarily excited to action, or contorted by contraction or relaxation, they form a species of malignant sneer. It sometimes arises from eating hemlock, or other acrid poisons, or succeeds to an apoplectic stroke.

SPA'THA. (*a, æ.* f.; from σπαθη, a slice, or ladle.) A sheath or covering of an immature flower, which bursts longitudinally, and is more or less remote from the flower. From the number of membranes, which are called valves, and of the flowers, and their duration, it is named,—

1. *Spatha univalvis,* having only one membraneous leaf; as in *Arum maculatum,* and *Crocus sativus.*

2. —— *bivalvis,* in *Stratiates alioides.*

3. —— *dimidiata,* or *lacera,* there being only one valve, and that covering the flower only partially; as in *Ixia uniflora,* and *africana.*

4. —— *vaga,* the common sheath inclosing several partial ones; as in *Iris germanica,* and *Helonica.*

5. —— *uniflora,* containing only one flower; as the *Narcissus poeticus, Pseudo-narcissus,* and *Amaryllis formosissima.*

6. —— *biflora,* with two; as in *Alpina racemosa,* and *Moræa virgata.*

7. —— *multiflora;* as in *Allium, Narcissus jonquilla,* and *Pancreatium carabeum.*

8. —— *persistens,* remaining with the fruit; as in *Heliconia bibai.*

9. —— *marcescens,* withering before or soon after the flowering; as in the *Allia,* and *Leucojum vernum.*

SPATHOME'LE. (From σπαθη, a sword, and μηλη, a probe.) An edged probe.

SPA'TULA. (Diminutive of *spatha,* a broad instrument.) An instrument for spreading salve.

SPATULA'TUS. Spatulate or battledoor-shaped. Applied to leaves, &c. of a roundish figure, tapering into an oblong base; as in *Silene otites.*

SPEAR. *Hasta.* This instrument often gives a trivial name in *Natural History*; as spearmint, wort, &c.

SPEARMINT. See *Mentha viridis.*

Spearshape. See *Hastatus,* and *Lanceolatus.*

Spearwort, water. See *Ranunculus.*

SPECIES. (*es, ei.* f.) 1. An obsolete name of a powder; as *species aromaticæ,* &c.

2. Individual animals, plants, and minerals, agreeing in their appearances or composition. Their similarity gives rise to the establishment of species. Individuals or species

differing in circumstances arising from accident; in plants and animals, from soil and climate; in diseases, from constitution, &c.; in minerals, from locality, are termed *varieties*. The circumstances which are common to one or more species give rise to a division, or the formation of a genus. See *Genus, Order, Class.*

SPECIFIC. *Specificus.* A remedy that has an infallible efficacy in the cure of disorders.

Specific gravity. See *Gravity, specific.*

SPECI'LLUM. (*um, i.* n.; from *specio,* to examine.) A probe.

SPE'CULUM. (*um, i.* n.; from *specio,* to view.) An instrument for opening or obtaining a view of parts within each other; as *speculum oculi, speculum oris, speculum ani,* &c.

Speculum ani. An instrument for distending the anus, whilst an operation is performed upon the parts within.

Speculum matricis. An instrument to assist in any manual operation belonging to the womb.

Speculum oculi. An instrument by which the eyelids are kept open, and the eye fixed.

Speculum oris. An instrument to force open the mouth.

Speculum veneris. See *Achillea.*

SPEECH. See *Voice.*

Speechlessness. See *Aphonia.*

SPEEDWELL. See *Veronica.*

Speedwell, female. See *Antirrhinum.*

Speedwell, mountain. See *Veronica.*

SPERMACETI. (From σπερμα, seed, and *cete,* or *cetus,* the whale.) See *Physeter.*

SPERMATIC. (*Spermaticus;* from σπερμα, seed.) Belonging to the testicle and ovary; as the spermatic artery, chord, and veins.

SPERMATOCE'LE. (*e, es.* f.; from σπερμα, seed, and κηλη, a tumour.) *Epididymis distensa.* A swelling of the testicle or epididymis from an accumulation of semen. It is known by a swelling of those organs, pain extending to the loins, without inflammation.

Spermatopoe'ticus. (From σπερμα, and ποιεω, to make.) Having the property of increasing the formation or generation of seed.

SPERMORRHŒ'A. (*a, æ.* f.; from σπερμα, *semen,* and ρεω, *fluo.*) Seminal flux. See *Gonorrhœa.*

SPHACELI'SMUS. (*us, i.* m.; from σφακελιζω, to gangrene.) 1. A gangrene.

2. An inflammation of the brain.

SPHA'CELUS. (*us, i.* m.; from σφακω, to destroy.) See *Gangrene.*

SPHÆNOI'DES. See *Sphenoides.*

SPHÆROCE'PHALUS. (From σφαιρα, a globe, and κεφαλη, a head.) A round head.

SPHÆRO'MA. (*a, atis.* n.; from σφαιρα, a globe.) A fleshy globular protuberance.

SPHÆRULITE. A brown and grey coloured mineral, found in embedded roundish balls and grains in pearlstone and pitchstone porphyries, near Schemnitz.

SPHE'NO. Names compounded of this word belong to the sphenoid bone.

Spheno-maxillaris. An artery, and a fissure of the orbit of the eye, is so called.

Spheno-salpingo-staphylinus. See *Circumflexus.*

Spheno-staphylinus. See *Levator palati.*

SPHENOID. (*Sphenoides;* from σφην, a wedge, and ειδος, a likeness: because it is fixed in the cranium like a wedge.) Wedgelike: applied to a bone of the skull.

SPHENOIDAL. *Sphenoidalis.* Belonging to the sphenoid bone.

Sphenoidal suture. *Sutura sphenoidalis.* The sphenoidal and ethmoidal sutures are those which surround the many irregular processes of these two bones, and join them to each other and to the rest.

Sphenoides os. This bone is also called, *Os cuneiforme, Os multiforme, Os azygos, Papillare os, Basilare os, Os polymorphos,* and *Pterygoideum.* The sphenoid bone is wedged in amidst the other bones of the head, and is of a more irregular figure than any other bone. It has been compared to a bat with its wings extended. This resemblance is but faint, but it would be difficult, perhaps, to find any thing it resembles more.

We distinguish in this bone its body or middle part, and its wings or sides, which are much more extensive than its body.

Each of its wings or lateral processes is divided into two parts. Of these the uppermost and most considerable portion, helping to form the deepest part of the temporal fossa on each side, is called the *temporal process.* The other portion makes a part of the orbit, and is therefore named the *orbitar process.* The back part of each wing, from its running out sharp to meet the os petrosum, has been called the *spinous process;* and the two processes, which stand out almost perpendicular to the basis of the skull, have been named *pterygoid* or *aliform* processes, though they may be said rather to resemble the legs than the wings of the bat. Each of these processes has two plates and a middle fossa facing backwards: of these plates the external one is the broadest, and the internal one the longest. The lower end of the internal plate forms a kind of hook, over which passes the round tendon of the *musculus circumflexus palati.* Besides these, we observe a sharp middle ridge, which stands out from the middle of the bone. The fore part of it, where it joins the nasal lamella of the ethmoidal bone, is thin and straight; the lower part of it is thicker, and is received into the vomer.

The cavities observable on the external surface of the bone, are where it helps to form the temporal, nasal, and orbitar fossæ.

It has likewise two fossæ in its pterygoid processes. Behind the edge, which separates these two fossæ, we observe a small groove, made by a branch of the superior maxillary

nerve in its passage to the temporal muscle. Besides these, it has other depressions, which serve chiefly for the origin of muscles.

Its foramina are four on each side. The three first serve for the passage of the optic, superior maxillary, and inferior maxillary nerves; the fourth transmits the largest artery of the dura mater. On each side we observe a considerable fissure, which, from its situation, may be called the superior orbitar fissure. Through it pass the third and fourth pair of nerves, a branch of the fifth, and likewise the sixth pair. Lastly, at the basis of each pterygoid process, we observe a foramen which is named *pterygoidean*, and sometimes *Vidian*, from Vidius, who first described it. Through it passes a branch of the external carotid, to be distributed to the nose.

The os sphenoides on its internal surface affords three fossæ. Two of these are considerable ones: they are formed by the lateral processes, and make part of the lesser fossæ of the basis of the skull. The third, which is smaller, is on the top of the body of the bone, and is called *sella turcica*, from its resemblance to a Turkish saddle. In this the pituitary gland is placed. At each of its four angles is a process. They are called the *clinoid* processes, and are distinguished by their situation into anterior and posterior processes. The two latter are frequently united into one.

Within the substance of the os sphenoides, immediately under the sella turcica, we find two cavities, separated by a thin bony lamella. These are the sphenoidal sinuses. They are lined with the pituitary membrane, and, like the frontal sinuses, separate a mucus which passes into the nostrils. In some subjects there is only one cavity; in others, though more rarely, we find three.

In infants, the os sphenoides is composed of three pieces, one of which forms the body of the bone and its pterygoid processes, and the other two its lateral processes. The clinoid processes may even then be perceived in a cartilaginous state, though some writers have asserted the contrary; but we observe no appearance of any sinus.

This bone is connected with all the bones of the cranium, and likewise with the ossa maxillaria, ossa malarum, ossa palati, and vomer. Its uses may be collected from the description we have given of it.

SPHERICAL. *Sphæricalis.* Round.

SPHI'NCTER. (*er, eris.* m.; from σφιγ7ω, to shut up.) The name of several muscles, the office of which is to shut or close the aperture around which they are placed.

Sphincter ani. *Sphincter externus*, of Albinus and Douglas. *Sphincter cutaneus*, of Winslow. A single muscle of the anus, which shuts the passage through the anus into the rectum, and pulls down the bulb of the urethra, by which it assists in ejecting the urine and semen. It arises from the skin and fat that surrounds the verge of the anus on both sides, near as far as the tuberosity of the ischium; the fibres are gradually collected into an oval form, and surround the extremity of the rectum. It is inserted by a narrow point into the perinæum, acceleratores urinæ, and transversi perinei; and behind into the extremity of the os coccygis, by an acute termination.

Sphincter ani cutaneus. See *Sphincter ani.*

Sphincter ani externus. See *Sphincter ani.*

Sphincter ani internus. Albinus and Douglas call the circular fibres of the muscular coat of the rectum, which surround its extremity by this name.

Sphincter cutaneus. See *Spincter ani.*

Sphincter externus. See *Sphincter ani.*

Sphincter gulæ. The muscle which contracts the top of the throat.

Sphincter labiorum. See *Orbicularis oris.*

Sphincter oris. See *Orbicularis oris.*

Sphincter vaginæ. *Constrictor cunni*, of Albinus. *Second muscle of the clitoris*, of Douglas. This muscle arises from the sphincter ani and from the posterior side of the vagina near the perinæum; from thence it runs up the side of the vagina, near its external orifice, opposite to the nymphæ, covers the corpus cavernosum, and is inserted into the crus and body or union of the crura clitoridis. Its use is to contract the mouth of the vagina.

Sphingo'ntus. (From σφιγ7ω, to bind.) Astringent.

SPHONDY'LIUM. (*um, ii.* n.; from σπονδυλος, vertebra: named from the shape of its root, or probably because it was used against the bite of a serpent, called σπονδυλις.) The name of a plant which is supposed to be the branckursine. See *Acanthus mollis.*

SPHRAGIDE. A species of Lemnian earth.

SPHRONGIDIUM. See *Columnula.*

SPHYGMICUS. Relating to the pulse.

Sphygmos. (*os, i.* m.; from σφύζειν, to leap or rebound.) The pulse.

SPICA. (*a, æ.* f.) A spike. I. A species of inflorescence, consisting of one common stalk bearing numerous flowers, all ranged along it without any, or having very small partial stalks, as the flower-stalk of the greater plantain. From its figure, the situation of the flowers, and its vesture, it is said to be,—

1. *Cylindrical*; as in *Plantago media.*
2. *Ovate*, in *Sanguisorba officinalis.*
3. *Articulate*, with joints; as in *Salicornea herbacea*, and *Polygonum articulatum.*
4. *Conjugate*, two spikes going from the summit of the peduncle; as in *Heliotropium europæum* and *parviflorum.*
5. *Ramose*, divided into branches; as in *Chenopodium bonus henricus*, and *Osmunda.*
6. *Imbricate*; as in *Salvia hispanica.*
7. *Secundal*, the flowers leaning all to one side; as in *Anchusa officinalis.*
8. *Interrupted*, in separate groups; as in *Betonica officinalis.*

9. *Distichal*, or two-rowed, two series of spikes; as in *Gladiolus alopecuroides*.

10. *Terminal;* as in *Lavendula*.

11. *Axillary;* as in *Justitia spinosa*.

12. *Foliose*, leaflets between the flowers; as in *Agrimonia eupatoria*.

13. *Comose*, having a leafy bundle at the apex; as in *Lavendula stœchas*.

14. *Ciliate*, hairs between the flowers; as in *Nardus ciliaris*.

II. An ear of corn.

III. A bandage like an ear of corn.

Spica brevis. The *Alopecuris pratensis*.

Spica celtica. See *Valeriana celtica*.

Spica fœmina. Common lavender.

Spica indica. See *Nardus indica*.

Spica inguinalis. A bandage for ruptures in the groin.

Spica duplex. Double bandage.

Spica mas. Broad-leaved lavender.

Spica nardi. See *Nardus indica*.

Spica simplex. A common bandage.

SPI'CULA. (*a, æ,* f.; a diminutive of *spica.*) A spikelet or spiket. A term applied exclusively to grasses that have many florets on one calyx, such florets ranged on a little stalk, constituting the spikelet, which is therefore a part of the flower itself, and not of the inflorescence; as in *Briza minor*, and *Poa aquatica*. *Locusta* means the same as *spicula*.

SPIGE'LIA. (*a, æ.* f.; so called by Linnæus in commemoration of an old botanist, Adrian Spigelius, who wrote *Isagoge in rem Herbariam*, in 1606.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia*.

2. The name in some pharmacopœias for the *Spigelia marilandica*.

Spigelia anthelmia. The systematic name of the spigelia of some pharmacopæias. It is directed as an anthelmintic: its virtues are very similar to those of the Indian pink. See *Spigelia marilandica*.

Spigelia lonicera. See *Spigelia marilandica*.

Spigelia marilandica. Perennial worm-grass, or Indian pink. *Spigelia lonicera. Spigelio—caule tetragono, foliis omnibus oppositis*, of Linnæus. The whole of this plant, but most commonly the root, is employed as an anthelmintic by the Indians and inhabitants of America. Dr. Hope has written in favour of this plant, in continued and remitting low worm fevers. Besides its property of destroying the worms in the primæ viæ, it acts as a purgative.

Spigelian lobe. See *Liver*.

SPIGELIUS, Adrian, was born at Brussels, in 1578. He wrote concerning the virtues of plants, some diseases, and on anatomical subjects.

SPIGNEL. See *Æthusa meum*.

SPIKELET. See *Spicula*.

SPIKENARD. See *Nardus indica*.

Spike-stalk. See *Rhachis*.

SPILA'NTHUS. (*us, i.* m.; from σπιλος, a spot, and ανθος, a flower: because of its dotted or speckled flowers.) The name of a genus of plants. Class, *Syngenesia;* Order, *Polygamia æqualis*.

Spilanthus acmella. The balm-leaved spilanthus; called also, *Achmella* and *Achamella*. This plant possesses a glutinous bitter taste, and a fragrant smell. The herb and seed are said to be diuretic and emmenagogue, and useful in dropsies, jaundice, fluor albus, and calculous complaints, given in infusion.

SPILUS. (*us, i.* m.; from σπιλος, *macula.*) A spot or discolouration of the skin. A mother's mark has been so called when in the form of a mere spot.

SPI'NA. (*a, æ.* f.; *quasi spiculina*, diminutive of *spica.*) A thorn.

I. In *Anatomy*. 1. The back-bone: so called from the thorn-like processes of the vertebræ. See *Vertebræ*.

2. The shin-bone: so called on account of its sharp edge.

II. In *Botany*, a thorn of a plant. A prickly armature of plants, not easily removed by the finger, and proceeding from the woody part of the plant. It is either,

1. *Culine;* as in *Prunus spinosa*.

2. *Terminal*, at the end of a branch; as in *Rhamnus catharticus*.

3. *Foliar*, on the surface of the leaf; as in *Carduus marianus*.

4. *Marginal*, on the margin of the leaf; as in *Ilex aquifolium*.

5. *Axillary*, going from the axilla of the leaf; as in *Gleditschia triacanthos*.

6. *Calycine*, on the calyx; as in *Carduus marianus*.

7. *Pericarpial*, on the pod; as in *Datura stramonium*.

8. *Stipular*, on the stipule; as in *Mimosa nilotica*, and *horrida*.

9. *Straight;* as in *Mimosa nigra*.

10. *Recurve;* as in *Costus nobilis*.

11. *Decussate;* as in *Genista lucitanica*.

12. *Setaceous;* as in *Cactus opuntia*.

13. *Subulate;* as in *Cactus tuna*.

14. *Inerm*, covered with soft and not prickly spines, also called *muricate;* as in *Convolvulus muricatus*, and *Mimosa muricata*.

15. *Simple*, when not divided; as *Genista anglica*.

16. *Germinal;* as in *Limonia trifoliata*.

17. *Ternate;* as in *Zanthium spinosum*.

18. *Ramose;* as in *Gleditschia horrida*.

Spina acida. See *Berberis*.

Spina ægyptiaca. See *Acacia vera*.

Spina bifida. See *Hydrorachitis*.

Spina cervina. See *Rhamnus*.

Spina hirci. The goats'-thorn of France yielding gum-tragacanth.

Spina infectoria. See *Rhamnus*.

Spina purgatrix. The purging thorn.

Spina solstitialis. See *Calcitrapa*.

Spina ventosa. (The term *spina* seems to have been applied by the Arabians to this disorder, because it occasions a prickling in the flesh like the puncture of thorns; and the *ventosa* is added, because, upon touching the tumour, it seems to be filled with wind, though this is not the cause of the distension.) A

tumour arising from an internal caries of a bone. It most frequently occurs in the carpus and tarsus, and is known by a continual pain in the bone, and a red swelling of the skin, which has a spongy feel.

SPINA'CHIA. See *Spinacia*.

SPINA'CIA. (*a, æ.* f. ; from Ισπανια, Spain, whence it originally came ; or from its spinous seed.) The name of a genus of plants. Class, *Diœcia* ; Order, *Pentandria*. Spinage.

SPINACIA OLERACEA. The systematic name of the spinach. Spinage. *Spinachia*. This plant is sometimes directed for medicinal purposes in the cure of phthisical complaints : made into a poultice, by boiling the leaves and adding some oil, it forms an excellent emollient. As an article of food it may be considered as similar to cabbage and other oleraceous plants. See *Brassica capitata*.

SPINAGE. See *Spinacia*.

SPINÆ VENTOSITAS. A caries of a bone.

SPINAL. *Spinalis*. Belonging to the spine of the back, or to the stem, leaves, &c. of plants which have thorns.

Spinal marrow. See *Medulla spinalis*.

SPINALIS CERVICIS. This muscle, which is situated close to the vertebræ at the posterior part of the neck and upper part of the back, arises, by distinct tendons, from the transverse processes of the five or six uppermost vertebræ of the back, and ascending obliquely under the complexus, is inserted, by small tendons, into the spinous processes of the sixth, fifth, fourth, third, and second vertebræ of the neck. Its use is to extend the neck obliquely backwards.

SPINALIS COLLI. See *Semi-spinalis colli*.

SPINALIS DORSI. *Transversalis dorsi*, of Winslow. This is the name given by Albinus to a tendinous and fleshy mass, which is situated along the spinous processes of the back and the inner side of the longissimus dorsi.

It arises tendinous and fleshy from the spinous processes of the uppermost vertebræ of the loins, and the lowermost ones of the back, and is inserted into the spinous processes of the nine uppermost vertebræ of the back.

Its use is to extend the vertebræ, and to assist in raising the spine.

SPINDLESHAPED. See *Fusiformis*.

SPINE. See *Vertebræ*.

SPINEL. A subspecies of octohedral corundum, of a red colour, and equal value with a diamond. It comes from Pegu and Ceylon.

SPINELLANE. A plum, blue-coloured crystallised mineral, found on the shores of the lake of Laach.

SPINESCENS. Spinescent : becoming hard and thorny. Applied to the leaf-stalk when it hardens into a thorn, and the leaf falls, as is the case in *Rhamnus catharticus*, and *Robinia spinosa* ; and to the stipulæ of the *Robinia seudacacia*, which also become thorns.

SPINO'SUS. Spinous : spinal. See *Spinal*.

SPINOSUM SYRIACUM. The Syrian broom.

SPINTHERE. A greenish grey-coloured mineral, believed to be a variety of prismatic titanium ore.

SPIRÆ'A. (*a, æ.* f.; from *spira*, a pillar: so named from its spiral stalk.) The name of a genus of plants in the Linnæan system. Class, *Icosandria* ; Order, *Pentagynia*.

SPIRÆA AFRICANA. A species of *Diosma*, most probably the *crenata*.

SPIRÆA FILIPENDULA. The systematic name of the officinal dropwort. *Filipendula*. *Saxifraga rubra*. The root of this plant, *Spiræa —foliis pennatis, foliolis uniformibus serratis ; caule herbaceo ; floribus corymbosis*, of Linnæus, possesses astringent, and, it is said, lithontriptic virtues. It is seldom used in the practice of the present day.

SPIRÆA ULMARIA. The systematic name of the meadow-sweet. Meadow-sweet. Queen of the meadows. *Ulmaria*. *Regina prati*. *Barba capræ*. This is a beautiful and fragrant plant. The leaves are recommended as mild astringents. The flowers have a strong smell, resembling that of May : they are supposed to possess antispasmodic and diaphoretic virtues ; and, as they are very rarely used in medicine, Linnæus suspects that the neglect of them has arisen from the plant being supposed to be possessed of some noxious qualities, which it seemed to betray by its being left untouched by cattle. It may be observed, however, that the cattle also refuse the Angelica and other herbs, whose innocence is apparent from daily experience.

SPIRAL. *Spiralis*. Twisted like a corkscrew.

SPI'RITUS. (*us, ûs.* m.; spirit.) This name was formerly given to all volatile substances collected by distillation. Three principal kinds were distinguished : inflammable or ardent spirits, acid spirits, and alkaline spirits. The word spirit is now almost exclusively confined to alkohol.

SPIRITUS ÆTHERIS NITRICI. *Spiritus ætheris nitrosi*. *Spiritus nitri dulcis*. Take of rectified spirits, two pints ; nitric acid, by weight, three ounces : add the acid gradually to the spirit, and mix them, taking care that the heat do not exceed 120°; then with a gentle heat distil twenty-four fluid ounces. A febrifuge, diaphoretic, and diuretic compound, mostly administered in asthenia, nervous affections, dysuria, and calculous complaints.

SPIRITUS ÆTHERIS AROMATICUS. Take of cinnamon-bark, bruised, three drachms ; cardamon-seeds, powdered, a drachm and a half; long pepper powdered, ginger-root sliced, each a drachm ; spirit of sulphuric æther, a pint : macerate for fourteen days, in a closed glass vessel, and strain. An excellent stimulating and stomachic compound, which is administered in debility of the stomach and nervous affections.

SPIRITUS ÆTHERIS SULPHURICI. *Spiritus vitrioli dulcis*. *Spiritus ætheris vitriolici*. Take of sulphuric æther, half a pint ; rectified spirit, a pint : mix them. A diaphoretic, antispasmodic, and tonic preparation, mostly exhibited

in nervous debility and weakness of the primæ viæ.

Spiritus ætheris sulphurici compositus. Take of spirit of sulphuric æther, a pint; ætherial oil, two fluid drachms: mix them. A stimulating anodyne, supposed to be similar to the celebrated *liquor mineralis anodynus*, of Hoffmann. It is exhibited in fevers, nervous affections, hysteria, &c.; and, in most cases of fever where medicines are rejected by the stomach, this is of infinite service.

Spiritus ammoniæ. Spirit of ammonia. Formerly called *Spiritus salis ammoniaci dulcis*; and *Spiritus salis ammoniaci.* Take of proof spirit, three pints; muriate of ammonia, four ounces; subcarbonate of potash, six ounces: mix them, and, with a gentle fire, let a pint and a half be distilled into a cooled receiver. A stimulating antispasmodic, occasionally exhibited in cases of asphyxia, asthenia, and in nervous diseases, but mostly used as an external stimulant against rheumatism, sprains, and bruises.

Spiritus ammoniæ aromaticus. Aromatic spirit of ammonia. Formerly known by the name of *Spiritus ammoniæ compositus; Spiritus volatilis aromaticus;* and *Spiritus salis volatilis oleosus.* Take of cinnamon-bark bruised, cloves bruised, each two drachms; lemon-peel, four ounces; subcarbonate of potash, half a pound; muriate of ammonia, five ounces; rectified spirit, four pints; water a gallon: mix, and distil six pints. A stimulating antispasmodic and sudorific, in very general use to smell at in faintings and lowness of spirits. It is exhibited internally in nervous affections, hysteria, and weakness of the stomach. The dose is from half a drachm to a drachm.

Spiritus ammoniæ fœtidus. Fœtid spirit of ammonia. Formerly called *spiritus volatilis fœtidus.* Take of spirit of ammonia, two pints; assafœtida, two ounces: macerate for twelve hours; then by a gentle fire distil a pint and a half into a cooled receiver. A stimulating antispasmodic, often exhibited to children against convulsions, and to gouty and asthmatic persons. The dose is from half to a whole fluid drachm.

Spiritus ammoniæ succinatus. Succinated spirit of ammonia. Formerly known by the names of *Eau de luce; Spiritus salis ammoniaci succinatus;* and *Liquor cornu cervi succinatus.* Take of mastich, three drachms; rectified spirit, nine fluid drachms; oil of lavender, fourteen minims; oil of amber, four minims; solution of ammonia, ten fluid ounces: macerate the mastich in the spirit that it may dissolve, and pour off the clear tincture; to this add the remaining articles, and shake them together. This preparation is much esteemed as a stimulant and nervine medicine, and is employed internally and externally against spasms, hysteria, syncope, vertigo, and the stings of insects. The dose is from ten minims to half a fluid drachm.

Spiritus anisi. Spirit of aniseed. Formerly called *Spiritus anisi compositus;* and *Aqua seminum anisi composita.* Take of aniseed, bruised, half a pound; proof spirit, a gallon; water sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. A stimulating carminative and stomachic, calculated to relieve flatulency, borborygmus, colic, and spasmodic affections of the bowels. The dose is from half to a whole fluid drachm.

Spiritus armoraciæ compositus. Compound spirit of horse-radish. Formerly called *Spiritus raphani compositus;* and *Aqua raphani composita.* Take of horse-radish root, fresh and sliced, dried orange-peel, of each a pound; nutmegs, bruised, half an ounce; proof spirit, a gallon; water sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. A very warm stimulating compound, given in gouty, rheumatic, and spasmodic affections of the stomach, and in scorbutic disorders. The dose is from half a fluid drachm to half a fluid ounce.

Spiritus camphoræ. Spirit of camphire. Formerly known by the names of *Spiritus camphoratus; Spiritus vinosus camphoratus;* and *Spiritus vini camphoratus.* Take of camphire, four ounces; rectified spirit, two pints: mix, that the camphire may be dissolved. A stimulating medicine, used as an external application against chilblains, rheumatism, palsy, numbness, and gangrene.

Spiritus carui. Spirit of caraway. Formerly called *Aqua seminum carui.* Take of caraway-seeds, bruised, a pound and a half; proof spirit, a gallon; water sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon by a gentle fire. The dose is from a fluid drachm to half a fluid ounce.

Spiritus cinnamomi. Spirit of cinnamon. Formerly called *Aqua cinnamomi spirituosa*, and *Aqua cinnamomi fortis.* Take of cinnamon bark, bruised, a pound; proof spirit, a gallon; water sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon by a gentle fire. Spirit of cinnamon is mostly used in conjunction with other carminatives to give a pleasant flavour: it may be exhibited alone as a carminative and stimulant. The dose is from a fluid drachm to half a fluid ounce.

Spiritus cornu cervi. See *Ammoniæ subcarbonas.*

Spiritus gallicus. See *Brandy.*

Spiritus jamaicensis. Rum.

Spiritus juniperi compositus. Compound spirit of juniper. Formerly called *Aqua juniperi composita.* Take of juniper-berries, bruised, a pound; caraway-seeds bruised, fennel-seeds bruised, of each an ounce and a half; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon by a gentle fire.

Spiritus lavendulæ. Spirit of lavender. Formerly called *Spiritus lavendulæ simplex.* Take of fresh lavender flowers, two pounds; rectified spirit, a gallon; water, sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon by a gentle fire. Though mostly used as a perfume, this spirit may be

given internally as a stimulating nervine and antispasmodic. The dose is from a fluid drachm to half a fluid ounce.

Spiritus lavendulæ compositus. Compound spirit of lavender. Formerly called *Spiritus lavendulæ compositus matthiæ.* Take of spirit of lavender, three pints; spirit of rosemary, a pint; cinnamon-bark, bruised, nutmegs, bruised, of each half an ounce; red saunders wood, sliced, an ounce: macerate for fourteen days, and strain. An elegant and useful antispasmodic and stimulant, in very general use against nervous diseases, lowness of spirits, and weakness of the stomach, taken on a lump of sugar.

Spiritus lumbricorum. The spirit obtained by the distillation of the earth-worm is similar to hartshorn.

Spiritus menthæ piperitæ. Spirit of peppermint. Formerly called *Spiritus menthæ piperitidis;* and *Aqua menthæ piperitidis spirituosa.* Take of peppermint, dried, a pound and a half; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon by a gentle fire. This possesses all the properties of the peppermint, with the stimulating virtues of the spirit. The dose from one fluid drachm to a fluid ounce.

Spiritus menthæ viridis. Spirit of spearmint. Formerly called *Spiritus menthæ sativæ;* and *Aqua menthæ vulgaris spirituosa.* Take of spearmint, dried, a pound and a half; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for 24 hours, and distil a gallon. This is most commonly added to carminative or antispasmodic draughts, and seldom exhibited alone. The dose from one fluid drachm to a fluid ounce.

Spiritus millepedarum. A volatile alkali, the virtues of which are similar to hartshorn.

Spiritus mindereri. See *Ammoniæ acetatis liquor.*

Spiritus myristicæ. Spirit of nutmeg. Formerly called *aqua nucis moschatæ.* Take of nutmegs, bruised, two ounces; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. A stimulating and agreeable spirit, possessing the virtues of the nutmeg. The dose from one fluid drachm to a fluid ounce.

Spiritus nitri dulcis. See *Spiritus ætheris nitrici.*

Spiritus nitri duplex. See *Acidum nitrosum,* and *Nitric acid.*

Spiritus nitri fumans. See *Acidum nitrosum,* and *Nitric acid.*

Spiritus nitri glauberi. See *Acidum nitrosum,* and *Nitric acid.*

Spiritus nitri simplex. The dilute nitrous acid. See *Acidum nitricum dilutum.*

Spiritus nitri vulgaris. A very dilute nitric acid, probably the acidum nitricum dilutum.

Spiritus pimentæ. Spirit of pimento. Formerly called *spiritus pimento.* Take of allspice, bruised, two ounces; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. A stimulating aromatic tincture, mostly employed with astringent and carminative medicines. The dose is from half a fluid drachm to half a fluid ounce.

Spiritus pulegii. Spirit of pennyroyal. Formerly called *aqua pulegii spirituosa.* Take of pennyroyal, dried, a pound and a half; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. This is in very general use as an emmenagogue amongst the lower orders. It possesses nervine and carminative virtues. The dose is from half a fluid drachm to half a fluid ounce.

Spiritus rector. Boerhaave and other chemists give this name to a very attenuated principle, in which the smell of odorant bodies peculiarly reside. It is now called *aroma.*

Spiritus rosmarini. Spirit of rosemary. Take of rosemary tops, fresh, two pounds; proof spirit, a gallon; water, sufficient to prevent empyreuma: macerate for twenty-four hours, and distil a gallon by a gentle fire. A very fragrant spirit, mostly employed for external purposes in conjunction with other resolvents.

Spiritus salis ammoniaci aquosus. See *Ammoniæ subcarbonas.*

Spiritus salis ammoniaci dulcis. See *Spiritus ammoniæ.*

Spiritus salis ammoniaci simplex. See *Ammoniæ subcarbonas.*

Spiritus salis glauberi. See *Muriatic acid.*

Spiritus salis marini. See *Muriatic acid.*

Spiritus vini rectificatus. See *Alkohol.*

Spiritus vini tenuior. Proof spirit, which is about half the strength of rectified, is much employed for preparing tinctures of resinous juices, barks, roots, &c.

Spiritus vitrioli. See *Sulphuric acid.*

Spiritus vitrioli dulcis. See *Spiritus ætheris sulphurici.*

Spiritus vitrioli tenuis. See *Acidum sulphuricum dilutum.*

Spiritus volatilis fœtidus. See *Spiritus ammoniæ fœtidus.*

SPISSAME'NTUM. (*um, i.* n.; from *spisso,* to thicken.) A substance put into oils and ointments to make them thick.

Spitting of blood. See *Hæmatemesis,* and *Hæmoptysis.*

SPLANCHNIC. (*Splanchnicus;* from σπλαγχνον, an entrail.) Belonging to the entrails.

Splanchnic nerve. The great intercostal nerve. See *Intercostal nerve.*

SPLANCHNOLOGY. (*Splanchnologia, æ.* f.; from σπλαγχνον, an entrail, and λογος, a discourse) The doctrine of the viscera.

SPLEEN. (*Splen, enis.* m. Σπλην.) *Lien.* The spleen or milt is a spongy viscus of a livid colour, and so variable in form, situation, and magnitude, that it is hard to determine either. Nevertheless, in a healthy man

it is always placed on the left side, in the left hypochondrium, between the eleventh and twelfth false ribs. Its circumference is oblong and round, resembling an oval figure. It is larger, to speak generally, when the stomach is empty, and smaller when it is compressed, or evacuated by a full stomach.

It should particularly be remembered of this viscus, that it is convex towards the ribs, and concave internally: also, that it has an excavation, into which vessels are inserted.

It is connected with the following parts:— 1. With the stomach, by a ligament and short vessels. 2. With the omentum, and the left kidney. 3. With the diaphragm, by a portion of the peritonæum. 4. With the beginning of the pancreas, by vessels. 5. With a colon, by a ligament.

In man, the spleen is covered with one simple, firm membrane arising from the peritonæum, which adheres to the spleen very firmly, by the intervention of cellular structure.

The vessels of the spleen are, the splenic artery coming from the cœliac artery, which, considering the size of the spleen, is much larger than is requisite for the mere nutrition of it. This goes by serpentine movements, out of its course, over the pancreas, and behind the stomach, and, after having given off branches to the adjacent parts, it is inserted into the concave surface of the spleen. It is afterwards divided into smaller branches, which are again divided into others yet smaller, delivering their blood immediately to the veins, but emitting it nowhere else. The veins, at length, come together into one, called the splenic vein; and having received the larger coronary vein of the stomach, besides others, it constitutes the left principal branch of the vena portæ.

The nerves of the spleen are small; they surround the arteries with their branches; they come from a particular plexus, which is formed of the posterior branches of the eighth pair, and the great intercostal nerve.

Lymphatic vessels are sometimes seen on the surface of the human spleen.

The use of the spleen has not hitherto been determined; yet if its situation and fabric be regarded, one would imagine its use to consist chiefly in affording some assistance to the stomach during the progress of digestion.

SPLEENWORT. See *Asplenium.*

SPLENA'LGIA. (*a, æ.* f.; from σπλην, the spleen, and αλγος, pain.) A pain in the spleen or its region.

SPLENETIC. (*Spleneticus;* from σπλην, the spleen.) Belonging to the spleen.

SPLENI'TIS. (*is, idis.* f.; from σπλην, the spleen.) Inflammation of the spleen. Characterised by fever, tension, heat, tumour, and pain in the left hypochondrium, increased by pressure. This disease, according to Juncker, comes on with a remarkable shivering, succeeded by a most intense heat, and very great thirst; a pain and tumour are perceived in the left hypochondrium, and the paroxysms for the most part assume a quartan form; when the patients expose themselves for a little to the free air, their extremities immediately grow very cold. If an hæmorrhage happen, the blood flows out of the left nostril. The other symptoms are the same with those of the hepatitis. Like the liver, the spleen is also subject to a chronic inflammation, which often happens after agues, and is called the ague cake, though that name is also frequently given to a scirrhous tumour of the liver succeeding intermittents. The causes of this disease are, in general, the same with those of other inflammatory disorders; but those which determine the inflammation to that particular part more than another, are very much unknown. It attacks persons of a very plethoric and sanguine habit of body rather than others.

During the acute stage of splenitis, we must follow the antiphlogistic plan, by general and topical bleedings, by purging frequently, and by the application of blisters near the part affected. If it should terminate in suppuration, we must endeavour to discharge the pus externally, by fomentations or poultices. When the organ is in an enlarged scirrhous state, mercury may be successful in preventing its farther progress, or even producing a diminution of the part; but proper caution is required in the use of it, lest the remedy do more harm than the disease.

SPLE'NIUM. (From σπλην, the spleen: so called from its efficacy in disorders of the spleen.) 1. Spleen-wort.

2. A compressed shape like the spleen.

SPLE'NIUS. (*us, ii.* m.; from σπλην, the spleen: so named from its resemblance in shape to the spleen; or, according to some, it derives its name from *splenium,* a *ferula,* or splint, which surgeons apply to the sides of a fractured bone.) *Splenius capitus,* and *Splenius colli,* of Albinus. The splenius is a flat, broad, and oblong muscle, in part covered by the upper part of the trapezius, and obliquely situated between the back of the ear and the lower and posterior part of the neck.

It arises, tendinous, from the four or five superior spinous processes of the dorsal vertebræ; tendinous and fleshy from the last of the neck; and tendinous from the ligamentum colli, or rather the tendons of the two splenii, unite here inseparably; but about the second or third vertebra of the neck they recede from each other, so that part of the complexus may be seen.

It is inserted, by two distinct tendons, into the transverse processes of the two first vertebræ of the neck, sending off some few fibres to the complexus and levator scapulæ; tendinous and fleshy into the upper and posterior part of the mastoid process, and into a ridge on the occipital bone, where it joins with the root of that process.

This muscle may be easily separated into two parts. Eustachius and Fallopius were aware of this; Winslow has distinguished

them into the *superior* and *inferior* portions; and Albinus has described them as two distinct muscles, calling that part which is inserted into the mastoid process and os occipitis, *splenius capitis*, and that which is inserted into the vertebræ of the neck, *splenius colli*. We have here followed Douglas, and the generality of writers, in describing these two portions as one muscle, especially as they are intimately united near their origin.

When this muscle acts singly, it draws the head and upper vertebræ of the neck obliquely backwards: when both act, they pull the head directly backwards.

Splenius capitis. See *Splenius*.

Splenius colli. See *Splenius*.

SPLENOCE'LE. (From σπλην, the spleen, and κηλη, a tumour.) A hernia of the spleen.

SPLINT. A long piece of wood, tin, or strong pasteboard, employed for preventing the ends of broken bones from moving, so as to interrupt the process by which fractures unite.

SPO'DIUM. (*um, ii.* n. Σποδιον.) The *spodium* of Dioscorides and of Galen are now not known in the shops. It is said to have been produced by burning cadmia alone in the furnace; for, having thrown it in small pieces into the fire, near the nozzle of the bellows, they blow the most fine and subtle parts against the roof of the furnace; and what was reflected from thence was called *spodium*. It differed from the pompholyx in not being so pure, and in being more heavy. Pliny distinguishes several kinds of it, as that of copper, silver, gold, and lead.

Spodium abaisir. Burnt ashes. Metallic calces, and a composition of white lead and oil.

Spodium arabum. Burnt ivory, or ivory black.

Spodium græcorum. The white dung of dogs; called also, *Album græcum*.

SPODUMENE. A mineral of a greenish white colour, first found in the island of Uton, in Sudermanuland, and lately in the vicinity of Dublin. It contains the new alkali called *lethia*.

Spolia'rium. A private room at the baths.

SPONDY'LIUM. (*um, ii.* n.; from σπονδυλος, a vertebra: so named from the shape of its root, or probably because it was used against the bite of a serpent called σπονδυλις.) See *Heracleum spondylium*.

SPO'NDYLUS. (*us, i.* m. Σπονδυλος, a vertebra.) The spine or back-bone.

SPONGE-TENT. See *Spongia præparata*.

SPO'NGIA. (*a, æ.* f. Σπογγος; σπογγια.) Sponge. See *Spongia officinalis*.

Spongia officinalis. The systematic name of the sponge. A sea-production; the habitations of insects. A soft, light, very porous, and compressible substance, readily imbibing water, and distending thereby. It is found adhering to rocks, particularly in the Mediterranean Sea, about the islands of the Archipelago. It was formerly supposed to be a vegetable production, but is now classed among the zoophytes; and analysed, it yields the same principles with animal substances in general. Burnt sponge is said to cure effectually the bronchocele, and to be of infinite utility in scrofulous complaints. Sponge-tents are employed by surgeons to dilate fistulous ulcers, &c.

Spongia præparata. Prepared sponge. Sponge-tent. This is formed by dipping pieces of sponge in hot melted emplastrum ceræ compositum, and pressing them between two iron plates. As soon as cold, the substance thus formed may be cut into pieces of any shape. It was formerly used for dilating small openings, for which it was well adapted, as, when the wax melted, the elasticity of the sponge made it expand and distend the opening in which it had been put.

Spongia usta. Burnt sponge. Cut the sponge into pieces, and beat it, that any extraneous matters may be separated; then burn it in a close iron vessel until it becomes black and friable; lastly, rub it to a very fine powder. This preparation is exhibited with bark in the cure of scrofulous complaints, and forms the basis of a lozenge, which has been known to cure the bronchocele in many instances. The dose is from a scruple to a drachm.

Spongiosa ossa. *Ossa turbinata inferiora. Ossa convoluta.* These bones are situated in the under part of the side of the nose: they are of a triangular form and spongy appearance, resembling the os spongiosum superius: externally they are convex; internally they are concave; the convexity is placed towards the septum nasi, and the concavity outwards. The under edge of each bone is placed horizontally near the outer part of the nose, and ending in a sharp point behind. At the upper part of the bone are two processes, the anterior of which ascends and forms part of the lachrymal groove, and the posterior descends and forms a hook to make part of the maxillary sinus. The connection of this bone is to the os maxillare, os palati, and os unguis, by a distinct suture in the young subject; but in the adult, by a concretion of substance.

The ossa spongiosa afford a large surface for extending the organ of smell, by allowing the membrane of the nose to be expanded, upon which the olfactory nerves are dispersed.

In the fœtus these bones are almost complete.

Spongio'sum os. 1. The ethmoid bone.
2. See *Spongiosa ossa*.

SPONGY. *Spongiosus*. Applied very generally to express the structure of things.

SPONGOI'DES. (Σπογγοειδης; from σπογγος, a sponge, and ειδος, *forma*, shape: so called because it is hollow and porous, like a sponge or sieve.) See *Ethmoid bone*.

SPORADIC. (*Sporadicus*; from σπειρω, to sow.) An epithet for such infectious and

other diseases as seize a few persons at any time or season.

Spotted lungwort. See *Pulmonaria.*

SPRAIN. See *Subluxatio.*

SPRAT. See *Clupea sprattus.*

SPREADING. See *Diffusus.*

SPRONGI'DIUM. See *Columnula.*

SPRUCE. 1. A particular species of fir. See *Pinus abies.*

2. A fermented liquor, called spruce-beer, prepared from the spruce fir. From the quantity of carbonic acid it contains, it is found a useful antiscorbutic.

SPUR. See *Calcar.*

Spurge-flax. See *Daphne gnidium.*

Spurge-laurel. See *Daphne laureola.*

Spurge-olive. See *Daphne mezereum.*

SPURIOUS. See *Nothus.*

Spurred. See *Calcaratus.*

SPUTA'MEN. See *Sputum.*

SPU'TUM. (*um, i.* n.; from *spuo,* to spit.) *Sputamen.* Saliva. That which is cast out of the mouth merely by spitting or hawking, as the spittle, is properly the sputum: but it applies also to expectoration, or that which comes from within the chest and is spit out. See *Expectoration.*

SQUA'MA. (*a, æ.* f.) A scale. An opake and thickened lamina of the cuticle. See *Scale.*

SQUAMÆ. An order of cutaneous diseases in Dr. Willan's arrangement. Scaly diseases are commonly produced by some degree of inflammation of the true skin, over which they are formed; but occasionally, as in the slighter forms of pityriasis, the cuticle alone, or with the rete mucosum, appears to be in a morbid condition. If the definition be carefully attended to, scales will not be confounded with the scabs succeeding confluent pustules and vesicles, or superficial ulcerations. The four genera of scaly diseases are, *Lepra, Psoriasis, Pityriasis,* and *Ichthyosis.*

SQUAMA'RIA. (From *squama,* a scale: so called from its scaly roots.) The great tooth-wort, or *Plumbago europæa.*

SQUAMA'TUS. Scaly: applied to the nectary of the *Ranunculus* genus, &c. See *Nectarium.*

SQUAMOSE. (*Squamosus;* from *squama,* a scale: because the bones lie over each other like scales.) Scaly.

SQUAMOSE SUTURE. The suture which unites the squamose portion of the temporal bone with the parietal.

SQUARRO'SUS. (From *squarra,* rough.) Squarrose: rough, scabby, scurfy, scaly. Applied to plants, &c.; as *Juncus squarrosus.*

SQUILL. See *Scilla.*

SQUI'LLA. See *Scilla.*

Squills, vinegar of. See *Acetum scillæ.*

SQUINA'NTHUS (From *squinanthia,* the quinsy: so named from its uses in the quinsy.) See *Andropogon schænanthus.*

SQUINTING. See *Strabismus.*

STA'CHYS. (*ys, yos.* m. Σταχυς, a spike: so named from its spicated stalk and seed.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia;* Order, *Gymnospermia.*

2. Some species of wild sage, and horehound, nettle, &c. were formerly so called.

STACHYS FŒTIDA. See *Ballote nigra.*

STACHYS PALUSTRIS. Clown's woundwort or all-heal. Fallen into disuse.

STA'CTE. (*e, es.* and *a, æ.* f. Στακτη; from ςαζω, to distil.) 1. That kind of myrrh which distils or falls in drops from the trees.

2. A more liquid kind of amber than what is commonly met with in the shops; whence in Scribonius Largus, Paulus Ægineta, and some others, we meet with a collyrium, and several other forms, wherein this was the chief ingredient, distinguished by the name of *Stactica.*

STA'CTICON. Instillation; also an eye-water.

STAGMA. (From ςαζω, to distil.) 1. Any distilled liquor.

2. The vitriolic acid.

STAHL, GEORGE ERNEST, was born at Anspach, in 1660. He was the leader of a sect of physicians, in opposition to the mechanical theorists, in which he was followed by many eminent persons, as well in Germany as in other countries, notwithstanding the very fanciful nature of the hypothesis on which his system was founded. It had been always observed, that there is a certain power in the animal body of resisting injuries, and correcting some of its disorders; and Van Helmont had ascribed some degree of intelligence to this power: but it was reserved for Stahl to refer it entirely to the rational soul, which, he affirmed, not only originally formed the body, but is the sole cause of all its motions, in the constant excitement of which life consists. Whence diseases were generally regarded as salutary efforts of the presiding soul, to avert the destruction of the body. This hypothesis, besides its visionary character, was justly deprecated as leading to an inert practice, and the neglect of the collateral branches of medical science, even of anatomical researches, which Stahl maintained had little or no reference to the art of healing. And, in fact, both he and his followers, trusting principally to the operations of nature, zealously opposed the use of some of the most efficacious remedies, as opium, cinchona, and mercury; and were extremely reserved in the employment of bleeding, vomiting, &c., although their system led them to refer most diseases to plethora. This hypothesis was maintained by Stahl with much ingenuity in several publications, particularly in his *Theoria Medica Vera,* printed in 1708. The merits of Stahl, as a chemical philosopher, are of a much higher character; and the school which he founded in this science has only been superseded of late by farther discoveries. He was the inventor of the celebrated theory of *phlogiston,* which appeared to account for the phænomena of combustion, and was received every where with high applause. His chief chemical work was entitled *Fundamenta Chemiæ Dogmaticæ et Experimen-*

talis, first printed in 1729: but this had been preceded more than thirty years by others, in which his doctrine was fully displayed.

STALACTITES. The calcareous substances found suspended from vaults, being formed by the oozing of water charged with calcareous particles gradually evaporating, and leaving these particles behind.

STALAGMI'TIS. (*is, is.* f.; from σταλαγμος, a dropping, or distillation, because the gum which it yields escapes in that manner.) The name of a genus of plants. Class, *Polygamia;* Order, *Monœcia.*

STALAGMITIS CAMBOGIOIDES. The systematic name of the tree which affords gamboge. This drug, from its supposed virtues, is also called *gummi ad podagram; gummi gutta;* and, by corruption, *gotta; gutta gamba; gamon; germandra; catagemu; gamboidea,* &c.; and, from its gold colour, *chrysopus;* and, from its purgative quality, *succus laxativus, succus Indicus purgans,* and *scammonium orientale.* Gamboge is a concrete vegetable juice, which was supposed to be the produce of two trees, both called by the Indians, *Caracapulli,* and by Linnæus, *Gambogia gutta;* but Kœnig ascertained its true source. It is partly of a gummy, and partly of a resinous nature. It is brought to us chiefly from Gambaja, in the East Indies, either in form of orbicular masses, or of cylindrical rolls of various sizes; and is of a dense, compact, and firm texture, and of a beautiful yellow colour. In medicine it is chiefly used as a drastic purge; it operates powerfully both upwards and downwards. Some condemn it as acting with too great violence, while others are of a contrary opinion. The dose is from two to four grains, as a cathartic; from four to eight grains it proves emetic and purgative. The roughness of its operation is said to be diminished by giving it in a liquid form, sufficiently diluted. Rubbed with almonds, from its want of taste, it is a good laxative for children.

It has been given in dropsy, with cream of tartar, to correct its operation. It has also been recommended by some, to the extent of fifteen grains, joined with an equal quantity of vegetable alkali, to destroy the tape-worm. This dose is ordered in the morning; and if the worm is not expelled in two or three hours, it is repeated, even to the third time, with safety and efficacy. It is asserted, that it has been given to this extent even in delicate habits. This is said to be the remedy alluded to by Van Swieten, which was employed by Dr. Herenchwand, and with him proved so successful in the removal of the tænia lata. It is an ingredient, and probably the active one, in most of the nostrums for expelling tæniæ.

Dr. Cullen says, that, on account of the quick passage of gamboge through the intestines, he was induced to give it in small, and frequently repeated doses, as three or four grains, rubbed with a little sugar, every three hours; and thus found it operate without griping or sickness, and, in three or four exhibitions, evacuate a great quantity of water, both by stool and urine.

STALA'GMUS. (*us, i.* m.; from σαλαζω, to distil.) Distillation.

STALK. See *Scapus.*

STA'LTICUS. (From σελλω, to contract.) Healing: applied to medicines which were supposed to have that power.

STAMEN. (*en, inis.* n.) The male genital organ of plants, found generally within the corolla, near the pistil. Stamens were formerly called *chives.* They are various in number in different flowers, from one to some hundreds. This organ is essential to a plant, no one having yet been discovered, after the most careful research, that is destitute of it, either in the same flower with the pistils, or a separate one of the same species.

A stamen consists of three parts:—

1. The *filament,* the part which supports the anther.

2. The *anther,* placed on the filament, and the most essential part of all.

3. The *pollen,* or powder adhering to the anther.

II. Stamina. In *Physiology* and *Pathology,* applied to the degree of strength and vigour in the constitution; often confined to the primordial fibrous structure.

STAMINIFEROUS. *Staminiferus.* Stamen-bearing: applied to such flowers and florets as contain one or more stamens and no pistils. They are necessarily barren flowers.

STAMMERING. See *Blæsitas.*

STANDARD. See *Vexillum.*

STANNI PULVIS. Tin, finely divided, is exhibited internally as a vermifuge: it acts mechanically, and the fine filings are more effectual than the powder.

STANNIC. (*Stannicus;* from *stannum,* tin.) Appertaining to tin.

STANNIC ACID. *Acidum stannicum.* A name which has been given to the peroxide of tin, because it is soluble in alkalies.

STA'NNUM. (*um, i.* n.) See *Tin.*

STAPE'DIS MUSCULUS. See *Stapedius.*

STAPE'DIUS. (From *stapes,* one of the bones of the ear.) *Musculus stapes,* of Cowper; and *pyramidal-stapedien,* of Dumas. A muscle of the internal ear, which draws the stapes obliquely upwards towards the cavern, by which the posterior part of its base is moved inwards, and the anterior part outwards.

STA'PES. (*es, edis.* m.; *in quo pes stat,* a stirrup.) A bone of the internal ear, so called from its resemblance to a stirrup.

STA'PHIS. (*is, idis.* f. Σταφις.) A grape, or a bunch of grapes; whence, from their likeness thereunto, it is applied to many other things, especially the glands of the body, whether natural or diseased.

STAPHISA'GRIA. (*a, æ.* f. Σταφις αγρια, wild vine: from the resemblance of its leaves to those of the vine.) See *Delphinium.*

STAPHYLE. (Σταφυλη, a grape or raisin: so called from its resemblance.) The uvula.

STAPHYLINE. (*Staphylinus;* from σαφυλη, a grape.) Grape-like.

STAPHYLI'NUS. (From σαφυλη, the uvula.) See *Azygos uvulæ*.

Staphylinus externus. See *Circumflexus*.

Staphylinus græcorum. The wild carrot, or *Daucus sylvestris*.

STAPHYLO'MA. (*a, atis.* n.; from σαφυλη, a grape: so named from its being thought to resemble a grape.) A disease of the eyeball, in which the cornea loses its natural transparency, rises above the level of the eye, and successively even projects beyond the eyelids, in the form of an elongated, whitish, or pearl-coloured tumour, which is sometimes smooth, sometimes uneven, and is attended with a total loss of sight. The proximate cause is an effusion of thick humour between the lamellæ of the cornea, so that the internal and external superficies of the cornea very much protuberates. The remote causes are, an habitual ophthalmia, contusions, and frequently a deposition of the variolous humour in the small-pox.

This disease sometimes occupies the whole transparent cornea; the opake cornea projects, and, if in the form of a cone, increasing in magnitude, it has been known to push out and invert the lower eyelid; and sometimes the morbid cornea is so elongated as to lie on the cheek: in these instances, there are generally collections of pus or some analogous fluid.

Staphyloma requires the aid of surgery to remove all the adventitious growths, or collections of fluids, and the use of detergent lotions and such caustic application as can be with safety used.

STAPHYLO'SIS. See *Staphyloma*.

STAR-LIKE. See *Stellatus*.

STAR-SHOOT. See *Tremella nostoc*.

Star-thistle. See *Carlina acaulis*.

STARCH. See *Amylum*.

STARRY. See *Stellatus*.

STA'TICE. (*e, es.* f.; from στατιζω, to stop: so named from its supposed property of restraining hæmorrhages.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Pentagynia*. The herb sea-thrift.

Statice limonium. The systematic name of the sea-thrift. Sea-lavender, or red behen. *Behen rubrum. Limonium. Limonium majus. Behen.* The roots possess astringent and strengthening qualities, but not in a very remarkable degree.

STATIONARY. *Stationarius.* That which does not alter its character or station.

Stationa'ria febris. A stationary fever. So Sydenham called those fevers which happen when there are certain general constitutions of the years, which owe their origin neither to heat, cold, dryness, nor moisture, but rather depend on a certain secret and inexplicable alteration in the bowels of the earth, whence the air becomes impregnated with such kinds of effluvia as subject the body to particular distempers, so long as that kind of constitution prevails, which, after a certain course of years, declines and gives way to another.

STAUROLITE. Grenatite, or prismatic garnet.

STAUROTIDE. Grenatite. Prismatic garnet. A crystallised, dark, reddish-brown garnet, found in Scotland and Ireland.

STAVESACRE. See *Delphinium*.

STEARINE. (From στεαρ, fat.) See *Adeps*.

STEATITE. Soap-stone. A subspecies of rhomboidal mica.

STEATITES. (*es, is.* f.; from στεαρ, ατος, fat.) Fat; corpulent. See *Polysarcia*.

STEATOCE'LE. (*e, es.* f.; from στεαρ, suet, and κηλη, a tumour.) A collection of a suety substance in the scrotum.

STEATO'MA. (*a, atis.* n.; from στεαρ, suet.) An encysted tumour, the contents of which are of a suety consistence.

STEEL. *Chalybs.* The best, hardest, finest, and closest grained iron, combined with carbon by a particular process.

STEINHEILITE. The blue quartz of Finland.

STE'LLA. (*a, æ.* f.; from στελλω, to arise.) A star. A bandage with many crossings like a star.

STELLA'RIA. (*a, æ.* f.; from *stella*, a star: so named from the star-like appearance of its flowers.) The name of a genus of plants. Class, *Decandria*; Order, *Trigynia*. Stitchwort.

Stellatæ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as have stellate leaves, and quadrified corolla: mostly tetrandrous; as *Galium, Asperula, Rubia tinctorum*, &c.

STELLA'TUS. (From *stella*, a star.) Stellate: star-like. Applied to plants and parts of plants; as the nectary of the *Stapelia*, &c.

STELOCHITES. See *Osteocolla*.

STEM. See *Caulis*, and *Stipes*.

Stem-leaves. See *Caulinus*.

STE'MA. (From στημι, to stand.) The penis.

Stemless. See *Acaulis*.

Stemless milk-vetch. See *Astragalus excapus*.

STENO, Nicholas, was born at Copenhagen, in 1638. The works extant by him relate principally to medical subjects. He was a diligent cultivator of anatomy, and made some discoveries relative to the minute structure of the eye, and other parts; which are detailed in papers communicated to the Academy of Copenhagen, and in some small works published by himself.

STENO'THORAX. (*ax, acis.* m.; from στενος, narrow, and θωραξ, the chest.) One who has a narrow chest.

STERILITY. (*Sterilitas, atis.* f.; from στειρος.) I. In *Physiology* and *Pathology*, sterility is the want of power to get or bear a child: hence it applies to both the male and female.

1. *Female sterility* is an inability to conceive offspring,—an imperfection or abolition of the conceptive power. In many instances

this is a direct imbecility or want of tone, rather than a want of desire; and the common causes are, a life of intemperance of any kind, and especially of inordinate indulgence in sexual pleasures, a long continuance of the whites, or a paralytic affection of the generative organs. It has also been occasioned by injuries done to the loins or hypogastric region, and by over-exertion in walking. The plan of treatment to be had recourse to, is similar to that recommended against sterility in males caused by debility.

Barrenness in females is often caused by organic derangement or structural defect, both natural and accidental. This may be of various kinds; for the vagina may be imperforate, and prohibit not only all intermission of semen, but an entrance of the penis itself. The ovaria may be defective, or even altogether wanting, or not duly developed, or destitute of ovula; or the fimbriæ may be defective, and incapable of grasping the ovum; or the Fallopian tube may be obstructed, or impervious, or wanting: in all which cases barrenness must necessarily ensue. These, however, are rare instances.

Barrenness is more frequently caused by a manifest retention, irregularity, or profusion of the menstrual secretion, producing the symptoms of chlorosis and amenorrhœa, or menorrhagia, which requires that the diseased state of the organs that form its seat should be removed. But there must also be a healthy degree of tone and energy in the conceptive organs, as well as of ease and quiet, in order that they should prove fruitful; and hence, whenever the menstrual flux is more frequently repeated than its natural course, or is thrown forth, even at its proper time, in great profusion, and, as is generally the case, intermixed with genuine blood, there is as little chance of conception as in difficult menstruation. The organs are too debilitated for the new process; and not unfrequently there is as little desire as there is elasticity. The cure of barrenness, under such circumstances, must depend on the cure of the particular kind of morbid affection that operates at the time, and lays the foundation for the disease.

Personal aversion, or want of appetency, also prohibit conception, though it is not altogether impossible that impregnation should take place from violence, rude or brutal force. Wherever there is a personal aversion, a coldness, or reserve, instead of an appetency and pleasure,—an irrespondence in the feelings of the female to those of the male, there is as little reason to hope for a parturient issue. There must be an orgastic shock or percussion sufficient to shoot off an ovulum from its bed, and to urge the fine and irritable fimbriæ of the Fallopian tube to lay hold of it in the ovarium, and grasp it tight, by which alone a communication can be opened between this last organ and the ovarium, or the seed cannot reach home to its proper soil, and produce a harvest.

2. *Male sterility* is an inability to beget offspring. It is caused either by impotency, or by seminal misemission, or by copulative incongruity.

Impotency has often been called *anaphrodisia*, which, however, is variously used by medical writers, sometimes as importing a want of desire, sometimes inability, sometimes both, and sometimes a particular kind of inability resulting from weakness alone. Impotency is often the result of great weakness only, produced by excess of indulgence, long-continued gleet, or a paralytic affection of the generative organs; and it has resulted from injuries done to the loins and pelvis. Time, in these cases, often effects a cure, and tonics and stimulants are frequently useful, especially cold bathing; but when produced by a long life of debauchery, or by a paralytic condition of the nerves from accidents, the case is hopeless. Much has been written and said of aphrodisiacs, but there is no dependance to be placed on any one. Wine and vinous stimulants generally augment the state of which they were the original cause. Cantharides are frequently resorted to; but, like spirits and wine, they are now deservedly distrusted. Their effect, as a local stimulant, shows itself rather on the bladder and prostate gland than on the testes; and, as a general irritant, in increasing the heat and action of the whole system. Many of the verticillate plants, as mint and pennyroyal, have been tried in a concentrated state for the same purpose, but with different and even opposite effects in the hands of different practitioners. The best aphrodisiacs are warm and general tonics, as the stimulating bitters with chalybeates. Local stimulants, as blisters and electricity, have been found serviceable.

When impotency is caused by organic affection, the only chance of deriving benefit depends on the removal of the structural disease, and of any natural malformation.

Another cause of inability to beget offspring is what nosologists have termed *dyspermatismus*, or seminal misemission. Imperfection, or defective emission, is produced in several ways: from super-erection or priapism of the penis, which, if caused by plethora or vascular fulness, is to be overcome by local bleedings, purgatives, and a slender diet;—by the incursion of an epileptic spasm, produced by sexual excitement during the intercourse;—by the discharge being ejected hastily, and without due adjustment, even before the vagina has been fairly entered, which, evincing great nervous irritability in a delicate habit, requires the use of tonics and chalybeates, a generous diet, and cold bathing;—by the discharge being unduly retarded, from habitude of the genital organs, and hence not accomplished till the orgasm on the part of the female has subsided: this, which is called *bradyspermatismus*, requires tonics and local stimulants, especially electricity;—by the discharge being thrown back into the vesiculæ seminales or the bladder before it reaches the extremity of the penis: this is caused by some obstruction

to the flow of the semen between the vesiculæ and glans, which is mostly a narrowing of the urethra, or stricture, and requires the removal of the cause of the obstruction.

II. In *Botany*,—See *Barren.*

STERNA'LGIA. (*a, æ.* f.; from *στερνον*, the sternum or chest, and *αλγος*, pain.) 1. Pain about the sternum, which is often very severe, and may arise from rheumatism, gout, dyspepsia, and other diseases.

2. An oppression or stricture about the sternum. See *Syncope anginosa.*

STERNO. Names compounded of this word belong to muscles which are attached to the sternum; as,

STERNO-CLEIDO-HYOIDEUS. See *Sterno-hyoideus.*

STERNO-CLEIDO-MASTOIDEUS. *Sterno-mastoideus*, and *cleido-mastoideus*, of Albinus. *Mastoideus*, of Douglas and Cowper. A muscle, on the anterior and lateral part of the neck, which turns the head to one side, and bends it forward. It arises by two distinct origins: the anterior, tendinous and fleshy, from the top of the sternum near its junction with the clavicle, the posterior, fleshy, from the upper and anterior part of the clavicle. Both unite a little above the anterior articulation of the clavicle, to form one muscle, which runs obliquely upwards and outwards, to be inserted, by a thick strong tendon, into the mastoid process of the temporal bone, which it surrounds; and, gradually becoming thinner, is inserted as far back as the lambdoidal suture.

STERNO-COSTALES. Vesalius considered these as forming a single muscle on each side, of a triangular shape; hence we find the name of *triangularis* adopted by Douglas and Albinus; but Verheyen, who first taught that they ought to be described as four or five distinct muscles, gave them the name of *sterno-costales*; and in this he is very properly followed by Winslow, Haller, and Lieutaud.

These muscles are situated at each side of the under surface of the sternum, upon the cartilages of the third, fourth, fifth, and sixth ribs. Their number varies in different subjects; very often there are only three, sometimes five, and even six, but most usually we find only four.

The lowermost of the sterno-costales, or what would be called the inferior portion of the triangularis, arises tendinous and fleshy from the edge and inner surface of the lower part of the cartilago ensiformis, where its fibres intermix with those of the diaphragm and transversalis abdominis. Its fibres run nearly in a transverse direction, and are inserted, by a broad thin tendon, into the inner surface of the cartilage of the sixth rib, and lower edge of that of the fifth.

The second and largest of the sterno-costales arises tendinous from the cartilago ensiformis and lower part of the sternum, laterally, and, running a little obliquely outwards, is inserted into the lower edge of the cartilage of the fifth, and sometimes of the fourth rib.

The third arises tendinous from the sides of the middle part of the sternum, near the cartilages of the fourth and fifth ribs, and, ascending obliquely outwards, is inserted into the cartilage of the third rib.

The fourth and uppermost, which is the most frequently wanting, arises tendinous from the beginning of the cartilage of the third rib and the adjacent part of the sternum, and running almost perpendicularly upwards, is inserted by a thin tendon (which covers a part of the second internal intercostal) into the cartilage and beginning of the bony part of the second rib.

All these muscles are more or less intermixed with one another at their origin, and this probably occasioned them to be considered as one muscle. Fallopius informs us, that the plate Vesalius has given of them was taken from a dog, in which animal they are much larger than in man. Douglas has endeavoured to account for this difference, but his explanation is far from being satisfactory.

STERNO-HYOIDEUS. As this muscle arises from the clavicle, as well as from the sternum, Winslow calls it *sterno-cleido-hyoideus.* It is a long, flat, and thin muscle, situated obliquely between the sternum and os hyoides, behind the lower part of the mastoideus, and covering the *sterno-thyroideus* and the *hyo-thyroideus.* It arises, by very short tendinous fibres, from the cartilaginous part of the first rib, from the upper and inner part of the sternum, from the capsular ligament that connects that bone with the clavicle, and commonly from a small part of the clavicle itself; from thence, ascending along the anterior and lateral part of the neck, we see it united to its fellow, opposite to the inferior part of the larynx, by means of a thin membrane, which forms a kind of *linea alba.* After this the two muscles separate again, and each passing over the side of the thyroid cartilage, is inserted into the basis of the os hyoides, immediately behind the insertion of the last-described muscle.

Its use is to draw the os hyoides downwards.

STERNO-MASTOIDEUS. See *Sterno-cleido-mastoideus.*

STERNO-THYROIDEUS. This is flat and thin, like the sterno-hyoideus, but longer and broader. It is situated at the fore part of the neck, between the sternum and thyroid cartilage, and behind the sterno-hyoideus. It arises broad and fleshy from the upper and inner part of the sternum, between the cartilages of the first and second ribs, from each of which it receives some few fibres, as well as from the clavicle, where it joins with the sternum. From thence, growing somewhat narrower, it ascends, and, passing over the thyroid gland and the cricoid cartilage, is inserted tendinous into the lower and posterior edge of the rough line of the thyroid cartilage, immediately under the insertion of the streno-hyoideus. Now and then a few of its fibres pass on to the os hyoides. Its use is to draw the thyroid cartilage, and consequently the larynx, downwards.

STE'RNUM. (*um, i.* n.) *Pectoris os.* The breast-bone. The sternum, os pectoris, or breast-bone, is the oblong, flat bone placed at the fore part of the thorax. The ossification of this bone in the fœtus beginning from many different points at the same time, we find it, in young subjects, composed of several bones, united by cartilages: but, as we advance in life, most of these cartilages ossify; and the sternum, in the adult state, is found to consist of three, and sometimes only of two pieces, the two lower portions being united into one; and very often, in old subjects, the whole is formed into one bone. But, even in the latter case, we may still observe the marks of its former divisions; so that, in describing the bone, we may very properly divide it into its upper, middle, and inferior portions.

The upper portion forms an irregular square, which, without much reason, has, by many writers, been compared to the figure of a heart as it is painted on cards. It is of considerable thickness, especially at its upper part. Its anterior surface is irregular, and slightly convex; posteriorly, it is somewhat concave. Its upper middle part is hollowed, to make way for the trachea. On each side, superiorly, we observe an oblong articulating surface, covered with cartilage in the recent subject, for receiving the ends of the clavicles. Immediately below this, on each side, the bone becomes thinner, and we observe a rough surface for receiving the cartilage of the first rib, and almost close to the inferior edge of this we find the half of such another surface, which, combined with a similar surface in the middle portion of the sternum, serves for the articulation of the cartilage of the second rib.

The middle portion is much longer, narrower, and thinner than the former; but is somewhat broader and thinner below than above, where it is connected with the upper portion. The whole of its anterior surface is slightly convex, and within it is slightly concave. Its edge, on each side, affords four articulating surfaces, for the third, fourth, fifth, and sixth ribs; and parts of articulating surfaces at its upper and lower parts, for the second and seventh ribs. About the middle of this portion of the sternum we sometimes find a considerable hole, large enough in some subjects to admit the end of the little finger. Sylvius seems to have been the first who described it. Riolanus, and some others after him, have, without reason, supposed it to be more frequent in women than in men. In the recent subject it is closed by a cartilaginous substance; and, as it does not seem destined for the transmission of vessels, as some writers have asserted, we may, perhaps very properly, with Hunauld, consider it as an accidental circumstance, occasioned by an interruption of the ossification before the whole of this part of the bone is completely ossified.

The third and inferior portion of the sternum is separated from the former by a line, which is seldom altogether obliterated, even in the oldest subjects. It is smaller than the other parts of the bone, and descends between the ribs, so as to have been considered as an appendix to the rest of the sternum. From its shape, and its being constantly in a state of cartilage in young subjects, it has been commonly named *cartilago xiphoides, ensiformis,* or sword-like cartilage; though many of the ancients gave the name of xiphoides to the whole sternum, comparing the two first bones to the handle, and this appendix to the blade of the sword. The shape of this appendix varies in different subjects: in some it is longer and more pointed, in others shorter and more obtuse. Veslingius has seen it reaching as low as the navel, and incommoding the motion of the trunk forwards. In general it terminates obtusely, or in a single point; sometimes, however, it is bifurcated; and Eustachius and Haller have seen it trifid. Very often we find it perforated, for the transmission of branches of the mammary artery. In the adult it is usually ossified and tipped with cartilage; but it very often continues cartilaginous through life, and Haller once found it in this state in a woman who died in her hundredth year.

The substance of the sternum, internally, is of a light, spongy texture, covered externally with a thin bony plate: hence it happens that this bone is easily fractured. From the description we have given of it, its uses may be easily understood. We have seen it serving for the articulation of seven true ribs on each side, and hence we shall find it of considerable use in respiration. We likewise observed, that it is articulated with each of the clavicles. It serves for the origin and insertion of several muscles; it supports the mediastinum; and, lastly, defends the heart and lungs; and it is observable, that we find a similar bone in almost all animals that have lungs, and even in such as have no ribs, of which latter we have an instance in the frog.

STERNUTAMENTO'RIA. (So called because the powdered flowers and roots have the property of exciting sneezing.) See *Achillea ptarmica.*

STERNUTAME'NTUM. (*um, i.* n.; from *sternuo,* to sneeze.) That which produces sneezing: snuff.

STERNUTA'TIO. See *Sneezing.*

STE'RTOR. (*or, oris.* m.) A snoring or snorting. A loud and deep sound produced in the larynx and fauces.

STETHOSCOPE. (*Stethoscopus, i.* m.; from στῆθος, the chest, and σκοπεω, to explore.) An instrument made of cedar wood, of a cylindrical form, about twelve inches long, and of the diameter of a flute. It has a cylindrical perforation throughout its whole length, and is divided into two parts for the convenience of using the whole or half length. The end of each part terminates in a funnel-shaped cavity, the one to receive the separate half of the instrument, and the other to receive the part acting as a stopper; which latter has

a short pipe, made of brass or silver, to enter the base of the cylinder. The instrument is used without the stopper, when employed to ascertain the state of respiration; and with it, either to examine the action of the heart, or the signs afforded by the voice, in certain states of disease affecting the lungs or pleural membrane. In using this instrument, care is to be taken that it is kept perfectly flat upon the part to which it is applied, in order that sound may not escape, nor air be admitted; for which purpose it is convenient to hold it at its lower part, while the other end (with the even surface) should be in close contact with the ear, so that the aperture of the instrument be in direct communication with the internal ear. Silk covering, as causing a cracking sort of noise, and thick dress, as obscuring the sound of respiration, should be avoided; but linen or flannel dress may remain on the person without disadvantage.

STHE'NIA. (*a, æ.* f.) A term employed by the followers of Dr. Brown, to denote that state of the body which disposes to inflammatory diseases, in opposition to those of debility, which arise from asthenia.

STIBIA'LIS. (From *stibium*, antimony.) An antimonial, or any thing appertaining to antimony.

STIBIC. (*Stibicus*; from στιβιον, antimony.) Of or belonging to antimony.

STIBIC ACID. Berzelius's name of the yellow oxide of antimony.

STIBII ESSENTIA. Antimonial wine.

STIBIOUS. *Stibiosus.* Antimonial.

STIBIOUS ACID. So Berzelius calls the white oxide of antimony.

STI'BIUM. (*um, ii.* n. Στιβιον; from στιλβω, to shine.) An ancient name of antimony. See *Antimony*.

STI'GMA. (*a, atis,* n. Στιγμα; from στιζω, to inflict blows.) I. In *Pathology*, 1. A small red speck in the skin, occasioning no elevation of the cuticle. Stigmata are generally distinct, or apart from each other. They sometimes assume a livid colour, and are then termed *petechiæ* and *purpuræ*.

2. A natural mark or spot on the skin. See *Nævus maternus*.

II. In *Botany*, that part of the female organ of a plant which is placed at the summit of the style. It is an indispensable part of the fructification, and consists of a vast number of absorbing papillæ, rarely observable by the naked eye, but best seen in the *Mirabilis jalapa*. Botanists distinguish the following differences in the form of stigma:—

1. *Globose*; as in *Trachelium*.
2. *Capitate*, round, but flat below; as in *Sorbus* and *Vinca*.
3. *Acute*, ending in a point; as in *Piscidia*.
4. *Obtuse*; as in *Nigrina*.
5. *Clubbed*; as in *Genipi*.
6. *Emarginate*, cut; as in *Dentaria*.
7. *Peltate*; as in *Garcinia*.
8. *Uncinate*, acute and reflected; as in *Lantana*.
9. *Triangular*; as in *Lilium candidum*.
10. *Trilobed*; as in *Tulipa gesneriana*.
11. *Petaliform*; as in *Iris germanica*.
12. *Convolute*; as in *Crocus*.
13. *Revolute*; as in *Leontodon*.
14. *Penniciliform*, resembling a pencil-brush; as in *Milium paspalium*.
15. *Perforate*; as in *Sloanea*.
16. *Concave*; as in *Viola*.
17. *Bifid*; as in *Menyanthes*.
18. *Trifid*; as in *Amaryllis*.
19. *Multifid*; as in *Castus*.
20. *Striate*; as in *Papaver*.
21. *Plumose*, on each side, like a hairy pen; as in grasses.
22. *Four-sided*; as in *Amyris*.
23. *Pubescent*, covered with hair; as in *Vicia*.
24. *Simple*, not differing from the style at its summit; as in *Galanthus* and *Hippuris*.
25. *Sessile*, on the germen; there being no style.

The stigma is always more or less moist with a peculiar viscid fluid, which in some plants is so conspicuous as to form a large drop, though never big enough to fall to the ground. This moisture is designed for the reception of the pollen, which explodes on meeting with it; and hence the seeds are rendered capable of ripening, which, though in many plants fully formed, they would not otherwise be.

STILBITE. See *Zeolite*.

STILBO'MA. (From στιλβω, to polish.) A cosmetic.

STILLICI'DIUM. (*um, ii.* n.; from *stillo*, to drop, and *cado*, to fall.) A strangury, or discharge of the urine, drop by drop. Also the pumping upon a part.

STILPNOSIDERITE. A brownish black coloured mineral, said to contain phosphoric acid. It occurs along with brown iron in Saxony and Bavaria.

STI'MMI. Στιμμι. Antimony.

STIMULANT. (*Stimulans*; from *stimulo*, to stir up.) That which possesses a power of exciting the animal energy. Stimulants are divided into,—

1. *Tonic*; as *sinapi, cantharides, hydrargyri præparationes*.
2. *Diffusible*; as *alkali volatile, electricity, heat*, &c.
3. *Cordial*; as *cinnamomum, nux moschata, wine*, &c.

STI'MULUS. (*us, i.* m.; from στιγμος, *stigmulus*, per sync. *stimulus*, a sting or spur.) 1. In *Pathology* and *Physiology*, that which rouses the action or energy of a part.

2. In *Botany*, a sting, or a sharp-pointed substance, which conveys a poison into the part it penetrates; as that of the nettle.

Stinking lettuce. See *Lactuca virosa*.

STINKSTONE. Swinestone. A variety of compact lucullite, a subspecies of limestone.

STI'PES. (*es, itis.* m.; from the Greek, στυπος.) A stipe or stem of a fungus, fern, or palm.

STIPITA'TUS. Standing on a pillar or pedicle.

STI'PULA. (*a, æ.* f.) A leafy appendage to the proper leaves, or to their footstalks. In some instances they are so like unto leaves, that they are believed to be so, and can only be distinguished from leaves by their situation on the footstalk. Stipulæ are,—

1. *Solitary*; as in *Astragalus onobrychis.*
2. *In pairs*; as in *Lathyrus annuus.*
3. *Lateral,* on the side of the footstalk; as in *Lotus tetraphillus.*
4. *Oppositifoliar,* in the side of the opposite leaves; as in *Trifolium pratense.*
5. *Extrafoliaceous,* external with respect to the leaf or footstalk; as in *Astragalus onobrychis.*
6. *Intrafoliaceous,* internal; as in *Morus nigra* and *alba.*
7. *Caducous,* falling off before the leaves are expanded; as in *Prunus avium.*
8. *Persistent,* remaining after the fall of the leaf; as in *Trifolium pratense.*
9. *Deciduous,* falling with the leaves; as in many stipulated plants.
10. *Spinescent,* thorny; as in *Robinia pseudacacia.*
11. *Sessile;* as in *Pisum sativum.*
12. *Adnate;* as in *Rosa canina.*
13. *Decurrent;* as in *Crotullaria sagittalis.*
14. *Sheathed;* as in *Hedysarum vaginale.*
15. *Lanceolate;* as in *Cistus helianthemum.*
16. *Subulate;* as in *Cassia glandulosa.*
17. *Sagittate;* as in *Pisum maritimum.*
18. *Lunate;* as in *Lathyrus tingitanus.*
19. *Ovate;* in *Ononis repens.*
20. *Cordate;* in *Ocymum sanctum.*
21. *Filiform;* in *Ononis mauritanica.*
22. *Foliaceous;* in *Sambucus ebulus.*
23. *Entire;* in *Vicia cracca.*
24. *Serrate;* in *Pisum sativum.*
25. *Ciliate;* in *Passiflora fœtida.*
26. *Toothed;* in *Orobus lathyroides.*
27. *Pinnatifid;* in *Viola tricolor.*

STIPULA'RIS. Stipular: belonging to the stipula of plants; as the *spina stipularis* of the *Mimosa nilotica* and *horrida.*

STIZOLO'BIUM. (*um, ii.* n.) See *Dolichos.*

STŒ'CHAS. (*as, ădis.* f.; from στοιχαδες, the islands on which it grew.) See *Lavendula.*

Stœchas arabica. See *Lavendula.*

Stœchas citrina. See *Gnaphalium.*

STOLO. (*o, onis.* m.; a shoot, branch, or twig.) A sucker or scion. A runner which proceeds from the roots of some plants, and takes root in the earth. It is distinguished into a *supraterraneous,* which runs on the surface above ground, as in *Fragaria vesca* and *Potentilla reptans;* and *subterraneous,* which runs under the surface, as in *Triticum repens,* the stolos of which are erroneously taken for the roots.

STOLONIFEROUS. *Stoloniferus.* Putting forth suckers.

STOMACA'CE. (*e, es.* f.; from στομα, the mouth, and κακος, evil.) *Cancrum oris.* *Gangrena oris.* Canker of the mouth. A fetor in the mouth, with a bloody discharge from the gums, which are ulcerated along their edges. The remedies for this disease are, acid gargles with myrrh, and the internal exhibition of mineral acids with bark or cascarilla; good food, especially a proper quantity of vegetables, and occasional purgatives; the cold bath, and walking exercise.

STOMACH. (*Stomachus, i.* m.; from στομα, the mouth, and χεω, to pour.) *Ventriculus;* called also, *Anocœlia, Gaster,* and *Nedys.* A membraneous receptacle, situated in the epigastric region, which receives the food from the œsophagus. Its figure is somewhat oblong and round: it is largest on the left side, and gradually diminishes towards its lower orifice, where it is the least. Its superior orifice, where the œsophagus terminates, is called the *cardia;* the inferior orifice, where the intestine begins, the *pylorus.* The anterior surface is turned towards the abdominal muscles, and the posterior opposite the lumbar vertebræ. It has two curvatures: the first is called the great curvature of the stomach, and extends downwards from one orifice to the other, having the omentum adhering to it; the second is the small curvature, which is also between both orifices, but superiorly and posteriorly. The stomach, like the intestinal canal, is composed of three coats or membranes:—1. The *outermost,* which is very firm, and from the peritonæum. 2. The *muscular,* which is very thick, and composed of various muscular fibres; and, 3. The *innermost,* or *villous coat,* which is covered with exhaling and inhaling vessels, and mucus. These coats are connected together by cellular membrane. The glands of the stomach which separate the mucus are situated between the villous and muscular coat, in the cellular structure. The arteries of the stomach come chiefly from the cœliac artery, and are distinguished into the coronary, gastro-epiploic, and short arteries; they are accompanied by veins which have similar names, and which terminate in the vena portæ. The nerves of the stomach are very numerous, and come from the eighth pair and intercostal nerves. The lymphatic vessels are distributed throughout the whole substance, and proceed immediately to the thoracic duct. The use of the stomach is to excite hunger and partly thirst, to receive the food from the œsophagus, and to retain it, till, by the motion of the stomach, the admixture of various fluids, and many other changes, it is rendered fit to pass the right orifice of the stomach, and afford chyle to the intestines.

Stomach, inflammation of. See *Gastritis.*

STOMACHIC. (*Stomachicus;* from στομαχος, the stomach.) That which excites and strengthens the action of the stomach.

Stoma'chica passio. A disorder in which there is an aversion to food; even the thought of it begets a nausea, anxiety, cardialgia, an effusion of saliva, and often a vomiting. Fasting is more tolerable than eating: if

obliged to eat, a pain follows that is worse than hunger itself.

STO'MACHUS. See *Stomach.*

STONE. See *Calculus.*

STONE-CROP. See *Sedum acre.*

STONE-POCK. An acrid and hard pimple, which suppurates. A species of acne.

STO'RAX. See *Styrax.*

Storax, liquid. See *Liquidambra.*

STORAX LIQUIDA. See *Liquidambra.*

STORAX RUBRA OFFICINALIS. Cascarilla bark was formerly so called.

Storax, white. See *Myroxylon peruiferum.*

STOERCK, ANTHONY, a medical professor, of considerable note, at Vienna. He distinguished himself chiefly by a long and assiduous course of experiments with various narcotic vegetables, as hemlock, henbane, stramonium, aconite, colchicum, &c.; of which, though he appears to have overrated the efficacy, yet certainly he had the merit of calling the attention of practitioners to a class of active remedies, which may often be highly useful under prudent management. His various tracts on these subjects were printed between 1760 and 1771; and they have since passed through several editions and translations. He was also author of a collection of cases, which occurred under his observation in the hospital at Vienna; and this work was afterwards continued by his successor, Dr. Collin.

STORER. See *Majalis.*

STRABALI'SMUS. See *Strabismus.*

STRABI'SMUS. (*us, i.* m.; from στραβιζω, to squint.) Squinting. An affection of the eye, by which a person sees objects in an oblique manner, from the axis of vision being distorted. Dr. Cullen distinguishes three species: —

1. *Strabismus habitualis,* when from a custom of using only one eye.

2. *Strabismus commodis,* when one eye, in comparison with the other, from greater weakness, or mobility, cannot accommodate itself to the other.

3. *Strabismus necessarius,* when some change takes place in the situation or figure of the eye, or a part of it. The most likely way to overcome squinting, especially in children, is to blindfold the sound eye for a considerable part of the day, and thus force the affected eye into use, and a subserviency to the will.

STRABO'SITAS. See *Strabismus.*

STRADLING. See *Divaricatus.*

STRAHLSTEIN. See *Actinolite.*

STRAIGHT. See *Rectus.*

STRA'MEN CAMELORUM. Camel's hay. See *Andropogon schœnanthus.*

STRAMMO'NIUM. See *Stramonium.*

STRAMO'NIUM. (*um, ii.* n.; from *stramen,* straw: so called from its fibrous roots.) See *Datura stramonium.*

STRAMONIUM OFFICINALE. See *Datura.*

STRAMONIUM SPINOSUM. See *Datura.*

STRA'NGALIS. (From στραγγευω, to torment.) A hard, painful tumour in the breast, from milk.

STRA'NGURY. (*Stranguria, æ.* f.; from στραγξ, a drop, and ουρον, urine.) A difficulty in making water, attended with pain and dripping. See *Ischuria.*

Strap-shaped. See *Ligulatus,* and *Linearis.*

STRATIO'TES. (From στρατος, an army: so named from its virtues in healing fresh wounds, and its usefulness to soldiers.) See *Achillea millefolium.*

STRATIO'TICUM. See *Achillea millefolium.*

STRAW. See *Culmus.*

STRAWBERRY. See *Fragaria.*

STREATHAM. A village in Surrey, where is a weak purging water, drunk to the amount of one, two, or more pints in a morning.

STRE'MMA. (*a, atis.* n. Στρεμμα; from στρεφω, to turn.) A strain or sprain of the parts about a joint.

STRI'ATUS. Striate: scored. Applied to stems, seeds, &c.; as the stem of the *Œnanthe fistula,* and seeds of the *Conium maculatum.*

STRICTURE. (*Strictura, æ.* f.) A diminution or contracted state of some tube or duct of the body; as the œsophagus, intestines, urethra, vagina, &c. They are either organic or spasmodic.

STRI'CTUS. In botanical language, it means stiff and straight; as *Caulus strictus.*

STRI'DOR. (*or, oris.* m.) A noise or crashing.

STRIDOR DENTIUM. Grinding of the teeth. This particularly uneasy sensation in the teeth is a sympathy with the ear. The noise of sharpening a saw, for example, is very uncomfortable to the ear, and, by sympathy with it, the teeth are affected with the *tooth-edge,* as it is termed. This can easily be explained, by reflecting on the union that exists between the nerves of the ear and those of the teeth. The best way of getting over this sympathy is to accustom one's-self to the cause; by which, as the sharpener of a saw well knows, the ear soon becomes used to the jarring noise, and the teeth lose their sympathy.

STRI'GA. (*a, æ.* f.) A species of pubescence of plants, white, bristle-like, with broad bases, mostly decumbent; as in *Borago officinalis.*

STRI'GIL. *Strigilis.* An instrument to scrape off the sweat during the gymnastic exercises of the ancients, and in their baths: *strigils* were made of metal, horn, or ivory, and were curved. Some were made of linen.

STRIGME'NTUM. The strigment, filth, or sordes scraped from the skin in baths and places of exercises.

STRIGO'SUS. Furnished with strigæ.

STROBILIFORM. *Strobiliformis.* In the form of a cone: applied to a spike.

STROBILUS. (*us, i.* m.) A cone. A species of pericarpium, or seed-vessel. A catkin hardened and enlarged into a seed-vessel; an example of which is in the *Pinus,* or fir. It is either *conic, cylindric, ovate, globose, squamose,* or *spurious,* consisting of membranaceous

and not woody scales; as in *Origanum marjorana*.

STRONGYLUS. (*us, i.* m.) A genus of intestinal worms in Rudolphi's classification.

STRONGYLUS GIGAS. This species of worm is said to have been found in the human kidney.

STRO'NTIA. (*a, æ.* f.: so called because it was first found in a lead mine at Strontian, in Scotland.) A greyish white-coloured earth, found in combination with carbonic acid in the mineral called strontianite.

Pure strontia is of a greyish-white colour; a pungent, acrid taste; and, when powdered in a mortar, the dust that rises irritates the lungs and nostrils. Its specific gravity approaches that of barytes. It requires rather more than 160 parts of water at 60° to dissolve it; but of boiling water much less. On cooling, it crystallises in thin, transparent, quadrangular plates, generally parallelograms, seldom exceeding a quarter of an inch in length, and frequently adhering together. The edges are most frequently bevelled from each side. Sometimes they assume a cubic form. These crystals contain about ·68 of water; are soluble in 51·4 times their weight of water at 60°, and in little more than twice their weight of boiling water. They give a blood red colour to the flame of burning alkohol. The solution of strontia changes vegetable blues to a green. Strontia combines with sulphur either in the wet or dry way, and its sulphuret is soluble in water.

In its properties, strontia has a considerable affinity to barytes. It differs from it chiefly in being infusible, much less soluble, of a different form, weaker in its affinities, and not poisonous. Its saline compounds afford differences more marked.

The basis of strontia is *strontium*, a metal first procured by Sir H. Davy in 1808, precisely in the same manner as barium, to which it is very analogous, but has less lustre. It appeared fixed, difficultly fusible, and not volatile. It became converted into strontia by exposure to air, and, when thrown into water, decomposed it with great violence, producing hydrogene gas, and making the water a solution of strontia. By igniting the mineral strontianate intensely with charcoal powder, strontia is cheaply procured.

Strontianite. See *Heavy spar.*

STRO'NTIUM. (*um, ii.* n.) The metallic base of strontia. See *Strontia.*

STROPHI'OLUM. (*um, i.* n.) A little curved gland-like part near the scar or base of some seeds, as that of *Asarum*; but especially in several papilionaceous genera, as *Ulex, Spartium*, &c.

STRO'PHOS. (From στρεφω, to turn.) A twisting of the intestines.

STRO'PHULUS. (*us, i.* m.) A papulous eruption peculiar to infants, and exhibiting a variety of forms, which are described by Dr. Willan under the titles of *intertinctus, albidus, confertus, volaticus,* and *candidus.*

1. *Strophulus intertinctus,* usually called the *red gum*, and, by the French, *efflorescence benigne.* The papulæ characterising this affection rise sensibly above the level of the cuticle, are of a vivid red colour, and commonly distinct from each other. Their number and extent varies much in different cases. They appear most constantly on the cheeks, fore-arm, and back of the hand, but are sometimes diffused over the whole body. The papulæ are, in many places, intermixed with stigmata, and often with red patches of a larger size, which do not, however, occasion any elevation of the cuticle. A child's skin, thus variegated, somewhat resembles a piece of red printed linen; and hence this eruption was formerly called the *red gown*, a term which is still retained in several counties of England, and may be found in old dictionaries. Medical writers have changed the original word for one of a similar sound, but not more significant. The strophulus intertinctus has not, in general, any tendency to become pustular; a few small pustules, containing a straw-coloured, watery fluid, occasionally appear on the back of the hand, but scarcely merit attention, as the fluid is always reabsorbed in a short time, without breaking the cuticle. The eruption usually terminates in scurf, or exfoliation of the cuticle: its duration, however, is very uncertain: the papulæ and spots sometimes remain for a length of time, without an obvious alteration; sometimes disappear and come out again daily; but, for the most part, one eruption of them succeeds another, at longer intervals, and with more regularity. This complaint occurs chiefly within the two first months of lactation. It is not always accompanied with, or preceded by, any disorders of the constitution, but appears occasionally in the strongest and most healthy children. Some authors connect it with aphthous ulcerations common in children, supposing the latter to be a part of the same disease diffused along the internal surfaces of the mouth and intestines. The fact, however, seems to be, that the two affections alternate with each other: for those infants who have the papulous eruption on the skin are less liable to aphthæ; and, when the aphthæ take place to a considerable degree, the skin is generally pale and free from eruption. The strophulus intertinctus is, by most writers, said to originate from an acidity, or acrimonious quality of the milk taken into a child's stomach, communicated afterwards to the blood, and stimulating the cutaneous excretories. This opinion might, without difficulty, be proved to have little foundation. The predisposition to the complaint may be deduced from the delicate and tender state of the skin, and from the strong determination of blood to the surface, which evidently takes place in infants. The papulous eruption is, in many cases, connected with a weak, irritable state of the alimentary canal, and consequent indigestion. For if it be by any means suddenly repelled from the surface, diarrhœa, vomiting, spas-

modic affections of the bowels, and often general disturbance of the constitution, succeed; but as soon as it re-appears, those internal complaints are wholly suspended. Dr. Armstrong and others have particularly noted this reciprocation, which makes the red gum, at times, a disease of some importance, though in its usual form it is not thought to be in any respect dangerous. On their remarks a necessary caution is founded, not to expose infants to a stream of very cold air, nor to plunge them unseasonably in a cold bath. The most violent, and even fatal, symptoms have often been the consequence of such imprudent conduct.

2. The *Strophulus albidus*, by some termed the *white gum*, is merely a variety of strophulus intertinctus, but deserves some notice on account of the different appearance of its papulæ. In place of those described as characterising the red gum, there is a number of minute whitish specks, a little elevated, and sometimes, though not constantly, surrounded by a slight redness. These papulæ, when their tops are removed, do not discharge any fluid; it is, however, probable that they are originally formed by the deposition of a fluid, which afterwards concretes under the cuticle. They appear chiefly on the face, neck, and breast, and are more permanent than the papulæ of the red gum. In other respects, they have the same nature and tendency, and require a similar plan of treatment. Although a distinctive name has been applied to this eruption, when occurring alone, yet it is proper to observe, that, in a great number of cases, there are red papulæ and spots intermixed with it, which prove its connection with the strophulus intertinctus.

3. The *Strophulus confertus*. An eruption of numerous papulæ, varying in their size, appears on different parts of the body in infants, during dentition, and has thence been denominated the *tooth-rash*. It is sometimes also termed the *rank red gum*. About the fourth or fifth month after birth, an eruption of this kind usually takes place on the cheeks and sides of the nose, extending sometimes to the forehead and arms, but rarely to the trunk or body. The papulæ on the face are smaller, and set more closely together than in the red gum; their colour is not so vivid, but they are generally more permanent. They terminate at length with slight exfoliations of the cuticle, and often appear again in the same places, a short time afterwards. The papulæ which, in this complaint, occasionally appear on the back or loins are much larger, and somewhat more distant from each other, than those on the face. They are often surrounded by an extensive circle of inflammation, and a few of them contain a semi-pellucid watery fluid, which is re-absorbed when the inflammation subsides. In the seventh or eighth month, the strophulus confertus assumes a somewhat different form; one or two large irregular patches appear on the arms, shoulder, or neck; in which the papulæ are hard, of a considerable size, and set so close together that the whole surface is of a high red colour. Most commonly the fore-arm is the seat of this eruption, the papulæ rising first on the back of the hand, and gradually extending upwards along the arm. Sometimes, however, the eruption commences at the elbow, and proceeds a little upwards and downwards on the outside of the arm. It arrives at its height in about a fortnight: the papulæ then begin to fade, and become flat at the top; afterwards the cuticle exfoliates from the part affected, which remains discoloured, rough, and irregular, for a week or two longer.

An obstinate and very painful modification of this disease takes place, though not often, on the lower extremities. The papulæ spread from the calves of the legs to the thighs, nates, loins, and round the body, as high as the navel: being very numerous and close together, they produce a continuous redness over all these parts.

The cuticle presently becomes shrivelled, cracks in various places, and finally separates from the skin in large pieces. During this process a new cuticle is formed, notwithstanding which the complaint recurs in a short time, and goes through the same course as before. In this manner successive eruptions take place, during the course of three or four months, and perhaps do not cease till the child is one year old, or somewhat more. Children necessarily suffer great uneasiness from the heat and irritation occasioned by so extensive an eruption; yet, while they are affected with it, they often remain free from any internal or febrile complaint. This appearance should be distinguished from the intertrigo of infants, which exhibits an uniform, red, smooth, shining surface, without papulæ; and which affects only the lower part of the nates and inside of the thighs, being produced by the stimulus of the urine, &c. with which the child's clothes are almost constantly wetted. The strophulus confertus, where the child is otherwise healthy, is generally ascribed to a state of indigestion, or some feverish complaint of the mother or nurse. Dr. Willan, however, asserts that he has more frequently seen the eruption when no such cause was evident. It may, with more probability, be considered as one of the numerous symptoms of irritation, arising from the inflamed and painful state of the gums in dentition: since it always occurs during that process, and disappears soon after the first teeth have cut the gums.

4. The *Strophulus volaticus* is characterised by an appearance of small circular patches, or clusters of papulæ, arising successively on different parts of the body. The number of papulæ in each cluster is from six to twelve. Both the papulæ and their interstices are of a high red colour. These patches continue red, with a little heat or itching, for about four days, when they turn brown, and begin to exfoliate. As one patch declines, another

appears at a small distance from it; and in this manner the complaint often spreads gradually over the face, body, and limbs, not terminating in less than three or four weeks. During that time the child has sometimes a quick pulse, a white tongue, and seems uneasy and fretful. In many cases, however, the eruption takes place without any symptoms of internal disorder. The above complaint has been by some writers denominated *ignis volaticus infantum*. Under this title Astruc and Lorry have described one of the forms of crusta lactea, in which a successive eruption of pustules takes place on the same spot, generally about the mouth or eyes, in children of different ages, and sometimes in adults. The *maculæ volaticæ infantum* mentioned by Wittichius, Sennertus, and Sebizeus, agree in some respects with the strophulus volaticus; but they are described by other German authors as a species of erysipelas, or as irregular efflorescences affecting the genitals of infants, and often proving fatal. The strophulus volaticus is a complaint by no means frequent. In most cases which have come under Dr. Willan's observation, it appeared between the third and sixth month; in one instance, however, it occurred about ten days after birth, and continued three weeks, being gradually diffused from the cheeks and forehead to the scalp, afterwards to the trunk of the body and to the extremities; when the patches exfoliated, a red surface was left, with a slight border of detached cuticle.

5. *Strophulus candidus.* In this form of strophulus, the papulæ are larger than in any of the foregoing species. They have no inflammation round their base; their surface is very smooth and shining, whence they appear to be of a lighter colour than the adjoining cuticle. They are diffused, at a considerable distance from each other, over the loins, shoulders, and upper parts of the arms: in any other situation they are seldom found.

This eruption affects infants about a year old, and most commonly succeeds some of the acute diseases to which they are liable. Dr. Willan has observed it on their recovery from a catarrhal fever, and after inflammation of the bowels or lungs. The papulæ continue hard and elevated for about a week, then gradually subside and disappear.

STRU'MA. (*a, æ.* f.; probably from ϛρωμα, congestion or coacervation, as, says Dr. Good, of straw in a litter, feathers in a bed, or tumours in the body: or from *struo*, to heap up, or, *à struendo*, because they grow insensibly.) 1. Generally applied to scrofula. See *Scrofula*.

2. Bronchocele, or an induration of the thyroid gland.

Stru'men. (From *struma*, a scrofulous tumour.) A herb, so called from its uses in healing strumous tumours.

STRUMOUS. (*Strumosus;* from *struma*, scrofula.) Of the nature of scrofula.

Strumus. An obsolete name of the berry bearing chickweed, which was supposed to be efficacious in the cure of scrofula. See *Cucubalus bacciferus*.

STRU'THIUM. (*um, i.* n.; from ϛρυθος, a sparrow: so named from the resemblance of its flowers to an unfledged sparrow.) The master-wort. See *Imperatoria ostruthium*.

STRY'CHNIA. (*a, æ.* f.; so called, because it is obtained from the *Strychnos*.) Strychnine. An alkaline substance obtained from the bean of the *Strychnos nux vomica* by the following process:— The bean is rasped down as small as possible. It is then exposed to the action of nitric æther in a Papin's digester. The residue, thus deprived of a quantity of fatty matter, is digested in alkohol as long as that re-agent is capable of dissolving any thing. The alkoholic solutions are evaporated to dryness, and the residue redissolved in water. Caustic potash being dropped into the solution, a white crystalline precipitate falls, which is strychnia. It is purified by washing it in cold water, dissolving it in alkohol, and crystallising it. Strychnia is obtained likewise by boiling the infusion of the bean with magnesia, in the same manner as Robiquet had obtained morphia from the infusion of opium.

The properties of strychnia, when in a state of purity, are as follows:—

It is crystallised in very small four-sided prisms, terminated by four-sided low pyramids. It has a white colour; its taste is intolerably bitter, leaving a metallic impression in the mouth. It is destitute of smell. It is not altered by exposure to the air. It is neither fusible nor volatile, except at temperatures at which it undergoes decomposition. It is very little soluble in cold water, 100,000 parts of that liquor dissolving only 15 parts of strychnia; but it dissolves in 2,500 times its weight of boiling water. A cold solution of strychnia in water may be diluted with 100 times its volume of that liquid without losing its bitter taste.

When strychnia is introduced into the stomach, it acts with prodigious energy. Small doses, as the sixteenth of a grain, two or three times a day, have been given in paralytic cases, it is said, with advantage; but a locked jaw is induced in a very short time, and the animal is speedily destroyed with a grain. Half a grain of strychnia, blown into the throat of a rabbit, proved fatal in five minutes, and brought on a locked jaw in two minutes. The saline compounds of strychnia, the sulphate, muriate, phosphate, nitrate, and carbonate, have been examined by chemists, but they have not yet been introduced into the Materia Medica.

STRYCHNINE. See *Strychnia*.

STRYCHNOMANIA. (*a, æ.* f.; from ϛρυχνος, nightshade, and μανια, madness.) So the ancients called the disorder produced by eating the deadly nightshade.

STRY'CHNOS. (*os, i.* m.; an ancient name which occurs in Pliny and Dioscorides, derived from στρωννυμι, to overthrow, and applied most probably from the overpowering narcotic quality of the plant to which it was

assigned, στρυχνος of the Greeks being a kind of nightshade. Linnæus adopted this name for the present genus, on account of the analogy of its narcotic properties with the plant of the ancients. Some derive it from ϛρυχω, to torment: from its properties of producing insanity.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

Strychnos nux vomica. The systematic name of the tree the seed of which is called the poison-nut. *Nux vomica. Nux metella.* The *nux vomica*, *lignum colubrinum*, and *faba sancti Ignatii*, have long been known in the Materia Medica as narcotic poisons, brought from the East Indies, while the vegetables which produced them were unknown, or at least not botanically ascertained.

By the judicious discrimination of Linnæus, the nux vomica was found to be the fruit of the tree described and figured in the *Hortus malabaricus*, under the name of *Caniram cucurbitifera malabariensis*, of Plukenet, now called *Strychnos nux vomica*.

To this genus, also, but upon evidence less conclusive, he likewise justly referred the colubrinum. But the faba sancti Ignatii he merely conjectured might belong to this family, as appears by the query, *An Strychni species?* which subsequent discoveries have decided in the negative; for in the Supp. Plant. it constitutes the new genus *Ignatia*, which Loureiro has lately confirmed, changing the specific name *amara* to that of *philippinica*. The strychnos and ignatia are, however, nearly allied, and both rank under the order *Solanaceæ*.

Dr. Woodville has enquired thus far into the botanical origin of these productions, from finding that, by medical writers, they are generally treated of under the same head, and in a very confused and indiscriminate manner. The seed of the fruit, or berry of this tree, *Strychnos nux vomica*, is the officinal nux vomica: it is flat, round, about an inch broad, and near a quarter of an inch thick; with a prominence in the middle on both sides, of a grey colour, covered with a kind of woolly matter; and internally hard and tough like horn. To the taste it is extremely bitter, but has no remarkable smell. It consists chiefly of a gummy matter, which is moderately bitter; the resinous part is very inconsiderable in quantity, but intensely bitter; hence rectified spirit has been considered as its best menstruum.

Nux vomica is reckoned amongst the most powerful poisons of the narcotic kind, especially to brute animals; nor are instances wanting of its deleterious effects upon the human species. It proves fatal to dogs in a very short time, as appears by various authorities. Hillefeld and others found that it also poisoned hares, foxes, wolves, cats, rabbits, and even some birds, as crows and ducks; and Loureiro relates, that a horse died in four hours after taking a drachm of the seed in an half-roasted state.

The effects of this baneful drug upon different animals, and even upon those of the same species, appear to be rather uncertain, and not always in proportion to the quantity of the poison given. With some animals it produces its effects almost instantaneously; with others, not till after several hours, when laborious respiration, followed by torpor, tremblings, coma, and convulsions, usually precede the fatal spasms, or tetanus, with which this drug commonly extinguishes life.

From four cases related of its mortal effects upon human subjects, we find the symptoms corresponded nearly with those which we have here mentioned of brutes; and these, as well as the dissections of dogs killed by this poison, not showing any injury done to the stomach or intestines, prove that the nux vomica acts immediately upon the nervous system, and destroys life by the virulence of its narcotic influence.

The quantity of the seed necessary to produce this effect upon a strong dog, as appears by experiments, need not to be more than a scruple; a rabbit was killed by five, and a cat by four grains: and of the four persons to whom we have alluded, and who unfortunately perished by this deleterious drug, one was a girl ten years of age, to whom fifteen grains were exhibited at twice for the cure of an ague. Loss, however, tells us, that he took one or two grains of it in substance, without discovering any bad effect; and that a friend of his swallowed a whole seed without injury.

In Britain, where physicians seem to observe the rule *saltem non nocere* more strictly than in many other countries, the nux vomica is rarely employed as a medicine. On the Continent, however, and especially in Germany, they have certainly been guided more by the axiom, "What is incapable of doing much harm, is equally unable to do much good." The truth of this remark was very fully exemplified by the practice of Baron Stoerck, and is farther illustrated by the medicinal character given of nux vomica, which, from the time of Gesner till that of a modern date, has been recommended by a succession of authors, as an antidote to the plague, as a febrifuge, as a vermifuge, and as a remedy in mania, hypochondriasis, hysteria, rheumatism, gout, and canine madness. In Sweden, it has of late years been successfully used in dysentery; but Bergius, who tried its effects in this disease, says, that it suppressed the flux for twelve hours, which afterwards returned again. A woman, who took a scruple of this drug night and morning, two successive days, is said to have been seized with convulsions and vertigo, notwithstanding which the dysenteric symptoms returned, and the disorder was cured by other medicines; but a pain in the stomach, the effect of the nux vomica, continued afterwards for a long time.

Bergius, therefore, thinks it should only be administered in the character of a tonic and anodyne, in small doses (from five to ten

grains), and not till after proper laxatives have been employed. Loureiro recommends it as a valuable internal medicine in fluor albus; for which purpose he roasts it till it becomes perfectly black and friable, which renders its medicinal use safe, without impairing its efficacy. It is said to have been used successfully in the cure of agues, and has also been reckoned a specific in pyrosis, or water-brash.

STRYCHNOS VOLUBILIS. This tree was supposed to afford the Jesuit's bean. See *Ignatia amara*.

STUPEFACIENT. (*Stupefaciens*; from *stupefacio*, to stupify.) Of a stupifying quality.

STU'PHA. (*a, æ.* f.; from συφω, to bind.) *Stupa, Stuppa.* A stupe, or fomentation.

STU'POR. (*or, oris.* m.; from *stupeo*, to be senseless.) Insensibility.

STU'PPA. See *Stupha*.

STURGEON. See *Acipenser sturio*.

STUTTERING. A high degree of stammering, which is a nervousness, influencing the muscles of speech.

STY. (This vernacular term, or, as it is sometimes written, *stian*, is to be met with in the earlier writers, who obtain it from the Saxon, in which *stihas* signifies a "rising, springing up, or ascent;" and hence, in Bede's Bible, "up sprung the thorns." Wickliffe spells it *stigh*.) See *Hordeolum*.

STY'GIA. (From *Styx*, a name given by the poets to one of the rivers in hell.) A water made from sublimate, and directed in old dispensatories, was so called from a supposition of its poisonous qualities. A name of the *aqua regia* also, from its corrosive qualities.

STYLIFORM. (*Styliformis*; from *stylus*, a bodkin, and *forma*, a likeness.) Shaped like a bodkin, or style. Applied to processes of bones, and parts of plants.

STYLI'SCUS. (From συλος, a bodkin.) A tent made in the form of a bodkin.

STY'LO. Names compounded of this word belong to muscles which are attached to the styloid process of the temporal bone.

STYLO-CERATO-HYOIDEUS. See *Stylo-hyoideus*.

STYLO-CHONDRO-HYOIDEUS. See *Stylo-hyoideus*.

STYLO-GLOSSUS. A muscle situated between the lower jaw and os hyoides laterally, which draws the tongue aside and backwards. It arises, tendinous and fleshy, from the styloid process, and from the ligament which connects that process to the angle of the lower jaw, and is inserted into the root of the tongue, runs along its sides, and is insensibly lost near its tip.

STYLO-HYOIDEUS. A muscle situated between the lower jaw and os hyoides laterally, which pulls the os hyoides to one side, and a little upwards. It is a small, thin, fleshy muscle, situated between the styloid process and os hyoides, under the posterior belly and middle tendon of the digastricus, near the upper edge of that muscle. It arises, by a long thin tendon, from the basis and posterior edge of the styloid process, and, descending in an oblique direction, is inserted into the lateral and anterior part of the os hyoides, near its horn. The fleshy belly of this muscle is usually perforated on one or both sides, for the passage of the middle tendon of the digastricus. Sometimes, though not always, we find another smaller muscle placed before the stylo-hyoideus, which, from its having nearly the same origin and insertion, and the same use, is called *stylo-hyoideus-alter*. It seems to have been first known to Eustachius: so that Douglas was not aware of this circumstance when he placed it amongst the muscles discovered by himself. It arises from the apex of the styloid process, and sometimes by a broad and thin aponeurosis, from the inner and posterior part of the angle of the lower jaw, and is inserted into the appendix, or little horn of the os hyoides. The use of these muscles is to pull the os hyoides to one side, and a little upwards.

STYLO-HYOIDEUS ALTER. See *Stylo-hyoideus*.

STYLO-MASTOID FORAMEN. *Foramen stylo-mastoideum.* A hole between the styloid and mastoid process of the temporal bone, through which the portio dura of the auditory nerve passes to the temples.

STYLO-PHARYNGEUS. A muscle situated between the lower jaw and os hyoides laterally, which dilates and raises the pharynx and thyroid cartilage upwards. It arises, fleshy, from the root of the styloid process, and is inserted into the side of the pharynx and back part of the thyroid cartilage.

STY'LUS. (*us, i.* m.) I. A surgical instrument called a probe.

II. The style or shaft of a flower, which proceeds from the germen, and bears the stigma. It is,—

1. *Filiform*, in *Jasminum*, and *Zea mays*.
2. *Linear*, in *Orobus*.
3. *Subulate*, thicker below than towards the apex; as in *Geranium*.
4. *Clavate*, thicker at its summit than towards its base; as in *Leucojum vernum*.
5. *Triangular*, in *Pisum*.
6. *Bifid*, in *Polygonum persicaria*.
7. *Trifid*, in *Bryonia* and *Momordica*.
8. *Dichotomous*, divided into two, which again bifurcate; as in *Cordia*.
9. *Long*, much more so than the stamina; as in *Campanula* and *Dianthus*.
10. *Persistent*, not going off after the fecundation of the germen; as *Sinapis*.

STYMATO'SIS. (*is, is.* f.; from συω, to have a priapism.) A violent erection of the penis, with a bloody discharge.

STYPTE'RIA. (From συφω, to bind: so called from its astringent properties.) Alum.

STYPTIC. (*Stypticus*; from συφω, to astringe.) A term given to those substances which possess the power of stopping hæmorrhages, such as turpentine, alum, &c.

STYRACI'FLUA. (From *styrax*, storax, and *fluo*, to flow.) See *Liquidambra*.

STY'RAX. (*ax, acis.* m. and f.; from

στυραξ, a reed, in which it was used to be preserved.) 1. The name of a genus of plants in the Linnæan system. Class, *Decandria*; Order, *Monogynia*.

2. The pharmacopœial name of the *Styrax calamita*.

Styrax alba. See *Myroxylon peruiferum*.

Styrax benzoin. The systematic name of the tree which affords the gum benzoin. This substance has received the following names: — *Benzoë*. *Benjoinum*. *Assa dulcis*. *Assa odorata*. *Liquor cyreniacus*. *Balzoinum*. *Benzoin*. *Benjui*. *Benjuin*. It is classed, by modern chemists, among the balsams. There are two kinds of benzoin: *benzoe amygdaloides*, which is formed of white tears, resembling almonds, united together by a brown matter; and *common benzoin*, which is brown and without tears. The tree which affords this balsam, formerly called *Laurus benzoin*, *Benzoifera*, and *Arbor benenici*, is the *Styrax benzoin—foliis oblongis acuminatis, subtus tomentosis, racemis compositis longitudine foliorum*, of Dryander, from which it is obtained by incisions. The benzoin of the shops is usually in very large brittle masses. When chewed it imparts very little taste, except that it impresses on the palate a slight sweetness; its smell, especially when rubbed or heated, is extremely fragrant and agreeable. Gum benjamin was analysed by Brande. The products obtained by distillation were, from 100 grains, benzoic acid, 9 grains; acidulated water, 5·5; butyraceous and empyreumatic oil, 60; brittle coal, 22; and a mixture of carburetted hydrogene and carbonic acid gas, computed at 3·5. On treating the empyreumatic oil with water, however, 5 grains more of acid were extracted, making 14 in the whole.

From 1500 grains of benzoin, Bucholz obtained 1250 of resin; 187 benzoic acid; 25 of a substance similar to balsam of Peru; 8 of an aromatic substance soluble in water and alkohol; and 30 of woody fibres and impurities.

Æther, and sulphuric and acetic acids, dissolve benzoin; so do solutions of potash and soda. Nitric acid acts violently on it, and a portion of artificial tannin is formed. Ammonia dissolves it sparingly. Its preparations are much esteemed against inveterate coughs and phthisical complaints unattended with much fever; it has also been used as a cosmetic, and in the way of fumigation, for the resolution of indolent tumours. The acid of benzoin is employed in the *tinctura camphoræ composita*, and a tincture is directed to be made of the balsam. See *Benzoic acid*.

Styrax calamita. Storax in the cane: because it was formerly brought to us in reeds or canes. See *Styrax officinalis*.

Styrax colata. Strained storax.

Styrax liquida. See *Liquidambra*.

Styrax officinalis. The systematic name of the tree which affords the solid storax. Officinal storax. *Styrax officinalis —foliis ovatis, subtus villosis, racemis simplicibus folio breviorib*us, of Linnæus. There are two kinds of storax to be found in the shops: the one is usually in irregular compact masses, free from impurities, of a reddish-brown appearance, and interspersed with whitish tears, somewhat like gum ammoniac, or benzoin; it is extremely fragrant, and, upon the application of heat, readily melts. This has been called *storax in lump*; *red storax*; and, when in separate tears, *storax in tears*. The other kind, which is called the *common storax*, is in large masses, very light, and bears no external resemblance whatever to the former storax, as it seems almost wholly composed of dirty saw-dust, caked together by resinous matter. Storax was formerly used in catarrhal complaints, coughs, asthmas, obstructions, &c. In the present practice it is almost totally disregarded, notwithstanding it is an efficacious remedy in nervous diseases.

Styrax rubra. Red storax, or storax in the tear.

SUB. 1. In *Anatomy*, it is applied to parts which lie under the other word or name which *sub* precedes; as *subscapularis*, under the scapula, &c.

2. In *Pathology*, it is used to express an imperfect disease, or a feeble state of a disease; as subluxation, subacute, &c.

3. In *Botany*, when shape, or any other character, cannot be precisely defined, *sub* is prefixed to the term used; as *subrotundus*, roundish; *subsessiles*, not quite destitute of a footstalk, &c.

4. In *Chemistry*, this term is applied when a salifiable base is predominant in a compound, there being a deficiency of the acid; as *subcarbonate of potash*, *subcarbonate of soda*, &c.

Subacetas cupri. See *Verdigris*.

Subacetate of copper. See *Ærugo æris*.

Subala'ris vena. The vein of the axilla.

Subcarbonas potassæ. See *Potash*.

Subcarbonas ferri. See *Ferrum*.

Subcarbonas plumbi. See *Plumbum*.

SUBCARBONATE. *Subcarbonas*. An imperfect carbonate.

SUBCARTILAGINOUS. (*Subcartilaginosus*; from *sub*, under, and *cartilago*, a cartilage.) Of a structure approaching to that of cartilage.

SUBCLAVIAN. (*Subclavicula*s; from *sub*, beneath, and *clavicula*, the clavicle.) That which is, or passes, under the clavicle.

Subclavian artery. The right subclavian arises from the arteria innominata, and proceeds under the clavicle to the axilla. The left subclavian arises from the arch of the aorta, and ascends under the left clavicle to the axilla. The subclavians in their course give off the internal mammary, the cervical, the vertebral, and the superior intercostal arteries.

Subclavian vein. This receives the blood from the veins of the arm, and runs into the vena cava superior.

SUBCLA'VIUS. (From *sub*, under, and *clavicula*, the channel-bone; as being situated

under [the clavicle or channel-bone.) *Subclavianus.* A muscle situated on the anterior part of the thorax, which pulls the clavicle downwards and forwards. It arises, tendinous, from the cartilage that joins the first rib to the sternum, is inserted, after becoming fleshy, into the inferior part of the clavicle, which it occupies from within an inch of the sternum as far outwards as to its connection, by a ligament, with the coracoid process of the scapula.

SUBCRURÆ'US. A name of two little muscular slips, sometimes found under the cruræus: they are inserted into the capsular ligament, which they pull up.

SUBCUTANEOUS. (*Subcutaneus*; from *sub*, under, and *cutis*, the skin.) Under the skin; a name given to the platysma myoides muscle, and to some nerves, vessels, glands, &c. which are very superficial.

Subcutaneous glands. *Glandulæ subcutaneæ.* These are sebaceous glands lying under the skin, which they perforate by their excretory ducts.

SUBER. Cork. See *Quercus suber.*

SUBERIC. (*Subericus*; from *suber*, cork.) Appertaining to cork.

Suberic acid. *Acidum subericum.* A white pulverulent acid, obtained from cork by nitric acid. It is not used as a medicine.

Sublimame'ntum. (From *sublimo*, to lift up.) The pendulous substance which floats in the middle of the urine.

SUBLIMATE. See *Hydrargyri oxymurias.*

Sublimate, corrosive. See *Hydrargyri oxymurias.*

SUBLIMATION. (*Sublimatio, onis.* f.; from *sublimo*, to raise or sublime.) A process by which volatile substances are raised by heat, and again condensed in a solid form. This chemical process differs from evaporation only in being confined to solid substances. It is usually performed either for the purpose of purifying certain substances, and disengaging them from extraneous matters; or else to reduce into vapour, and combine, under that form, principles which would have united with greater difficulty if they had not been brought to that state of extreme division.

As all fluids are volatile by heat, and consequently capable of being separated, in most cases, from fixed matters, so various solid bodies are subjected to a similar treatment. Fluids are said to distil, and solids to sublime, though sometimes both are obtained in one and the same operation. If the subliming matter concretes into a solid hard mass, it is commonly called a sublimate; if into a powdery form, flowers.

The principal subjects of this operation are, volatile alkaline salts; neutral salts, composed of volatile alkali and acids, as sal ammoniac; the salt of amber, and flowers of benzoin, mercurial preparations, and sulphur. Bodies of themselves not volatile are frequently made to sublime by the mixture of volatile ones: thus iron is carried over by sal ammoniac in the preparation of the flores martiales, or ferrum ammoniatum.

The fumes of solid bodies in close vessels rise but a little way, and adhere to that part of the vessel where they concrete.

SUBLI'MIS. See *Flexor brevis digitorum pedis*, and *Flexor sublimis perforatus.*

SUBLINGUA'LIS. (From *sub*, under, and *lingua*, the tongue.) Sublingual. A name given to parts immediately under the tongue.

Sublingual glands. *Glandulæ sublinguales. G. Bartholinianæ. G. Rivinianæ.* The glands which are situated under the tongue, and secrete saliva. Their excretory ducts are called *Rivinian* from their discoverer.

SUBLUXA'TIO. A sprain.

SUBMERSION. (*Submersio*; from *sub*, under, and *mergo*, to sink.) Drowning. See *Asphyxia.*

SUBME'RSUS. Under water; applied to leaves which are naturally under water, while others of the plants are above; as in *Ranunculus aquatilis.* See *Natans.*

SUBMU'RIAS. A submuriate, or an imperfect muriate.

Submurias hydrargyri. See *Hydrargyri submurias.*

Suborbita'rius. The suborbitary nerve, a branch of the fifth pair.

Subphosphuretted hydrogene. See *Phosphorus.*

SUBRAMO'SUS. A little branched.

SUBROTU'NDUS. Roundish; nearly globular: applied to several parts of plants. The leaf of the *Pyrola* is subrotund.

SUBSALT. A salt having an excess of base beyond what is requisite for saturating the acid, as *supersalt* is one with an excess of the acid. The sulphate of potash is the neutral compound of sulphuric acid and potash; subsulphate of potash, a compound of the same ingredients, in which there is an excess of base; supersulphate of potash, a compound of the same acid and the same base, in which there is an excess of acid.

SUBSCAPULA'RIS. (From *sub*, under, and *scapula*, the shoulder-blade.) *Infra-scapularis.* The name of this muscle sufficiently indicates its situation. It is composed of many fasciculi of tendinous and fleshy fibres, the marks of which we see imprinted on the under surface of the scapula. These fasciculi, which arise from all the basis of that bone internally, and likewise from its superior as well as from one half of its inferior costa, unite to form a considerable flat tendon which adheres to the capsular ligament, and is inserted into the upper part of the lesser tuberosity at the head of the os humeri.

The principal use of this muscle is to roll the arm inwards. It likewise serves to bring it close to the ribs; and, from its adhesion to the capsular ligament, it prevents that membrane from being pinched.

SUBSU'LTUS. (From *subsulto*, to leap.) Weak convulsive motions or twitchings of

the tendons of the hands. These twitchings or starts of the tendons are most common in the extreme stages of debility, produced by low nervous and typhous fevers, and are generally the harbingers of a fatal termination. They are, in these cases, weak convulsions, interruptedly undulating from one limb to another, too feeble to raise the limb itself, though sufficiently powerful to be felt in the belly of the muscle, and along its tendon: they affect the wrist and ankles the most. Twitchings of a limb or a set of muscles is often an habitual affection.

SUBU'BERES. (From *sub*, under, and *ubera*, the breasts.) This term hath been used by some writers for those infants who yet suck, in distinction to those who are weaned, and then are called *exuberes.*

SUBULATUS. Subulate: awl-shaped. Applied, in *Botany*, to leaves, receptacles, &c. which are tapering from a thick base to a point like an awl; as the leaf of the *Salsola kali*, and receptacle of the *Scabiosa atropurpurea.*

Succa'go. The rob of any fruit.

SUCCEDA'NEUM. (*um, i.* n.) A medicine substituted for another.

Succenturia'ti musculi. The pyramidal muscles of the belly.

Succenturiati renes. Two glands lying above the kidneys.

Su'cci scorbutici. The juice of English scurvy grass, &c.

SUCCINATE. *Succinas.* A salt formed by the combination of the acid of amber, or succinic acid, with a salifiable base; as, *succinate of potash, succinate of copper*, &c.

Succi'ngens membrana. The diaphragm.

SUCCINIC. (*Succinicus;* from *succinum*, amber.) Of or belonging to amber.

Succinic acid. *Acidum succinicum. Sal succini.* It has long been known that amber, when exposed to distillation, affords a crystallised substance, which sublimes into the upper part of the vessel. Before its nature was understood, it was called *salt of amber;* but it is now known to be a peculiar acid, as Boyle first discovered. The crystals are at first contaminated with a little oil, which gives them a brownish colour; but they may be purified by solution and crystallisation, repeated as often as necessary, when they will become transparent and shining. Pott recommends to put on the filter, through which the solution is passed, a little cotton previously wetted with oil of amber. Their figure is that of a triangular prism. Their taste is acid; and they redden the blue colour of litmus, but not that of violets. They are soluble in less than two parts of boiling alkohol, in two parts of boiling water, and in twenty-five of cold water.

Planche of Paris observes, that a considerable quantity might be collected in making amber varnish, as it sublimes while the amber is melting for this purpose, and is wasted.

Several processes have been proposed for purifying this acid: that of Richter appears to be the best. The acid being dissolved in hot water, and filtered, is to be saturated with potash or soda, and boiled with charcoal, which absorbs the oily matter. The solution being filtered, nitrate of lead is added; whence results an insoluble succinate of lead, from which, by digestion in the equivalent quantity of sulphuric acid, pure succinic acid is separated. Nitrate or muriate of barytes will show whether any sulphuric acid remains mixed with the succinic solution; and if so, it may be withdrawn by digesting the liquid with a little more succinate of lead. Pure succinic acid may be obtained by evaporation, in white transparent prismatic crystals. Their taste is somewhat sharp, and they redden powerfully tincture of turnsole. Heat melts and partially decomposes succinic acid. Air has no effect upon it. It is soluble in both water and alkohol, and much more so when they are heated.

SU'CCINUM. (*um, i.* n.; from *succus*, juice: because it was thought to exude from a tree.) Amber. A beautiful bituminous substance, which takes a good polish, and, after a slight rubbing, becomes so electric as to attract straws and small bodies. It was called *ηλεκτρον, electrum*, by the ancients; and hence the word electricity. "Amber is a hard, brittle, tasteless substance, sometimes perfectly transparent, but mostly semitransparent or opake, and of a glossy surface: it is found of all colours, but chiefly yellow or orange, and often contains leaves or insects; its specific gravity is from 1·065 to 1·100; its fracture is even, smooth, and glossy; it is capable of a fine polish, and becomes electric by friction; when rubbed or heated, it gives a peculiar agreeable smell, particularly when it melts, that is at 550° of Fahrenheit, but it then loses its transparency; projected on burning coals, it burns with a whitish flame, and a whitish-yellow smoke, but gives very little soot, and leaves brownish ashes; it is insoluble in water and alkohol, though the latter, when highly rectified, extracts a reddish colour from it; but it is soluble in the sulphuric acid, which then acquires a reddish-purple colour, and is precipitable from it by water. No other acid dissolves it, nor is it soluble in essential or expressed oils without some decomposition and long digestion; but pure alkali dissolves it. By distillation it affords a small quantity of water, with a little acetous acid, an oil, and a peculiar acid. The oil rises at first colourless; but, as the heat increases, becomes brown, thick, and empyreumatic. The oil may be rectified by successive distillations, or it may be obtained very light and limpid at once, if it be put into a glass alembic with water, as the elder Rouelle directs, and distilled at a heat not greater than 212° Fahr. It requires to be kept in stone bottles, however, to retain this state; for in glass vessels it becomes brown by the action of light.

Amber is met with plentifully in regular mines in some parts of Prussia. The upper

surface is composed of sand, under which is a stratum of loam, and under this a bed of wood, partly entire, but chiefly mouldered or changed into a bituminous substance. Under the wood is a stratum of sulphuric or rather aluminous mineral, in which the amber is found. Strong sulphureous exhalations are often perceived in the pits.

Detached pieces are also found occasionally on the sea-coast in various countries. It has been found in gravel beds near London. In the Royal Cabinet at Berlin there is a mass of 18 lbs. weight, supposed to be the largest ever found. Jussieu asserts, that the delicate insects in amber, which prove the tranquillity of its formation, are not European. Haüy has pointed out the following distinctions between mellite and copal, the bodies which most closely resemble amber:—Mellite is infusible by heat. A bit of copal heated at the end of a knife takes fire, melting into drops, which flatten as they fall: whereas amber burns with spitting and frothing; and when its liquefied particles drop, they rebound from the plane which receives them.

The origin of amber is at present involved in perfect obscurity, though the rapid progress of vegetable chemistry promises soon to throw light on it.

Various frauds are practised with this substance. Neumann states as the common practices of workmen the two following: — The one consists in surrounding the amber with sand in an iron pot, and cementing it with a gradual fire for forty hours, some small pieces placed near the sides of the vessel being occasionally taken out for judging of the effect of the operation. The second method, which he says is that most generally practised, is by digesting and boiling the amber about twenty hours with rapeseed oil, by which it is rendered both clear and hard.

Werner has divided it into two subspecies, the white and the yellow; but there is little advantage in the distinction. Its ultimate constituents are the same with those of vegetable bodies in general; viz. carbon, hydrogene, and oxygene.

In the second volume of the Edinburgh Philosophical Journal, Dr. Brewster has given an account of some optical properties of amber, from which he considers it established beyond a doubt that amber is an *indurated vegetable juice;* and that the traces of a regular structure, indicated by its action upon polarised light, are not the effect of the ordinary laws of crystallisation by which *mellite* has been formed, but are produced by the same causes which influence the mechanical condition of gum arabic, and other gums, which are known to be formed by the successive deposition and induration of vegetable fluids. See *Oleum succini*, and *Succinic acid*.

Succinum cinereum. See *Ambergris.*

Succinum griseum. See *Ambergris.*

Succinum oleum. See *Oleum succini.*

Succinum præparatum. See *Amber.*

SUCCI'SA. (*a, æ.* f.; from *succido*, to cut: so named from its being indented, and, as it were, cut in pieces.) Applied to a species of the genus *Scabiosa*.

SUCCORY. See *Cichorium.*

Su'ccubus. See *Incubus.*

SU'CCULENS. Succulent: juicy, rich. Applied to fruits, pods, soils, &c.

Succule'ntæ. The name of an order of Linnæus's Fragments of a Natural Method, containing those which have fleshy and succulent leaves; as *Cactus, Sedum, Sempervivum*, &c.

SUCCULENTUS. Juicy; full of juice. Applied to plants, pods, leaves, &c.

SU'CCUS. (*us, i.* m.) Juice.

Succus cochleariæ compositus. A warm aperient and diuretic, mostly exhibited in the cure of diseases of the skin arising from scurvy.

Succus cyreniacus. Juice of laserwort.

Succus gastricus. See *Gastric juice.*

Succus heliotropii. See *Croton tinctorium.*

Succus indicus purgans. See *Gamboge.*

Succus liquoritiæ. See *Glycyrrhiza glabra.*

SUCKER. See *Stolo.*

SUDA'MEN. (*en, inis.* n.; from *sudor*, sweat.) *Sudamina* are vesicles resembling millet-seeds in form and magnitude, which appear suddenly, without fever, especially in the summer time, after much labour and sweating.

SUDA'TIO. (*o, onis.* f.; from *sudor*, sweat.) A sweating. See *Ephidrosis.*

SUDATO'RIUM. (From *sudo*, to sweat.) A stew or sweating-house.

SU'DOR. Sweat or perspiration.

Sudor anglicus. (Thus named from its first appearing in this island, and the patient suddenly breaking out into a profuse sweat.) The sweating sickness of England; called also, *Hydronosus*, and *Gargeatio*. Dr. Cullen thinks it a species of typhus. It made its first appearance in London in 1480. Dr. Caius, who practised at the time of its appearance at Shrewsbury, describes it as "a contagious pestilential fever of one day, which prevailed with a mighty slaughter;" and the description of it is as tremendous as that of the plague of Athens.

SUDORIFIC. (*Sudorificus;* from *sudor*, sweat, and *facio*, to make.) A synonym of diaphoretic. See *Diaphoretic.*

SUFFIME'NTUM. (From *suffimen*, a perfume.) A perfume.

SUFFI'TUS. A perfume.

SUFFOCA'TIO. (*o, onis.* f.) Suffocation.

Suffocatio stridula. See *Croup.*

Suffrutices plantæ. Under-shrubby plants. Such ligneous or somewhat woody vegetables that are of a nature, in some degree, between that of the shrubby and the herbaceous; as thyme, sage, hyssop, &c.

SUFFRUTICO'SUS. Somewhat woody, nearly shrubby; as *Lavendula, Salvia*, &c.

SUFFUMIGATION. (*Suffumigatio, onis.* f.; from *sub*, under, and *fumigo*, to

smoke.) The burning odorous substances to remove an evil smell, or destroy miasma.

Suffusio auriginosa. See *Icterus*.

SUFFUSION. (*Suffusio, onis.* f.; from *suffundo*, to pour down: so called because the ancients supposed the opacity proceeded from something running under the crystalline humour.) 1. A cataract.

2. An extravasation of some humour, as the blood: thus we say, a suffusion of blood in the eye, when it is what is vulgarly called bloodshot.

SUGAR. See *Saccharum*.

Sugar, maple. See *Acer*.

Sugar of lead. See *Plumbi acetas*.

Sugar of milk. A substance produced from whey, which, if not sour, contains a saline substance to which this name has been given.

SUGILLATION. (*Sugillatio*; from *sugillo*, to stain.) A bruise. A spot or mark made by a leech or cupping-glass.

SULCA'TUS. Sulcate: furrowed; marked with deep lines running lengthways. Applied to stems, leaves, seeds, &c. of plants; and well seen in the seeds of the *Scandix odorata*.

SU'LCUS. A groove or furrow; generally applied to the bones.

SU'LPHAS. (*as, atis.* m.; from *sulphur*, brimstone.) A sulphate or salt formed by the union of the sulphuric acid with a salifiable base. The sulphates which have been examined by chemists are, the sulphate of barytes, strontian, potash, soda, ammonia, lime, magnesia, glucine, yttria, alumine, and zircon.

Those used in medicine are,—

1. Alumen.
2. Sulphate of ammonia. See *Ammonia*.
3. ——— copper. See *Cuprisulphas*.
4. ——— iron. See *Ferri sulphas*.
5. ——— magnesia. See *Magnesiæ sulphas*.
6. ——— potash. See *Potassæ sulphas*.
7. ——— soda. See *Sodæ sulphas*.
8. ——— zinc. See *Zinci sulphas*.
9. ——— quinine. See *Quinæ sulphas*.
10. ——— mercury. See *Hydrargyri sulphas*.

Sulphas aluminosus. See *Alumen*.

Sulphas ammoniæ. *Alkali volatile vitriolatum*, of Bergman. *Sal ammoniacum secretum*, of Glauber. *Vitriolum ammoniacale*. This salt has been found native in the neighbourhood of some volcanoes. It is esteemed diuretic and deobstruent, and exhibited in the same diseases as the muriate of ammonia.

Sulphas cupri. See *Cupri sulphas*.

Sulphas ferri. See *Ferri sulphas*.

Sulphas hydrargyri. See *Hydrargyrum vitriolatum*.

Sulphas magnesiæ. See *Magnesiæ sulphas*.

Sulphas potassæ. See *Potassæ sulphas*.

Sulphas quinæ. See *Quinæ sulphas*.

Sulphas sodæ. See *Sodæ sulphas*.

Sulphas zinci. See *Zinci sulphas*.

Sulphate of lime. This salt is commonly called *selenite, gypsum, plaster of Paris*, and sometimes *alabaster*. It forms extensive strata in various mountains. The *specular gypsum*, or *glacies Mariæ*, is a species of this salt, and affirmed by some French travellers to be employed in Russia, where it abounds, as a substitute for glass in windows.

SULPHIS. A sulphite. A salt formed by the combination of a definite quantity of the sulphureous acid with a salifiable base; as *sulphite of potash, ammoniacal sulphite, &c.*

SULPHITE. See *Sulphis*.

Sulpho-naphthalic acid. Mr. Faraday communicated a paper to the Royal Society in 1826, to show that, during the mutual action of sulphuric acid and naphthaline, a compound of that acid with hydrocarbon is formed, differing from all known substances; and which, possessing acid properties, and combining with salifiable bases to produce a peculiar class of salts, is named sulpho-naphthalic acid.

SULPHOVINIC. (*Sulphovinicus*: so called from its composition.) Appertaining to the acid so called.

Sulphovinic acid. *Acidum sulphovinicum*. The name given by Vogel to an acid, or class of acids, which may be obtained by digesting alkohol and sulphuric acid together with heat.

SU'LPHUR. (*ur, uris.* n.; from *sal* or *sul*, and πυρ, fire: so named from its great combustibility.) Sulphur. Brimstone. Its old names are, *Abric, Alcubrith, Anpater, Appebrioc, Aquala, Aquila, Chibur, Chybur*, and *Cibur*. It is the only simple combustible substance which nature offers pure and in abundance. It was the first known of all. It is found in the earth, and exists externally in depositions, in sublimed incrustations, and on the surface of certain waters, principally near burning volcanoes. It is found combined with many metals.

Sulphur, in the mineral kingdom, is either in a loose powder or compact; and then either detached or in veins. It is found in the greatest plenty in the neighbourhood of volcanoes or pseudo-volcanoes, whether modern or extinct, as at Solfatara, &c. and is deposited as a crust on stones contiguous to them, either crystallised or amorphous. It is frequently met with in mineral waters, and in caverns adjacent to volcanoes; sometimes also in coal-mines. It is found in combination with most of the metals. When united to iron it forms the mineral called *martial pyrites*, or *iron pyrites*. All the ores known by the name of *pyrites*, of which there are a vast variety, are combinations of sulphur with different metals; and hence the names of copper, tin, arsenical, &c. pyrites. It exists likewise in combination with alumine and lime: it then constitutes different kinds of alum ore.

A prodigious quantity of pure sulphur is obtained from Solfatara, in Italy.

From pyrites sulphur is extracted in the large way. In order to form it into rolls, it is melted and poured into cylindrical wooden

moulds; in these it takes the form in which we usually see it in commerce, as roll sulphur.

Flowers of sulphur, as they are called, are formed by subliming purified sulphur with a gentle heat in close rooms, where the sublimed sulphur is collected, though the article met with in general under that name is nothing but sulphur finely powdered.

Properties.—Sulphur is a combustible, dry, and exceedingly brittle body, of a pale lemon-yellow colour. Its specific gravity is 1·990. It is destitute of odour, except when rubbed or heated. It is of a peculiar faint taste. It frequently crystallises in entire or truncated octahedra, or in needles. If a piece of sulphur, of a considerable size, be very gently heated, as, for example, by holding it in the hand and squeezing it firmly, it breaks to pieces with a crackling noise. It is a non-conductor of electricity, and hence it becomes electric by friction. When heated, it first softens before it melts, and its fusion commences at 218° Fahr.: it is capable of subliming at a lower temperature; and takes fire at 560°. In the beginning of fusion it is very fluid; but by continuing the heat it grows tough, and its colour changes to a reddish-brown. If in this condition it be poured into water, it remains as soft as wax, and yields to any impression. In time, however, it hardens again, and recovers its former consistence.

When a roll of sulphur is suddenly seized in a warm hand, it crackles, and sometimes falls in pieces. This is owing to the unequal action of heat on a body which conducts that power slowly, and which has little cohesion. If a mass of sulphur be melted in a crucible, and, after the surface begins to concrete, if the liquid matter below be allowed to run out, fine acicular crystals of sulphur will be obtained.

Sulphur is insoluble in water; but in small quantity in alkohol and æther, and more largely in oil.

Combinations of Sulphur. Sulphur combines with *oxygene* in four definite proportions, constituting an interesting series of acids. See *Sulphuric acid*, and *Sulphureous acid.*

Sulphur combines readily with *chlorine.*

Iodide of sulphur is easily formed by mixing the two ingredients in a glass tube, and exposing them to such a heat as melts the sulphur.

Sulphur and *hydrogene* combine, and form *sulphuretted hydrogene.* Their union may be effected, by causing sulphur to sublime in dry hydrogene in a retort.

The usual way of preparing sulphuretted hydrogene, is to pour a dilute sulphuric or muriatic acid on the black sulphuret of iron or antimony in a retort. For accurate experiments it should be collected over mercury. It takes fire when a lighted taper is brought in contact with it, and burns with a pale blue flame, depositing sulphur. Its smell is extremely fœtid, resembling that of rotten eggs. Its taste is sour. It reddens vegetable blues. It is absorbable by water, which takes up more than an equal volume of the gas. Its sp. gr., according to Gay Lussac and Thénard, is to that of air as 1·1912 to 1·0.

Of all the gases, sulphuretted hydrogene is perhaps the most deleterious to animal life. A greenfinch, plunged into air which contains only $\frac{1}{1500}$ of its volume, perishes instantly. A dog of middle size is destroyed in air that contains $\frac{1}{800}$; and a horse would fall a victim to an atmosphere containing $\frac{1}{250}$.

Dr. Chaussier proves that to kill an animal, it is sufficient to make the sulphuretted hydrogene gas act on the surface of its body, when it is absorbed by the inhalants. He took a bladder having a stop-cock at one end, and at the other an opening, into which he introduced the body of a rabbit, leaving its head outside, and securing the bladder air-tight round the neck by adhesive plaster. He then sucked the air out of the bladder, and replaced it by sulphuretted hydrogene gas. A young animal in these circumstances usually perishes in 15 or 20 minutes. Old rabbits resist the poison much longer.

When potassium or sodium is heated merely to fusion, in contact with sulphuretted hydrogene, it becomes luminous, and burns with extrication of hydrogene, while a metallic sulphuret remains, combined with sulphuretted hydrogene, or a sulphuretted hydrosulphuret.

Sulphuretted hydrogene combines with an equal volume of ammonia, and unites to alkalies and oxides, so that it has all the characters of an acid. These compounds are called *hydrosulphurets.*

All the *hydrosulphurets*, soluble in water, have an acrid and bitter taste, and, when in the liquid state, the odour of rotten eggs. All those which are insoluble are, on the contrary, insipid, and without smell. Those which have been examined, are the hydrosulphurets of potash, soda, ammonia, barytes, strontites, lime, and magnesia.

When we expose sulphur to the action of a solution of a hydrosulphuret, saturated with sulphuretted hydrogene, as much more sulphuretted hydrogene is evolved as the temperature is more elevated. But when the solution of hydrosulphuret, instead of being saturated, has a sufficient excess of alkali, it evolves no perceptible quantity of sulphuretted hydrogene, even at a boiling heat; although it dissolves as much sulphur as in its state of saturation. It hence follows, 1st, That sulphuretted hydrogene, sulphur, and the alkalies have the property of forming very variable triple combinations; 2d, That all these combinations contain less sulphuretted hydrogene than the hydrosulphurets; and, 3d, That the quanity of sulphuretted hydrogene is inversely as the sulphur they contain, and reciprocally. These compounds have been called, in general, sulphuretted hydrosulphurets, and hydrogenated sulphurets.

Sulphur combines with *carbon*, forming an

interesting compound, to which the name of *sulphuret of carbon* is sometimes given.

Sulphur has been long an esteemed article of the Materia Medica. It stimulates the system, loosens the belly, and promotes the insensible perspiration. It pervades the whole habit, and manifestly transpires through the pores of the skin, as appears from the sulphureous smell of persons who have taken it, and from silver being stained in their pockets of a blackish colour. In the stomach it is probably combined with hydrogene. It is a celebrated remedy against cutaneous diseases, particularly psora, both given internally and applied externally. It has likewise been recommended in rheumatic pains, flying gout, rickets, atrophy, coughs, asthmas, and other disorders of the breast and lungs, and particularly in catarrhs of the chronic kind, also in colica pictonum, worm cases, and to lessen salivation.

In hæmorrhoidal affections it is almost specific; but in most of these cases it is advantageously combined with some cooling purgative, especially supertartrate of potash.

The preparations of sulphur directed to be used by the London and Edinburgh Colleges, are the *Sulphur lotum*, *Sulphur præcipitatum*, and *Sulphur sublimatum*.

Sulphur antimonii præcipitatum. *Sulphur auratum antimonii.* This preparation of antimony appears to have rendered that called *kermes mineral* unnecessary. It is a yellow hydrosulphuret of antimony, and therefore called *hydro-sulphuretum stibii luteum.* As an alterative and sudorific it is in high estimation, and given in diseases of the skin and glands; and joined with calomel, it is one of the most powerful and penetrating alteratives we are in possession of.

Sulphur auratum antimonii. See *Sulphur antimonii præcipitatum.*

Sulphur lotum. Washed sulphur. *Flores sulphuris loti.* Take of sublimed sulphur, a pound. Pour on boiling water, so that the acid, if there be any, may be entirely washed away: then dry it. The dose is from half a drachm to two drachms.

Sulphur præcipitatum. *Lac sulphuris.* Take of sublimed sulphur, a pound; fresh lime, two pounds; water, four gallons: boil the sulphur and lime together in the water; then strain the solution through paper, and drop in as much muriatic acid as may be necessary to precipitate the sulphur; lastly, wash this by repeated affusions of water until it is tasteless. This preparation is mostly preferred to the flowers of sulphur, in consequence of its being freed from its impurities. The dose is from half a drachm to three drachms.

Sulphur, precipitated. See *Sulphur præcipitatum.*

Sulphur sublimatum. See *Sulphur.*

Sulphur vivum. Native sulphur.

Sulphur, washed. See *Sulphur lotum.*

Sulphur-wort. See *Peucedanum.*

SULPHUREOUS. *Sulphureus.* 1. Of or belonging to sulphur.

2. Applied, in *Natural History*, to designate a bright pale yellow, without any orange tinge. See *Colour.*

Sulphureous acid. *Acidum sulphurosum.* Sulphur, burned at a low temperature, absorbs less oxygene than it does when exposed to greater heat, and is consequently acidified in a slighter degree, so as to form sulphureous acid. This, in the ordinary state of the atmosphere, is a gas; but on reducing its temperature very low by artificial cold, and exposing it to strong compression, it becomes a liquid. To obtain it in the liquid state, however, for practical purposes, it is received into water, by which it is absorbed.

Water thus saturated is intensely acid to the taste, and has the smell of sulphur burning slowly. It destroys most vegetable colours, but the blues are reddened by it previously to their being discharged. A pleasing instance of its effect on colours may be exhibited by holding a red rose over the blue flame of a common match, by which the colour will be discharged wherever the sulphureous acid comes in contact with it, so as to render it beautifully variegated, or entirely white. If it be then dipped into water, the redness, after a time, will be restored.

Sulphureous acid is used in bleaching, particularly for silks. It likewise discharges vegetable stains and iron-moulds from linen.

In combination with the salifiable bases it forms sulphites, which differ from the sulphates in their properties.

Sulphure. See *Sulphuret.*

Sulphuret of antimony. See *Antimonii sulphuretum.*

Sulphuretted chyazic acid. See *Sulphuro-prussic acid.*

Sulphuretted hydrogene. See *Sulphur.*

Sulphuretted hydrogene gas. See *Hydrogene gas, sulphuretted.*

SULPHURE'TUM. (*um, i.* n.) Sulphuret. Sulphure. A combinate of sulphur with an alkali, earth, or metal.

Sulphuretum ammoniæ. *Hepar sulphuris volatile.* Boyle's or Beguine's fuming spirit. Sulphuret of ammonia is obtained in the form of a yellow fuming liquor, by the ammonia and sulphur uniting whilst in a state of gas during distillation. It excites the action of the absorbent system, and diminishes arterial action, and is given internally in diseases arising from the use of mercury, phthisis, diseases of the skin, and phlegmasiæ: externally it is prescribed in the form of bath in paralysis, contractura, psora, and other cutaneous diseases.

Sulphuretum antimonii præcipitatum. See *Antimonii sulphuretum præcipitatum.*

Sulphuretum calcis. Sulphuret of lime. Principally used as a bath in various diseases of the skin.

Sulphuretum hydrargyri nigrum. See *Hydrargyri sulphuretum nigrum.*

Sulphuretum hydrargyri rubrum. See *Hydrargyri sulphuretum rubrum.*

Sulphuretum potassæ. See *Potassæ sulphuretum.*

Sulphuretum sodæ. A combination of soda and sulphur.

Sulphuretum stibii nativum. *Sulphuretum stibii nigrum. Antimonium crudum.* Native sulphuret of antimony. It is from this ore that all our preparations of antimony are made. See *Antimony.*

SULPHURIC. *Sulphuricus.* Belonging to sulphur.

Sulphuric acid. *Acidum sulphuricum.* Oil of vitriol. Vitriolic acid. When sulphur is heated to 180° or 190° in an open vessel, it melts, and soon afterwards emits a bluish flame, visible in the dark, but which, in open day-light, has the appearance of a white fume. This flame has a suffocating smell, and has so little heat that it will not set fire to flax, or even gunpowder, so that in this way the sulphur may be entirely consumed out of it. If the heat be still augmented, the sulphur boils, and suddenly bursts into a much more luminous flame, the same suffocating vapour still continuing to be emitted.

The suffocating vapour of sulphur is imbibed by water, with which it forms the fluid formerly called *volatile vitriolic,* now sulphureous acid. If this fluid be exposed for a time to the air, it loses the sulphureous smell it had at first, and the acid becomes more fixed. It is then the fluid which was formerly called the *spirit of vitriol.* Much of the water may be driven off by heat, and the dense acid which remains is the sulphuric acid, commonly called *oil of vitriol;* a name which was probably given to it from the little noise it makes when poured out, and the unctuous feel it has when rubbed between the fingers, produced by its corroding and destroying the skin, with which it forms a soapy compound.

Sulphuric acid was formerly obtained in this country by distillation from sulphate of iron, as it still is in many parts abroad: the common green vitriol is made use of for this purpose, as it is to be met with at a low price, and the acid is most easily to be extracted from it.

That which is now made in Great Britain is produced by the combustion of sulphur. There are three conditions requisite in this operation:—oxygene must be present to maintain the combustion; the vessel must be so close as to prevent the escape of the volatile matter which rises; and water must be present to imbibe it. For these purposes, a mixture of eight parts of sulphur, with one of nitre, is placed in a proper vessel, enclosed within a chamber of considerable size, lined on all sides with lead, and covered at bottom with a shallow stratum of water. The mixture being set on fire, will burn for a considerable time by virtue of the supply of oxygene which nitre gives out when heated, and the water imbibing the sulphureous vapours, becomes gradually more and more acid, after repeated combustions, and the acid is afterwards concentrated by distillation.

Such was the account usually given of this operation, till Clement and Desormes showed its total inadequacy to account for the result. 100 parts of nitre, judiciously managed, will produce, with the requisite quantity of sulphur, 2000 parts of concentrated sulphuric acid.

The sulphuric acid strongly attracts water, which it takes from the atmosphere very rapidly, and in larger quantities if suffered to remain in an open vessel, imbibing one third of its weight in twenty-four hours, and more than six times its weight in a twelvemonth. If four parts by weight be mixed with one of water, at 50°, they produce an instantaneous heat of 300° F.; and four parts raise one of ice to 212°: on the contrary, four parts of ice, mixed with one of acid, sink the thermometer to 4° below 0. When pure it is colourless, and emits no fumes. It requires a great degree of cold to freeze it; and if diluted with half a part or more of water, unless the dilution be carried very far, it becomes more and more difficult to congeal; yet at the specific gravity of 1·78, or a few hundredths above or below this, it may be frozen by surrounding it with melting snow. Its congelation forms regular prismatic crystals with six sides. Its boiling point, according to Bergman, is 540°; according to Dalton, 590°.

Pure sulphuric acid is without smell and colour, and of an oily consistence. Its action on litmus is so strong, that a single drop of acid will give to an immense quantity of water the power of reddening. It is a most violent caustic; and has sometimes been administered with the most criminal purposes. The person who unfortunately swallows it speedily dies in dreadful agonies and convulsions. Chalk, or common carbonate of magnesia, is the best antidote for this, as well as for the strong nitric and muriatic acids.

When transmitted through an ignited porcelain tube of one fifth of an inch diameter, it is resolved into two parts of sulphureous acid gas, and one of oxygene gas, with water. Voltaic electricity causes an evolution of sulphur at the negative pole; whilst a sulphate of the metallic wire is formed at the positive. Sulphuric acid has no action on oxygene gas or air. It merely abstracts their aqueous vapour.

All the simple combustibles decompose sulphuric acid, with the assistance of heat. About 400° Fahr. sulphur converts sulphuric into sulphureous acid. Several metals, at an elevated temperature, decompose this acid, with evolution of sulphureous acid gas, oxidisement of the metal, and combination of the oxide with the undecomposed portion of the acid.

The sulphuric acid is of very extensive use in the art of chemistry, as well as in metallurgy, bleaching, and some of the processes for dyeing: in medicine it is given as a tonic and stimulant, properly diluted, in the dose of from one to three drops, with cinchona and other medicines, in the cure of fevers and debilities; and it is often applied externally,

as a caustic with oil, and, when very much diluted, against psora and some chronic affections of the skin. The combinations of this acid with the various bases are called *sulphates*, and most of them have long been known.

Sulphuric acid, oxygenated. If the oxygenised muriatic acid of Thénard be put in contact with the sulphate of silver, there is immediately formed insoluble chloride of silver, and oxygenised sulphuric acid. To obtain sulphuric acid in the highest degree of oxygenation, it is merely necessary to pour barytes water into the above oxygenised acid, so as to precipitate only a part of it, leaving the rest in union with the whole of the oxygene. Oxygenised sulphuric acid partially reduces the oxide of silver, occasioning a strong effervescence.

Sulphuris flores. See *Sulphur*.

SULPHUROPRUSSIC. (*Sulphuroprussicus:* so called from its composition.) Of or belonging to the compound of sulphur with prussic acid.

Sulphuroprussic acid. Sulphuretted chyazic acid of Porrett.

Dissolve in water one part of sulphuret of potash, and boil it for a considerable time with three or four parts of powdered prussian blue, added at intervals. Sulphuret of iron is formed, and a colourless liquid containing the new acid combined with potash, mixed with hyposulphate and sulphate of potash. Render this liquid sensibly sour, by the addition of sulphuric acid. Continue the boiling for a little, and, when it cools, add a little peroxide of manganese in fine powder, which will give the liquid a fine crimson colour. To the filtered liquid add a solution containing persulphate of copper, and protosulphate of iron, in the proportion of two of the former salt to three of the latter, until the crimson colour disappears. Sulphuroprussiate of copper falls. Boil this with a solution of potash, which will separate the copper. Distil the liquid mixed with sulphuric acid in a glass retort, and the peculiar acid will come over. By saturation with carbonate of barytes, and then throwing down this by the equivalent quantity of sulphuric acid, the sulphuroprussic acid is obtained pure.

It is a transparent and colourless liquid, possessing a strong odour, somewhat resembling acetic acid. Its specific gravity is only 1·022. It dissolves a little sulphur at a boiling heat. It then blackens nitrate of silver; but the pure acid throws down the silver white. By repeated distillations sulphur is separated and the acid is decomposed.

Sulphurous acid. See *Sulphureous acid.*

Sultan-flower. See *Centaurea moschata.*

SUMACH. (*Sumak;* from *samak*, to be red: so called from its red berry.) See *Rhus coriaria.*

Sumach, elm leaved. See *Rhus coriaria.*

Su'men. (Arabian.) The lower or fat part of the belly.

SUN. See *Sol.*

Sun-dew. See *Drosera rotundifolia.*

SUPER. 1. This term is applied, in *Chemistry* and *Pharmacy*, to several saline substances, in which there is an excess of one of its constituents beyond what is necessary to form the ordinary compound; as supersulphate of potash, supercarbonate of soda, &c.

2. In *Anatomy*, it regards situation; as *superscapularis, supergenualis.*

3. In *Physiology*, it means an additional; as *superfœtation.*

4. In *Medicine*, it means excess; as *superpurgation.*

Superarse'nias potassæ. Superarseniate of potash. A compound of potash with excess of arsenic acid. It was called *Macquer's arsenical salt*, from its discoverer; and has been sometimes given in medicine, possessing similar properties to those of the white oxide of arsenic.

SUPE'RBUS. See *Rectus superior oculi.*

SUPERCI'LIUM. (*um, ii.* n.; so called because it is *supra cilium.*) See *Eyebrow.*

Supercilium veneris. See *Achillea millefolium.*

SUPERFLUUS. Superfluous: abounding; in excess. See *Polygamia.*

SUPERFŒTATION. (*Superfœtatio, onis.* f.; from *super*, above or upon, and *fœtus*, a fœtus.) The impregnation of a woman already pregnant.

SUPERGEMINA'LIS. (From *super*, above, and *gemini*, the testicles.) The epididymis, or body above the testicles.

SUPERGENUA'LIS. (From *super*, above, and *genu*, the knee.) The patella, or knee-pan.

SUPERIMPREGNA'TIO. (From *super*, above, and *impregnatio*, a conception.) See *Superfœtation.*

SUPE'RIOR. A term in general use as regards the relative situation of parts.

Superior auris. See *Attollens aurem.*

SUPERLI'GULA. (From *super*, above, and *ligula*, a little tongue.) The epiglottis.

SUPEROXALATE. *Superoxalas.* An oxalate with an excess of acid. *Bioxalate* has the same meaning.

SUPERPURGA'TIO. (From *super*, beyond, and *purgo*, to purge.) An excessive evacuation by stool.

SUPERSALT. See *Subsalt.*

SUPERSCAPULA'RIS. (From *super*, upon, and *scapula*, the shoulder-blade.) A muscle seated upon the scapula.

SUPERUS. Above: applied to the perianthium of flowers when placed above the germen; as in roses, and the genus *Pyrus.*

SUPINATION. (*Supinatio, onis.* f.; from *supinus*, placed upward.) The act of turning the palm of the hand upwards, by rotating the radius upon the ulna.

SUPINA'TOR. (From *supinus*, upwards.) A name given to those muscles which turn the hand upwards.

Supinator brevis. See *Supinator radii brevis.*

Supinator longus. See *Supinator radii longus.*

Supinator radii brevis. A supinator muscle of the hand, situated on the fore-arm. *Supinator brevis sive minor*, of Winslow. This small muscle, which is tendinous externally, is situated at the upper part of the fore-arm under the supinator longus, the extensor carpi radialis brevis, the extensor carpi ulnaris, the extensor digitorum communis, and the extensor minimi digiti.

It arises tendinous from the lower and anterior part of the outer condyle of the os humeri, and tendinous and fleshy from the outer edge and posterior surface of the ulna, adhering firmly to the ligament that joins the radius to that bone. From these origins its fibres descend forwards and inwards, and are inserted into the upper, inner, and anterior part of the radius around the cartilaginous surface upon which slides the tendon of the biceps, and likewise into a ridge that runs downwards and outwards below this surface. It assists in the supination of the hand by rolling the radius outwards.

Supinator radii longus. *Supinator longus*, of Albinus. *Supinator longus sive major*, of Winslow. A long flat muscle, covered by a very thin tendinous fascia, and situated immediately under the integuments along the outer convex surface of the radius. It arises, by very short tendinous fibres, from the anterior surface and outer ridge of the os humeri, about two or three inches above its external condyle, between the brachialis internus and the triceps brachii; and likewise from the anterior surface of the external intermuscular membrane, or ligament, as it is called. About the middle of the radius, its fleshy fibres terminate in a flat tendon, which is inserted into the inner side of the inferior extremity of the radius, near the root of its styloid process.

This muscle not only assists in rolling the radius outwards, and turning the palm of the hand upwards, on which account Riolanus first gave it the name of *supinator*, but it likewise assists in pronation, and in bending the fore-arm.

SUPPOSITO'RIUM. (*um, i.* n.; from *sub*, under, and *pono*, to put.) A suppository, *i. e.* a substance to put into the rectum, there to remain and dissolve gradually.

Suppressed menses. See *Amenorrhœa*.

SUPPRESSION. (*Suppressio, onis.* f.; from *supprimo*, to withhold.) The total defect or non-secretion of any humour: applied to the urine when the kidneys do not separate any from the blood. See *Retention*.

SUPPURATION. (*Suppuratio, onis.* f.; from *suppuro*, to suppurate.) That morbid action by which pus is deposited in inflammatory tumours. See *Pus*.

SU'PRA. Above. This word, before any other name, implies its situation being above it; as supra-spinatus, above the spine of the scapula, &c.

Supra-costa'les. See *Intercostal muscles*.

Supra-decompo'situs. More than doubly compound: a botanical term, applied to leaves.

SUPRA-FOLIACEOUS. Situated above the leaf.

Supra-spina'tus. *Supra-spinatus seu super-scapularis*, of Cowper. A muscle of the arm, first so named by Riolanus, from its situation. It is of considerable thickness, wider behind than before, and fills the whole of the cavity or fossa that is above the spine of the scapula. It arises fleshy from the whole of the base of the scapula that is above its spine, and likewise from the spine itself, and from the superior costa. Opposite to the basis of the coracoid process, it is found beginning to degenerate into a tendon, which is at first covered by fleshy fibres, and then passing under the acromion, adheres to the capsular ligament of the os humeri, and is inserted into the upper part of the large tuberosity at the head of the os humeri. This muscle is covered by a thin fascia which adheres to the upper edge and superior part of the basis, as well as to the upper edge of the spine of the scapula. The principal use of the supra-spinatus seems to be to assist in raising the arm upwards; at the same time, by drawing the capsular ligament upwards, it prevents it from being pinched between the head of the os humeri and that of the scapula. It may likewise serve to move the scapula upon the humerus.

SURA. (An Arabian word.) 1. The calf of the leg.

2. The fibula.

SU'RCULUS. (*us, i.* m.) A term applied by botanists to the stem of mosses, or the shoot which bears the leaves. It is *simple*, in *Polytrichum*; *branched*, in *Minium androgynum*; with *branches turned downward*, in *Sphagnum palustre*; *decumbent*, *creeping*, or *erect* in other mosses.

SU'RDITAS. Deafness. See *Aphonia*, and *Paracusis*.

SURFEIT. The consequence of excess in eating or drinking, or of something unwholesome or improper in the food. It consists in a heavy load or oppression of the stomach, with nausea, sickness, impeded perspiration, and, at times, eruptions on the skin. See *Colic*.

SURGERY. See *Chirurgia*.

Surmullet. See *Mullus*.

SURTURBRAND. Fibrous brown coal, or bituminous wood, is so called in Iceland, where it occurs in great quantities.

SUS. (*Sus, suis.* m. and f.) The name of a genus of animals. Class, *Mammalia*; Order, *Belluæ*. The hog.

Sus scrofa. The systematic name of the hog, the fat of which is called lard. The flesh called pork is considered a great delicacy, especially the young and well fed, and is much used in most countries. Salted, it affords a harder food, still very nutritious to hard-working people, whose digestion is good.

Suspended animation. See *Asphyxia*.

Suspension. *Suspensio.* Hanging. See *Asphyxia*.

SUSPENSO'RIUM. (*um, ii.* n.; from

suspendeo, to hang.) A suspensory: a bag, or bandage, to suspend any part.

Suspensorium hepatis. The broad ligament of the liver.

Suspensorius testis. The cremaster muscle of the testicle.

SUSU'RRUS. (*us, i.* m.; from *susurro*, to murmur.) 1. A buzzing noise, like that of that of bees.

2. A whisper, or low tone of voice. See *Whisper*.

SU'TURA. (*a, æ.* f.; from *suo*, to join together.) A suture. 1. In *Surgery*, this term signifies the uniting the lips of a wound by sewing. *Clavata commissura*. A number of different kinds of sutures have been recommended by writers on surgery, but all of them are now reduced to two; namely, the *twisted*, and the *interrupted*, called also the *knotted suture*. The twisted suture is made in the following manner: — Having brought the divided parts nearly into contact, a pin is to be introduced from the outside inwards, and carried out through the opposite side to the same distance from the edge that it entered at on the former side; a firm wax ligature is then to be passed around it, making the figure of 8, by which the wounded parts are drawn gently into contact. The number of pins is to be determined by the extent of the wound: half an inch, or at most three quarters, is the proper distance between two pins. The interrupted suture is practised where a number of stitches is required, and the interruption is only the distance between the stitches.

2. In *Anatomy*, the word suture is applied to the union of bones by means of dentiform margins, as in the bones of the cranium. See *Temporal, sphenoidal, zygomatic, transverse, coronal, lambdoidal*, and *sagittal sutures*.

3. In *Botany*, it is applied to that part of a capsule which is a kind of furrow on the external surface, in which the valves are united. See *Capsula*.

Swallow-wort. See *Hirundinaria*.

SWAMMERDAM, John, was born at Amsterdam, in 1637. He invented the injecting the vessels with ceraceous matter, from which anatomy has derived very important advantages. In the dissection of insects, he was singularly dexterous by the aid of instruments of his own invention. In 1669 he published, in his native language, *A General History of Insects*, afterwards reprinted and translated into French and Latin, the latter with splendid figures. In 1672 another work appeared, entitled *Miraculum Naturæ*, detailing the structure of the uterus; of which there are many subsequent editions. Several of his papers, which came long after into the hands of Boerhaave, were published under the title of *Biblia Naturæ*; in which the history of bees is particularly esteemed.

SWAN. See *Cygnus*.

Swan, tame. See *Cygnus mutus*, and *Anas cygnus*.

SWEAT. See *Perspiration*.

Sweet flag. See *Acorus calamus*.

Sweet marjoram. See *Origanum majorana*.

Sweet navew. See *Brassica rapa*.

Sweet rush. See *Andropogon schænanthus*, and *Acorus calamus*.

Sweet sultan. The *Centaurea moschata*.

Sweet willow. See *Myrica gale*.

SWIETEN, Gerard Van, was born at Leyden, in 1700. He was a favourite pupil of the illustrious Boerhaave, on whose aphorisms he wrote *Commentaries*. His extensive erudition gained him the honour of being entrusted with the interests of learning in general in the Austrian dominions: he was appointed Imperial Librarian, President of the Censorship of Books, &c.; and also created a Baron of the Empire. He was likewise voluntarily enrolled in the list of almost all the distinguished literary societies of Europe. The inflexibility of his character led him to maintain a long opposition to small-pox inoculation. He died in 1772; and a statue was erected to his memory by the Empress at Vienna. His commentaries will always maintain their reputation, from the immense number of facts, well selected and well arranged, and the judicious summary of ancient and modern medical knowledge which they contain. He also published another useful work, on the *Diseases which prevail in Armies*.

SWIETE'NIA. (*a, æ.* f.; named after Van Swieten.) The name of a genus of plants. Class, *Decandria*; Order, *Monogynia*.

Swietenia mahagoni. The systematic name of the mahogany tree. The bark of the wood of this tree is of a red colour internally; has an astringent bitter taste; and yields its active matter to water. It has been prepared as a substitute for Peruvian bark, and has been used as such with advantage. Dose, half a drachm.

SWINE-POX. See *Varicella*.

SWINE-STONE. A variety of compact lucullite, a subspecies of lime-stone.

SWINGING. See *Æora*.

Sword-fish. The *Xiphias gladius*, of Linnæus; eaten by the Sicilians as a delicacy.

Sword-shaped. See *Lanceolatus*, and *Ensiformis*.

SYCO'MA. (From σνκη, a fig.) *Sycosis*. A wart or excrescence resembling a fig, on the eyelid, about the anus, or any other part.

SYCO'SIS. (*is, is.* f.; from σνκωσις, from σνκον, a fig: and so called from the granulated and prominent surface of the ulceration which takes place in the disease.) A cutaneous disease which consists of an eruption of inflamed, but not very hard tubercles, occurring on the bearded portion of the face and on the scalp, in adults, and usually clustering together, in irregular patches. Celsus has correctly stated that some difference takes place in the appearance and the progress of the eruption, when it is seated in the chin and in the scalp; whence he divides it into two species.

1. In the *Sycosis menti*, the tubercles arise first on the under lip, or on the prominent part of the chin, in an irregularly circular

cluster; but this is speedily followed by other clusters, and by distinct tubercles, which appear in succession, along the lower part of the cheeks up to the ears, and under the jaw towards the neck, as far as the beard grows. The tubercles are red and smooth, and of a conoidal form, and nearly equal to a pea in magnitude. Many of them continue in this condition for three or four weeks, or even longer, having attained their full size in seven or eight days; but others suppurate very slowly and partially, discharging a small quantity of thick matter, by which the hairs of the beard are matted together, so that shaving becomes impracticable, from the tender and irregular surface of the skin. This condition of the face, rendered rugged by tubercles from both ears round to the point of the chin, together with the partial ulceration and scabbing, and the matting together of the unshaven beard, occasions a considerable degree of deformity; and it is accompanied also with a very troublesome itching.

This form of the sycosis occurs, of course, chiefly in men; but women are not altogether exempt from it, though it is commonly slight when it appears in them. Its duration is very uncertain: it is commonly removed in about a fortnight; but sometimes the slow suppuration goes on for many weeks; and sometimes the suppurating tubercles heal, and again begin to discharge. Occasionally the disease disappears for a season, and breaks out again.

2. The *Sycosis capillitii*, is seated chiefly about the margin of the hairy scalp, in the occiput, or round the forehead and temples, and near the external ear, which is also liable to be included in the eruption. The tubercles rise in clusters, which affect the circular form: they are softer and more acuminated than those on the chin; and they all pass into suppuration in the course of eight or ten days, becoming confluent, and producing an elevated, unequal, ulcerated surface, which often appears granulated, so as to afford some resemblance to the internal pulp of a fig. The ulceration, as Celsus states, is generally humid; for there is a considerable discharge of a thin ichorous fluid, which emits an unpleasant rancid odour.

The sycosis, under its first-mentioned form, may be distinguished from acne, by its seat being exclusively on the bearded part of the face, — by the softer, more numerous, and clustered tubercles, — and by the ulceration which they tend to produce. And, under its second form, in which it is somewhat assimilated to the eruption of favous pustules, or porrigo favosa, affecting the face and the borders of the capillitium, it may be discriminated, by the tuberculated and elevated base of the suppurating tumours; not to mention the adult age of the patient, and the absence of contagion.

The cure of sycosis is generally much more easily accomplished than that of porrigo favosa; but the method of treatment required for it is not very different. When the tubercles are numerous, inflamed, and confluent, and especially when the suppuration is either beginning or considerably advanced, the most speedy benefit is derived from the application of poultices, at night, of linseed meal, bread and milk, or other simple ingredients. In the less severe forms warm ablutions or fomentations may be substituted, when the inflammatory symptoms are reduced; and in cases where they are from the first moderate, the healing process is much promoted, and the discharge moderated and restrained, by the unguentum hydrargyri nitrati, or the unguentum hydrargyri præcipitati albi, reduced with common cerate. Ointments of zinc and acetate of lead are in some cases useful. At the same time attention must be paid to the constitution, which mostly requires tonics.

SYDENHAM, Thomas, was born at Winford-Eagle, in Dorsetshire, about the year 1624. It was to febrile diseases that he particularly gave his attention, and it cost him several years to satisfy himself as to the proper mode of treating them: the result of which he published in 1666, under the title of *Methodus curandi Febres*, and again, nine years after, with additional remarks. His writings are not altogether free from hypothesis; but he seems to have been little influenced by these in his practice; and by closely observing the operations of nature, and the effects of remedies, he was enabled to introduce very essential improvements. In small-pox especially, by checking the eruptive fever by means of cool air, and other antiphlogistic means, he ascertained that the eruption and consequent danger were greatly diminished: which plan applies likewise to other eruptive and febrile diseases, as has been since determined by general experience. He was likewise very attentive to the varieties occurring, especially in febrile disorders, at different seasons, or in different years; and was led to suppose these connected with a particular constitution of the air. He had been subject, for above thirty years, to gout, and stone in the kidney, which impaired his constitution, and at last terminated his life in 1689. After his death, a manual of practice, composed for his son, was published under the title of *Processus Integri in Morbis fere omnibus curandis.* Sydenham ever maintained the character of a generous and public-spirited man: he conducted himself without that arrogance which too often accompanies original talent; and he has been universally acknowledged the first physician of his age.

Sy'lphium. Assafœtida is so termed by some writers. See *Ferula assafœtida.*

SYLVANITE. Native tellurium.

Sylvius, digestive salt of. The muriate of potash.

SY'LVIUS, Francis de le Boe, was born at Hanau, in 1614. His works were chiefly controversial tracts, in which he defended his peculiar notions.

Sylvius, James Du Bois, was born at Amiens, in 1478. His works were popular

during the reign of the old school, but are now obsolete.

SYMBLE'PHARUM. (*um, i.* n.; from συν, with, and βλεφαρον, the eyelid.) A concretion of the eyelid to the globe of the eye. This chiefly happens in the superior, but very rarely in the inferior palpebra. The causes of this concretion are a bad conformation of the parts, or from ulcers of the cornea, the membrana conjunctiva, or internal superficies of the palpebræ, or imprudent scarifications, or burns, especially if the eye remains long closed. There are two species,—the partial, and total: in the former, the adhesion is partial; in the latter, the membrana conjunctiva and cornea are concreted to the eyelid together.

SY'MBOLE. (From συμϐαλλω, to knit together.) It is said either of the fitness of parts with one another, or of the consent between them by the intermediation of nerves, and the like.

SYMBOLO'GIA. (*a, æ.* f.; from συμϐυλον, a sign, and λογος, a discourse.) The doctrine of the signs and symptoms of disease.

SYMMETRY. The exact and beautiful proportion of parts to one another.

SYMPASMA. (*a, atis.* n.; from συν, and πασσω, to sprinkle.) A dry powder, which the ancients used to sprinkle over the body. See *Catapasma.*

SYMPATHETIC. *Sympatheticus.*

1. Relating to sympathy.
2. See *Intercostal nerve.*

Sympathetic nerve. See *Intercostal nerve.*

SYMPATHY. (*Sympathia*; from συμπασχω, to suffer together, to sympathise.) All the body is sympathetically connected together, and dependent, the one part upon the rest, constituting a general sympathy. But sometimes we find particular parts more intimately dependent upon each other than upon the rest of the body, constituting a particular sympathy. Action cannot be greatly increased in any one organ without being diminished in some other; but certain parts are more apt to be affected by the derangement of particular organs than others; and it was the observance of this fact which gave foundation to the old and well-known doctrine of sympathy, which was said to proceed "*tum ob communionem et similitudinem generis, tum ob viciniam.*" It may be thought that this position of action, being diminished in one organ by its increase either in the rest or in some other part, is contradicted by the existence of general diseases or actions affecting the whole system. But in them we find, in the first place, that there is always some part more affected than the rest. This local affection is sometimes the first symptom, and affects the constitution in a secondary way, either by the irritation which it produces, or by an extension of the specific action. At other times the local affection is coeval with the general disease, and is called sympathetic. It is observed in the second place, that, as there is some part which is always more affected than the rest, so also is there some organ which has its action, in consequence of this, diminished lower than that of the rest of the system, and most commonly lower than its natural standard. From the extensive sympathy of the stomach with almost every part of the body, we find that this most frequently suffers, and has its action diminished in every disease, whether general or local, provided that the diseased action arises to any considerable degree. There are also other organs which may, in like manner, suffer from their association or connection with others which become diseased. Thus, for instance, we see, in the general disease called puerperal fever, that the action of the breasts is diminished by the increased inflammatory action of the uterus.

In consequence of this balance of action, or general connection of the system, a sudden pain, consequent to violent action of any particular part, will so weaken the rest as to produce fainting, and occasionally death. But this dependance appears more evidently in what may be called the smaller systems of the body, or those parts which seem to be more intimately connected with each other than they are with the general system. Of this kind is the connection of the breasts with the uterus of the female; of the urethra with the testicles of the male; of the stomach with the liver; and of the intestines with the stomach, and of this again with the brain; of the one extremity of the bone with the other; and of the body of the muscle with its insertion; of the skin with the parts below it.

These smaller systems, or circles, shall be treated regularly: but first it may be proper to observe, that these are not only intimately connected with themselves, but also with the general system, an universal sympathy being thus established.

That there is a very intimate connection between the breasts and uterus has been long known; but it has not been very satisfactorily explained. Fallopius, and all the older authors, declare plainly that the sympathy is produced by an anastomosis of vessels; Bartholine adding that the child being born, the blood no longer goes to the uterus, but is directed to the breasts and changed into milk. But none of all those who talk of this derivation assign any reasonable cause which may produce it.

In pregnancy, and at the menstrual periods, the uterus is active; but, when the child is delivered, the action of the uterus subsides, whilst the breasts in their turn become active, and secrete milk. If, at this time, the uterus is again put into action, that of the breasts is diminished, and the secretion of milk is destroyed, as is well illustrated by the case of inflammation of the uterus, which is incident to lying-in women. When the uterus, at the cessation of the menses, ceases to be active, or to secrete, we often find that the breasts have an action excited in them, becoming slowly inflamed, and assuming a cancerous disposition. The uterus and breasts seem to be a set of glands

balancing each other in the system, one only being naturally active, or secreting properly, at a time: and accordingly we seldom, if ever, find that when the uterus yields the menstrual discharge, the milk is secreted in perfection during the continuance of this discharge, nor do we ever find them both inflamed at the same time.

The uterus has not only this connection with the breasts, but it has also a very particular sympathy with the stomach, which again sympathises with the brain; and thus we see how a disorder of the uterus may induce an extensive series of affections, each dependent on the other.

The organs of generation in the male form, likewise, a little system, in which all the parts exhibit this sympathy with each other. They likewise give us a very good instance of the association of action, or sympathy in the common acceptation of that word.

Sympathy is divided into, first, the sympathy of equilibrium, in which one part is weakened by the increased action of another; and, secondly, the sympathy of association, in which two parts act together at the same time.

The sympathy of association is produced suddenly, and for a short time. The sympathy of equilibrium is produced more slowly, and continues to operate for a much longer time.

It is curious enough that most, or at least many, of those organs which seem to be connected by the sympathy of equilibrium exhibit, likewise, more or less of the sympathy of association, when under the circumstances in which this can take place.

The sympathy of equilibrium is seen in the effects of inflammation of the end of the urethra on the testicle, which often diminishes its action, and produces a very disagreeable sensation of dulness; or, if this inflammation be suddenly diminished, the action of the testicle is as suddenly increased, and swelling takes place. The same is seen in the connection of the urethra with the bladder and prostate gland, as is mentioned in all the dissertations on gonorrhœa. These parts likewise affect the stomach greatly, increased action in them weakening that organ much. This is seen in the effects of swelled testicle, or excessive venery, or inflamed bladder, and in a stone; all which weaken the stomach, and produce dyspepsia. The same remark applies to the kidney; vomiting and flatulence being produced by nephritis.

The sympathy of association, or an instance of sympathy in the common acceptation of the word, is likewise seen in the connection betwixt the glans and testicles in coition; but, for this purpose, the action in the glans must be sudden and of short duration; for, if continued long, weakness of the testicles, or diminished action, is induced. In those parts which exhibit this natural association of action, if the action of one part be suddenly and for a short time increased, the action of the sympathising part will likewise be increased; as we see in the instance already given of coition, and likewise in paroxysms of the stone, in which the glans penis, after making water, becomes very painful.

But if the action be more slowly induced, and continued for a long time, then this association is set aside, by a stronger and more general principle of the equilibrium of action, and the sympathising part is weakened. Hence violent inflammation of the end of the urethra produces a weakness and irritability of the bladder, dulness of the testicle, &c.

There is also an evident sympathy of equilibrium betwixt the stomach and lower tract of intestines; which two portions may be said, in general, to balance each other in the abdomen. When the action of the intestines is increased in diarrhœa, the stomach is often weakened, and the patient tormented with nausea. This will be cured, not so easily by medicines taken into the stomach, as by anodyne clysters, which will abate the action of the intestines. When the intestines are inflamed, as in strangulated hernia, vomiting is a never-failing attendant.

When, again, the stomach is inflamed, the intestines are affected, and obstinate costiveness takes place; even in hysterical affections of the stomach, the intestines are often deranged. Injections of cold water frequently relieve these affections of the stomach, by their action on the intestines.

The liver and stomach are also connected with one another. When the liver is inflamed, or has its action increased, the stomach is weakened, and dyspeptic symptoms take place. When the stomach is weakened, as, for instance, by intoxication, then the action of the liver is increased, and a greater quantity than usual of bile is secreted. The same takes place in warm climates, where the stomach is much debilitated.

If the liver has its action thus frequently increased, it assumes a species of inflammation, or becomes, as it is called, scirrhous. This is exemplified in the habitual dram-drinkers, and in those who stay long in warm countries and make free with their stomachs. The liver likewise sympathises with the brain; for when this organ is injured, and its action much impaired, as in compression, inflammation and suppuration have been often known to take place in the liver.

Besides this connection of the stomach with the liver, it is also very intimately dependent on the brain, being weakened when the action of the brain is increased; as we see in an inflammation of that organ. The brain again is affected with pain when the stomach is weakened by intoxication, or other causes; and this pain will be often relieved by slowly renewing the action of the stomach by such stimuli as are natural to it, such as small quantities of soup frequently repeated. A slight increase of action in the stomach, at least if not of a morbid kind, affects the brain so as to produce sleep, diminishing its action. This we see in

the effects of a full meal, and even of a draught of warm water. The stomach, likewise, sympathises with the throat, squeamishness and anorexia being often produced by inflammation of the tonsils. This inflammation is frequently abated by restoring or increasing the action of the stomach. Hence the throat, in slight inflammation, is frequently easier after dinner: hence, likewise, the effects of emetics in cynanche.

The extremities of bones and muscles also sympathise in the same manner. When one end of a bone is inflamed, the action of the other is lessened, and pain is produced; for a painful sensation may result both from increased and diminished action. When the tendon of a muscle is inflamed, the body of that muscle often is pained, and *vice versâ*.

Lastly, the external skin sympathises with the parts below it. If it be inflamed, as in erysipelas, the parts immediately beneath are weakened, or have their natural action diminished. If this inflammation affect the face or scalp, then the brain is injured; and headache, stupor, or delirium supervene. If it attack the skin of the abomen, then the abdominal viscera are affected, and we have vomiting and purging, or obstinate costiveness, according to circumstances. This is illustrated by the disease of children, which is called by the women the bowel-hive, in which the skin is inflamed, as they suppose, from some morbid matter within.

If the internal parts be inflamed, the action of the surface is diminished, and, by increasing this action, we can lessen or remove the disease below; as we see daily proved by the good effects of blisters. When the stomach, intestines, or kidney have been very irritable, a sinapism has been known to act like a charm; and, in the deep-seated inflammations of the breasts, bowels, or joints, no better remedy is known, after the use of the lancet, than blisters.

The utility of issues in diseases of the lungs, the liver, and the joints, is to be explained on the same principle. In these cases we find that issues do little good unless they be somewhat painful, or be in the state of healthy ulcers. An indolent flabby sore, however large the discharge (which is always thin, and accompanied with little action), does no good, but only adds to the misery of the patient. We may, however, err on the other hand, by making the issues too painful, or by keeping them active too long; for, after they have removed the inflammatory disease below, they will still operate on these parts, lessening their action, and preventing the healing process from going on properly. This is seen in cases of curvature of the spine, where, at first, the inflammation of the vertebra is diminished by the issues; but if they be kept long open after this be removed, they do harm. We often see the patient recover rapidly after his surgeon has healed the issue in despair, judging that it could do no farther service, but only increase the weakness of his patient.

It is a well-established fact, that when any particular action disappears suddenly from a part, it will often speedily affect that organ which sympathises most with the part that was originally diseased. This is best seen in the inflammatory action, which, as practical writers have well observed, occasionally disappears quickly from the part first affected, and then shows itself in some other.

From the united testimony of all these facts, Mr. Burns, of Glasgow, maintains the doctrine just delivered, and proposes to introduce it into pathological reasonings. In the whole of the animal economy we discover marks of the wisdom of the Creator, but perhaps in no part of it more than in this, of the existence of the sympathy of equilibrium; for if a large part of the system were to have its action much increased, and all the other parts to continue acting in the same proportionate degree as formerly, the whole must be soon exhausted; for increased action would require for its support an increased quantity of energy.

But upon this principle, when action is much increased in one part, it is to a certain degree diminished in some other: the general sum or degree of action in the body is thus less than it otherwise would be, and consequently the system suffers less.

SY'MPHYSIS. (*is, is.* f.; from συν, together, and φυω, to grow.) Mediate connection. A genus of the connection of bones, in which they are united by means of an intervening body. It comprehends four species; viz. synchondrosis, syssarcosis, syneurosis, and syndesmosis.

SY'MPHYTUM. (*um, i.* n.; from συμφυω, to unite: so called because it was supposed to unite and close the lips of wounds together.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the comfrey. See *Symphytum officinale.*

Symphytum maculosum. See *Pulmonaria officinalis.*

Symphytum minus. See *Prunella.*

Symphytum officinale. The comfrey. *Consolida major.* This plant, *Symphytum officinale—foliis ovatis lanceolatis decurrentibus,* is administered where the althæa cannot be obtained, its roots abounding with a viscid glutinous juice, whose virtues are similar to those of the althæa.

Symphytum petræum. See *Coris Monspeliensis.*

SYMPTOM. (*Symptoma, æ.* f.; from συμπτωμα, coincident.) A coincidence or circumstance that happens at the same time that the disease takes place: for example, a blood-vessel breaks in the windpipe, and the person coughs or hawks up blood: the disease here is the rupture of the blood-vessel, and the spitting of blood is the symptom. It is from the symptoms we become acquainted with the part of the body in which the disease is situated, and also with the nature and difference of diseases.

The symptoms of diseases are very numerous, because most of the functions of the body undergo a change when disease takes place.

Symptoms, then, are the phænomena of diseases; and every symptom is a change of action, or an unhealthy action, or læsion of a visible quality of some part of the body.

Symptoms may be arranged under three divisions, or heads:—

I. *Impaired Functions.*

To this division belongs,—

a. *In the Animal Functions.*

1. Loss of speech.
2. Incoherent speech.
3. Deliriousness.
4. Impaired memory.
5. Delusion.
6. Unsound judgment.
7. Mental extravagance.
8. Inspiration.
9. Fanaticism.
10. Sentimentalism.
11. Diminished sensibility of mind.
12. Absence of mind.
13. Wandering fancy.
14. Unnatural conscientiousness.
15. Inordinate energy of the passions of the mind.
16. Numbness, or diminished feeling of the skin.
17. Unnatural feeling.
18. Destruction of the feeling.
19. Want of taste.
20. Depraved taste.
21. Diminished smell.
22. Unnatural smell.
23. Diminished sight.
24. Lost sight.
25. Impaired sight.
26. Nearness of sight.
27. Diminished hearing.
28. Hearing destroyed.
29. False hearing.
30. Unnatural movement of the muscles.

b. *In the Animal Functions.*

1. Hoarseness.
2. Faulty articulation.
3. Want of sleep.
4. Unnatural sleep.

In the Vital Functions.

1. A frequent pulse.
2. A slow pulse.
3. A strong pulse.
4. A feeble pulse.
5. A hard pulse.
6. A soft pulse.
7. A contracted pulse.
8. An irregular pulse.
9. An intermitting pulse.
10. A rebounding pulse.
11. No pulse.
12. The action of the heart ceasing for a time.
13. A cough.
14. A difficulty of breathing.
15. Sighing.

In the Natural Functions.

1. Want of appetite.
2. A voracious appetite.
3. Sickness of stomach.
4. Depraved appetite.
5. Thirst.
6. Want of thirst.
7. A difficulty of swallowing.
8. Costiveness.
9. Relaxation of bowels.
10. Unnatural fæces.
11. Increased perspiration.
12. An expectoration.
13. An increased flow of saliva.
14. Unnatural urine.

In the Sexual Functions.

1. Unhealthy semen.
2. Unnatural emission of semen.
3. Obstructed emission of semen.
4. A want of erectile power in the penis.
5. Unnatural erection.
6. Impotence.
7. Discharge from the urethra.
8. Unnatural discharge from the vagina.
9. Suspension of menstrual discharge.
10. Painful menstruation.

II. *Change of Visible Qualities.*

To this division belongs,—

1. Pallor of the skin.
2. Preternatural redness.
3. Blueness.
4. Yellowness.
5. Tumefaction.
6. Crackling noise on pressure.
7. Fluctuation.
8. Grating of bone.
9. Grating of the teeth.
10. A sound when tapped.
11. Excess of cruor in the blood.
12. Excess of serum in the blood.
13. Too dark a colour of the blood.
14. Too florid a colour.
15. An albuminous surface of the cruor of the blood.
16. A yellow serum.
17. Dilatation of the pupil.
18. Contracted pupil.
19. A wasting of the body.
20. A wasting of a part.
21. An increased size of the body.
22. An increased size of a part.

III. *Uneasy Sensations.*

Under this division comes,—

1. Pain, or uneasy feeling.
2. Anxiety.
3. Coldness.
4. Shivering.
5. Shuddering.
6. Heat.
7. Giddiness.

According to the origin, the time of appearing, the situation, and the nature of symptoms, and other circumstances, writers have made the following distinctions:—

1. The true symptoms of the disease.
2. The symptoms of symptoms.
3. The epigenomic, or supervening symptoms.

The more trivial distinctions are divided into,—

1. Precedent.
2. Concomitant.
3. Consequent.
4. Proper.
5. Common.
6. Characteristic.
7. Primary.
8. Secondary.
9. Pathognomonic.

It is by arranging diseases together, which afford a similarity of symptoms, that nosologists form them into classes, orders, genera, species, and varieties.

SYNA'NCHE. See *Cynanche.*

SYNA'NCHICA. (From συναγχη, the quinsey: so called from its uses in that disease.) Quinsey-wort,—the *Asperula cynanchica.* Not now used.

SYNARTHRO'SIS. (*is, is.* f.; from συν, together, and αρθρον, a joint.) Immoveable connection. A genus of connection of bones, in which they are united together by an immoveable union. It has three species, viz. suture, harmony, and gomphosis.

SYNASTOMO'SIS. See *Anastomosis.*

SYNCHONDRO'SIS. (*is, is.* f.; from συν, with, and χονδρος, a cartilage.) A species of symphysis, in which one bone is united with another by means of an intervening cartilage; as the vertebræ and the bones of the pubes.

SYNCHONDROTO'MIA. (*a, æ.* f.; from συγχονδρωσις, the symphysis of the pubes, and τεμνω, to cut.) The operation of dividing the symphysis of the pubes.

SY'NCHYSUS. (*us, i.* m.; from συγχυω, to confound.) A solution of the vitreous humour into a fine attenuated aqueous fluid.

SYNCI'PITIS OSSA. See *Parietal bones.*

SY'NCIPUT. (*Syncipput,* vel *sinciput, itis.* n.) The fore-part of the head or cranium.

SY'NCOPE. (*e, es.* f.; from συν, with, and κοπτω, to cut, or strike down.) Fainting or swooning. *Animi deliquium. Leipothymia. Defectio animi. Dissolutio. Exanimatio. Asphyxia. Virium lapsus. Apopsychia. Apsychia. Ecchysis.* A disease in which the respiration and action of the heart either cease, or become much weaker than usual, with paleness and coldness, arising from diminished energy of the brain, or from organic affections of the heart. The species are:—

1. *Syncope cardiaca,* the cardiac syncope, arising without a visible cause, and with violent palpitation of the heart during the intervals, and depending generally on some organic affection of the heart or neighbouring vessels.

2. *Syncope occasionalis,* the exciting cause being manifest. The disease is sometimes preceded by anxiety about the præcordia, a sense of fulness ascending from the stomach towards the head, vertigo, or confusion of ideas, dimness of sight, and coldness of the extremities. The attacks are frequently attended with or end in vomiting, and sometimes in epileptic or other convulsions. The causes are sudden and violent emotions of the mind, pungent or disagreeable odours, derangement of the primæ viæ, debility from preceding disorders, loss of blood, spontaneous or artificial, the operation of paracentesis, &c. During the paroxysm the nostrils are to be stimulated with some of the preparations of ammonia, or these may be exhibited internally, if the patient is capable of swallowing; but when the disease has originated from large loss of blood, such stimulants must be used cautiously. When it is connected with a disordered state of the stomach, if an emetic can be given, or vomiting excited by irritating the fauces, it will probably afford relief. Sometimes sprinkling the face with cold water will recover the patient; and when there is reason for supposing an accumulation about the heart, the disease not having arisen from debilitating causes, a moderate abstraction of blood may be made with propriety. Between the fits we should endeavour to strengthen the constitution, where debility appears concerned in producing them, and the several exciting causes must be carefully guarded against. When organic affections of the heart, and parts connected with it, exist, all that can be done is, to palliate the attacks of fainting; unless the primary disease can be removed, which is extremely rare.

3. *Syncope anginosa.* The disease so named by Dr. Parry was first described by Dr. Heberden, under the name of *angina pectoris.* It is an acute constrictory pain at the lower end of the sternum, inclining rather to the left side, and extending up into the left arm, accompanied with great anxiety. Violent palpitations of the heart, laborious breathings, and a sense of suffocation, are the characteristic symptoms of this disease.—It is found to attack men much more frequently than women, particularly those who have short necks, who are inclinable to corpulency, and who, at the same time, lead an inactive and sedentary life. Although it is sometimes met with in persons under the age of twenty, still it more frequently occurs in those who are between forty and fifty. In slight cases, and in the first stage of the disorder, the fit comes on by going up-hill, up-stairs, or by walking at a quick pace after a hearty meal; but as the disease advances, or becomes more violent, the paroxysms are apt to be excited by certain passions of the mind; by slow walking, by riding on horseback or in a carriage; or by sneezing, coughing, speaking, or straining at stool. In some cases they attack the patient from two to four in the morning, or whilst sitting or standing, without any previous exertion or obvious cause. On a sudden he is seized with an acute pain in the breast, or rather at the extremity of the sternum, inclining to the left side, and extending up into the arm, as far as the insertion of the deltoid muscle, accompanied by a sense of suffocation, great anxiety, and an idea that its continuance, or increase, would certainly be fatal. In the first stage of the disease, the uneasy sensation at the end of the sternum, with the other unpleasant symp-

toms, which seemed to threaten a suspension of life by a perseverance in exertion, usually go off upon the person's standing still, or turning from the wind; but, in a more advanced stage, they do not so readily recede, and the paroxysms are much more violent. During the fit, the pulse sinks, in a greater or less degree, and becomes irregular; the face and extremities are pale, and bathed in a cold sweat; and, for a while, the patient is perhaps deprived of the powers of sense and voluntary motion. The disease having recurred more or less frequently during the space of some years, a violent attack at last puts a sudden period to his existence. Angina pectoris is attended with a considerable degree of danger; and it usually happens that the person is carried off suddenly. It mostly depends upon an ossification of the coronary arteries, and then we can never expect to effect a radical cure. During the paroxysms, considerable relief is to be obtained from fomentations, and administering powerful antispasmodics, such as opium and æther combined together. The application of a blister to the breast is likewise attended sometimes with a good effect. As the painful sensation at the extremity of the sternum often admits of a temporary relief, from an evacuation of wind by the mouth, it may be proper to give frequent doses of carminatives, such as peppermint, caraway, or cinnamon water. Where these fail in the desired effect, a few drops of ol anisi, on a little sugar, may be substituted.

With the view of preventing the recurrence of the disorder, the patient should carefully guard against passion, or other emotions of the mind: he should use a light generous diet, avoiding every thing of a heating nature; and he should take care never to overload the stomach, or to use any kind of exercise immediately after eating. Besides these precautions, he should endeavour to counteract obesity, which has been considered as a predisposing cause; and this is to be effected most safely by a vegetable diet, moderate exercise at proper times, early rising, and keeping the body perfectly open. It has been observed that angina pectoris is a disease always attended with considerable danger, and, in most instances, has proved fatal under every mode of treatment. We are given, however, to understand, by Dr. Macbride, that, of late, several cases of it have been treated with great success, and the disease radically removed, by inserting a large issue in each thigh. These, therefore, should never be neglected. In one case, with a view of correcting or draining off the irritating fluid, he ordered, instead of issues, a mixture of lime-water with a little of the spiritus juniperi comp., and an alterative proportion of Huxham's antimonial wine, together with a plain, light, perspirable diet. From this course the patient was soon apparently mended; but it was not until after the insertion of a large issue in each thigh that he was restored to perfect health.

SYNDESMOLO'GIA. (*a, æ.* f.; from *συνδεσμος*, a ligament, and *λογος*, a discourse.) The doctrine of the ligaments.

SYNDESMO-PHARYNGEUS. See *Constrictor pharyngis medius.*

SYNDESMO'SIS. (*is, is.* f.; from *συνδεσμος*, a ligament.) That species of symphysis, or mediate connection of bones, in which they are united by ligament, as the radius with the ulna.

SYNDE'SMUS. (*us, i.* m.; from *συνδεω*, to bind together.) A ligament.

SYNE'CHIA. (*a, æ.* f. *Συνεχια.*) A concretion of the iris with the cornea, or with the capsule of the crystalline lens. The remote causes are, a collapse of the cornea, a prolapse of the iris, a swelling or tumefied cataract, hypopium, or original formation.

SYNEURO'SIS. (*is, is.* f.; from *συν*, with, and *νευρον*, a nerve: because the ancients included membranes, ligaments, and tendons under the head of nerves.) A species of symphysis, in which one bone is united to another by means of an intervening membrane.

SYNGENE'SIA. (*a, æ.* f.; from *συν*, together, and *λγενεσις*, generation.) The name of a class of plants, in the sexual system of Linnæus, consisting of plants in which the anthers are united into a tube, the filaments on which they are supported being mostly separate and distinct. The flowers are compound.

SYNIZE'SIS. (*is, is.* f.; from *συνιζω*, *consido, coëo, coalesco,* to meet.) Closed pupil. A perfect concretion and coarctation of the pupil. It is known by the absence of the pupil, and a total loss of vision. The species are:—

1. *Native,* with which infants are sometimes born.

2. *Simple,* the pupil being closed or obliterated from a gradual contraction, and, at length, coalition of the muscular fibres of the iris, unattended by any other change or impairment of the eye.

3. *Accidental,* from an inflammation or exulceration of the uvea or iris, or from a defect of the aqueous or vitreous humour.

4. *Complicate,* or that which is complicated with some other ocular disease. Medicines are only serviceable in the simple species, in which the tincture of belladonna often effects a cure; and application, also, of stimulating solutions, as sulphate of zinc, dilute alkohol, æther, &c. When these are of no service, an artificial pupil may be made, either by excision, incision, or separation, according to the appearance of the closure.

SYNO'CHA. (*a, æ.* f.; from *συνεχω*, to continue.) See *Inflammatory fever.*

SYNOCHUS. (*us, i.* m.; from *συνεχω*, to continue.) See *Mixed fever.*

SYNO'VIA. (*a, æ.* f.; a term of no radical meaning, coined by Paracelsus.) An unctuous fluid secreted from certain glands in the joint in which it is contained. Its use is to lubricate the cartilaginous surfaces of the articulatory bones, and to facilitate their motions.

SYNOVIAL. *Synovialis.* Of or belonging to the synovia, or fluid of the joints.

Synovial glands. *Glandulæ synoviales.* The assemblage of a fatty fimbriated structure within the cavities of some joints.

SYNTENO'SIS. (*is, is.* f.; from συν, with, and τενων, a tendon.) A species of articulation where the bones are connected together by tendons.

SYNTE'XIS. (From συντηχω, to dissolve.) A marasmus or wasting of the body.

SY'NTHESIS. (*is, is.* f.; from συντιθημι, to compose.) Combination. See *Analysis.*

Syntheti'smus. (From συνθεω, to concur.) The reduction of a fracture.

Synulo'ticus. (From συνουλοω, to cicatrise.) That which assists in healing a wound. Having a healing property when applied to wounds.

SY'PHILIS. (The name of a shepherd, who fed the flocks of king Alcithous, who, proud of their number and beauty, insulted the sun; as a punishment for which, fable relates, that this disease was sent on earth; or from σιφλος, filthy.) The venereal disease; called *Lues venerea, Morbus Gallicus, Aphrodisius morbus, Morbus Indicus, Morbus Neapolitanus,* and *Patursa.* Towards the close of the memorable fifteenth century, about the year 1494 or 1495, the inhabitants of Europe were greatly alarmed by the sudden appearance of this disease. The novelty of its symptoms, and the wonderful rapidity with which it was propagated throughout every part of the known world, soon made it an important object of medical enquiry.

In common language, it is said a person has syphilis, or is poxed, when the venereal poison has been received into, or is diffused through, the system, and there produces its peculiar effects, as ulcers of the mouth or fauces, spots, tetters, and ulcers of the skin, pains, swelling, and caries of the bones, &c. But as long as the effects of the poison are local, and confined to or near the genitals, the disorder is not called syphilis, lues venerea, nor pox; but distinguished by some particular name, according to its different seat or appearance; such as gonorrhœa venerea, chancre, or bubo.

The venereal disease is always produced by a poison. Concerning the nature of this poison, we know no more than we do about that of the small-pox or any other contagion: we know only that it produces peculiar effects. The smallest particle of this poison is sufficient to bring on the most violent disorder over the whole body. It seems to spread and diffuse itself by a kind of fermentation and assimilation of matter; and, like other contagions, it requires some time, after being applied to the human body, before it produces that effect. It is not known whether it has different degrees of acrimony and volatility, or whether it is always the same in its nature, varying only with regard to the particular part to which it is applied, or according to the different habit and constitution or particular idiosyncrasy of the person who receives the infection. We know that mercury possesses a certain and specific power of destroying the venereal virus; but we are quite uncertain whether it acts by a sedative, astringent, or evacuant quality; or, which is not unlikely, by a chemical elective attraction, whereby both substances uniting with one another are changed to a third, which is no more hurtful, but has some new properties entirely distinct from those which any of them had before they were united. The variolus miasma, we know, produces its effects in about twenty or twenty-four days after the infection is received from the atmosphere, and eight or ten days if by inoculation, but the venereal virus seems to keep no particular period. At some times, and, perhaps, in particular persons, Dr. Swediaur has seen chancres arise in the space of twelve hours, nay, in a still shorter time, indeed he mentions in a few minutes, after an impure coition; whereas, in most cases, they make their appearance only in as many days. The generality of men feel the first symptoms of a clap between the second and fifth days after an impure coitus; but there are instances where they do not appear till after as many weeks or months. Dr. S. was consulted by a young man, who was seized with a violent discharge from the glans along with a phimosis, but without any chancres, four weeks after coition; and during all the interval he felt not the least symptom of the disease. Some years ago, a gentleman went out from London, in seemingly perfect health, to the East Indies; but on his arrival in that hot climate, after a voyage of four months, a violent clap broke out before he went on shore, though he could have received no infection during the voyage, as there was not a woman on board. There are instances which render it probable that the virus may lie four, five, or six weeks, and perhaps longer, on the surface of the genitals before it is absorbed; and were it not then to produce a chancre, might probably not be absorbed at all. We see daily examples where common women communicate the infection to different men in the space of several weeks, while they themselves have not the least symptom of syphilis, local or universal, the poison lying all that time in the vagina harmless, and generally without being absorbed. How long the venereal virus may lurk in the body itself, after it has been absorbed into the mass of blood, before it produces any sensible effect, is a matter of equal uncertainty. There is scarcely a practitioner who has not observed instances of its remaining harmless for weeks or even months in the body. Dr. Swediaur had a case, where, after lying dormant for half a year, it broke out with unequivocal symptoms. But the following instance, if to be depended upon, is still more extraordinary:—

Some years ago, says the above writer, I was consulted by a gentleman about a sore throat, which I declared to be venereal. My

patient was astonished; and assured me that for nine years past he had not had the least venereal complaint, nor had he any reason to believe he had since received any infection; but that he had been in the East Indies, where he was affected with a violent clap. On his return to Europe, being to appearance in good health, he married, and continued perfectly free of any such complaint ever since. By a mercurial course, however, the complaint for which he applied to me was completely removed. With regard to its effects, the venereal poison follows no constant rule: for though, in general, it affects first the throat, where it produces ulcerations, in others it exerts its virulence on the skin or bones. Whilst the greatest part of mankind are thus easily affected by this poison, there are some few who seem to be altogether unsusceptible of the infection: as happens equally with the variolous contagion, though they go into infected places, and expose themselves to inoculation or every hazard by which the disease is generally communicated.

Some persons are more liable than others to be infected who are seemingly of the same habit; nay, the very same person seems to be more liable to be infected at one time than at another, and those who have been once infected seem to be more liable to catch the infection a second time than those who never were infected before with the disease. The climate, season, age, state of health, idiosyncrasy, are, perhaps, as in other diseases, the necessary predisposing causes. The same difference is observable in the progress made by the disease after the patient is infected. In some the progress is slow, and the disease appears scarcely to gain any ground, while in others it advances with the utmost rapidity, and speedily produces the most terrible symptoms. Whether the venereal poison can be absorbed into the system, without a previous excoriation or ulceration of the genitals, or some other parts of the surface of the body, is still a matter of doubt. Several cases, however, have occurred which render it highly probable, if not certain, that the poison really is now and then absorbed, without any previous excoriation or ulceration whatsoever, and thus produces buboes and other venereal symptoms in the body.

It has been asserted by the earliest and even by some late writers, that it may be caught by lying in the same bed, or living in the same room, with or after an infected person. What may have been the case at the commencement of the disease, cannot be said; but the most accurate observations and experiments which have been made upon the subject, do not confirm this to be the case in our times. Nor are nurses infected in the Lock Hospital, where they live night and day with patients in all stages of the distemper. The fact seems to be, that patients in our times are apt to impose upon themselves, or upon physicians and surgeons, with regard to this matter; and the above opinion easily gains ground among the vulgar, especially in countries where people are more influenced by prejudices, superstition, servile situation in life, or other circumstances. Hence, we sometimes hear the most ridiculous accounts given in those countries by friars and common soldiers, of the manner by which they came to this disorder: such as piles, gravel, colics, contusions, fevers, little-houses, lying in suspected beds, or lying in bed with a suspected person, retention of the semen, coition with a woman in menstruation, the use of cider, bad wine or beer, &c.

Another question undecided is, whether the venereal poison ever infects any fluid of our body, besides those of the mucous and lymphatic system? Does the venereal poison in an infected woman ever affect the milk, and consequently can the infection be conveyed to the infant by the milk alone, without any venereal ulcer on or about the nipples? It is equally a matter of uncertainty whether the venereal disease is ever conveyed from an infected father or mother, by coition, to the fœtus, provided their genitals are sound; or whether a child is ever affected with venereal symptoms in the uterus of an infected mother. Such infected infants as came under the observation of Dr. Swediaur, or of his friends, whose practice afforded them frequent opportunities of seeing new-born infants, seemed rather to militate against the opinion. Neither he nor any of them have ever been able to observe ulcerations or other symptoms of a venereal kind upon new-born children; and, such as make their appearance four, six, or eight, or more days afterwards, on the genitals, anus, lips, mouth, &c. may rather be supposed to arise by infection during the passage from ulcers in the vagina of the mother, the skin of the infant being then nearly in as tender a state as the glans penis, or the labia; and this perhaps at the time when an absorption of the venereal poison might more easily take place without a previous excoriation, or ulceration of the skin. All the ways, therefore, by which the venereal poison is communicated from an unhealthy to a healthy person, may be reduced to the following heads:—

1. By the coition of a healthy person with another who is infected with venereal disease of the genitals.

2. By the coition of a healthy person with another, apparently healthy, in whose genitals the poison lies concealed, without having yet produced any bad symptom. Thus a woman who has perhaps received the infection from a man two or three days before, may, during that time, infect, and often does infect, the man or men who have to do with her afterwards, without having any symptoms of the disease visible upon herself; and, *vice versâ*, a man may infect a woman in the same manner. Such instances occur in practice every day.

3. By sucking. In this case the nipples of the wet-nurse may be infected by venereal

ulcers in the mouth of the child; or, *vice versâ*, the nipples of the nurse being infected, will occasion venereal ulcers in the child's nose, mouth, or lips. It is uncertain, as mentioned above, whether the venereal poison was ever propagated by means of the milk from the breast.

4. By exposing to the contact of venereal poison any part of the surface of the body, by kissing, touching, &c., especially if the parts so exposed have been previously excoriated, wounded, or ulcerated by any cause whatever. In this manner we frequently see venereal ulcers arise in the scrotum and thighs; and there are some well-attested instances where the infection took place in the fingers of midwives or surgeons. Several instances are recorded of venereal ulcers in the nostrils, eyelids, and lips of persons who had touched their own genitals, or those of others, affected at the time with local venereal complaints, and then rubbed their nostrils, &c. with the fingers, without previously washing the hands. There was some years ago, in London, a melancholy example of a young lady, who, after having drawn a decayed tooth, and replaced it with one taken immediately from a young woman, apparently in perfect health, was soon after affected with an ulcer in the mouth. The sore manifested symptoms of a venereal nature; but such was its obstinacy, that it resisted the most powerful mercurial remedies, terminating at last in a caries of the maxilla, with a most shocking erosion of the mouth and face, by which the unhappy patient was destroyed. During all this, however, we are informed that not the smallest venereal symptom was perceived in the woman from whom the sound tooth was procured.

5. By wounding any part of the body with a lancet or knife infected with the venereal virus. In this instance there is a similarity between the venereal poison and that of the small-pox. There are several examples of the latter being produced by bleeding with a lancet which had been previously employed for the purpose of inoculation, or of opening variolous pustules, without being properly cleaned afterwards. In Moravia, in the year 1577, a number of persons who assembled in a house for bathing, had themselves, according to the custom of that time, scarified by the barber, were all of them infected with the venereal disease, and treated accordingly. Krato, the physician, and Jordan, who gave a description of this distemper, are both of opinion that it was communicated by means of the scarifying instrument; and Van Swieten relates several instances where the lues was communicated by a similar carelessness in cleaning the instrument used in bleeding or scarification.

The venereal poison applied to the urethra and vagina produce a clap. See *Gonorrhœa.* Coming into contact with other parts, it produces a chancre or bubo, and constitutional symptoms. Chancre is the primary and immediate consequence of inoculation with true venereal matter in any of the ways which have been mentioned, and may arise in any part of the human body: but it generally shows itself in the pudenda, because the infecting medium is there first taken up in the one sex, and communicated by contact to the other. It is not, however, peculiar to these parts, for whenever the same kind of fluid is applied to a scratch on the hand, finger, lip, or nipple, the same consequence will follow. There can be no doubt but that the slightest abrasion possible, or breach of the cuticle, is sufficient to give a speedy admission to this destructive poison. A chancre makes its appearance either with a slight inflammation, which afterwards ulcerates, or there arises a small pimple or pustule filled with a transparent fluid, which soon breaks and forms into a spreading ulcer. The period at which it makes its appearance after infection is very various, being most commonly in five or six days, but in some cases not till after the expiration of as many weeks. There is both a local and general predisposition to chancres: Jews and Mahomedans, from the constant exposure of the glans and loss of the prepuce, have the cuticle of the glans penis of much firmer texture than those who have not been circumcised; and they are, from this circumstance, much less subject to chancres than the rest of mankind. For the same reason they who, from the shortness of the prepuce, generally keep the glans uncovered, are not so liable to the diseases as those who have long narrow preputia; for persons thus formed constantly keep the surface of the glans and prepuce moist and tender, and are very liable to abrasions and to excoriations.

There is an intermediate state of the venereal disease between a local and constitutional affection, which arises from the absorption of venereal matter from some surface to which it has been applied. The glands situated nearest the parts thus affected are apt to become swelled and inflamed, so as to give rise to what is termed *bubo;* and the parts of generation usually coming first in contact with the matter, so the glands in the groin generally afford this particular symptom. In most cases the venereal virus is absorbed from a chancre or an ulcer in the urethra; but instances have occurred where a bubo has arisen without either gonorrhœa or any kind of ulceration, and where the matter appears to have been absorbed without any erosion of the skin or mucous membrane.

A bubo comes on with a pain in the groin, accompanied with some degree of hardness and swelling, and is at first about the size of a kidney-bean, but continuing to increase, it at length becomes as large as an egg, occasions the person to experience some difficulty in walking, and is attended with a pulsation and throbbing in the tumour, and a great redness of the skin. In some cases the suppuration is quickly completed, in others it goes on very slow, and in others again the

inflammatory appearances go off without any formation of pus. In a few instances the glands have been known to become scirrhous. The following are the characteristics of a venereal bubo. The swelling is usually confined to one gland; the colour of the skin, where inflammation prevails, is of a florid red; the pain is very acute; the progress from inflammation to suppuration and ulceration is generally very rapid; the suppuration is large in proportion to the size of the gland; and there is only one abscess.

A bubo is never attended with danger, where the inflamed gland proceeds on regularly to suppuration, but in particular cases it acquires an indolence after coming to a certain length, arising from a scrofulous taint; or, by being combined with erysipelas, it terminates in grangene, and occasions a great loss of substance. This termination is, however, more frequently met with in hospitals than in private practice, and may partly be attributed to the contaminated state of the air of the wards wherein venereal patients are lodged.

A constitutional taint is the third form under which it has been mentioned that the venereal poison is apt to show itself, and which always arises in consequence of the matter being absorbed and carried into the circulating mass of fluids. The absorption of it may, however, take place in three ways:

1st, It may be carried into the circulation, without producing any evident local effect on the part to which it was first applied.

2dly, It may take place in consequence of some local affection, such as either gonorrhœa, chancre, or bubo. And,

3dly, It may ensue from an application of the matter to a common sore or wound, similar to what happens in inoculating for the small-pox.

The most general way, however, in which a constitutional taint is produced, is by an absorption of the matter, either from a chancre or a bubo.

When venereal matter gets into the system, some symptoms of it may often be observed in the course of six or eight weeks, or probably sooner; but, in some cases, it will continue in the circulating mass of fluids for many months before any visible signs of its effects are produced. The system being completely contaminated, it then occasions many local effects in different parts of the body, and shows itself under a variety of forms, many of which put on the appearance of a distinct disease. We may presume that this variety depends wholly on the difference of constitution, the different kind of parts affected, and the different state these parts were in at the time the matter or poison was applied.

The first symptoms usually show themselves on the skin, and in the mouth or throat. When on the skin, reddish and brownish spots appear here and there on the surface, and eruptions of a copper colour are dispersed over different parts of the body, on the top of which there soon forms a thick scurf or scale. This scurf falls off after a short time, and is succeeded by another; and the same happening several times, and at length casting off deep scabs, an ulcer is formed which discharges an acrid fœtid matter. When the matter is secreted in the glands of the throat and mouth, the tongue will often be affected, so as to occasion a thickness of speech, and the tonsils, palate, and uvula will become ulcerated, so as to produce a soreness and difficulty of swallowing, and likewise a hoarseness in the voice. In a venereal ulcer of the tonsil, a portion of it seems as if it was dug out; it is, moreover, very foul, and has a thick white matter adhering to it, which cannot be washed off. By these characteristic marks it may, in general, readily be distinguished from any other species of ulceration in these parts.

If the disease affects the eyes, obstinate inflammation, and sometimes ulceration, will also attack these organs.

The matter sometimes falls on deep-seated parts, such as the tendons, ligaments, and periosteum, and occasions hard, painful swellings to arise, known by the name of nodes.

When the disease is suffered to take its own course, and not counteracted by proper remedies, the patient will, in the course of time, be afflicted with severe pains, but more particularly in the night-time; his countenance will become sallow, his hair will fall off, he will lose his appetite, strength, and flesh, his rest will be much disturbed by night, and a small fever of the hectic kind will arise. The ulcers in the mouth and throat being likewise suffered to spread, and to occasion a caries of the bones of the palate, an opening will be made from the mouth to the nose, and the cartilages and bones of the nose being at length corroded away, this will sink on a level with the face. Some constitutions will bear up for a considerable time against the disease, whilst others again will soon sink under a general weakness and irritation produced by it. If the disorder is recent, and the constitution not impaired by other diseases, a perfect cure may easily be effected; but where it is of long standing, and accompanied with the symptoms of irritation which have been mentioned, the cure will prove tedious, and in many cases uncertain, as the constitution and strength of the patient may not admit of his going through a course of medicine sufficient to destroy the poison; or his health may be in such a state, as that only a very small quantity of mercury can be administered even at considerable intervals.

The medicines which have been found most serviceable in curing this disease, or arresting its progress, are narcotics, diluent diaphoretics, diuretics, drastic purgatives, and those which introduce a large portion of oxygene into the system. Practitioners having directed their attention at different times to rendering the vascular fibres inirritable to the specific acrimony of the disease, to expelling it by

some of the emunctories opening externally, or to dulcifying it by a chemical combination.

Of the narcotics, recourse has been chiefly had to opium, conium, solanum, and belladonna, manifestly upon the principle of their being sedatives, and hence rendering the system inirritable to the syphilitic virus. This some of them accomplish in a very considerable and desirable degree; and particularly opium, which has been mostly trusted to, and tried upon a wider scale than any of the rest. It moderates and alleviates every symptom; and, from a cause not well ascertained, may be taken in very large doses, with less inconvenience in syphilis than in almost any other disease. From its palliative effects, it has been supposed by many practitioners capable of producing a radical cure; and numerous accounts to this purpose have been published by those whose judgments have been unduly prejudiced in its favour. Narcotics in general, and opium beyond the rest, add considerably to the efficacy of other means, and particularly of mercury; but of themselves they are not competent to remove the complaint, and consequently are not to be depended upon.

The list of warm and diluent diaphoretics are very extensive; but it may be sufficient to enumerate the following: —mezereon, guaiacum, sarsaparilla.

All these are supposed to be serviceable by exciting a determination to the skin, and throwing off the syphilitic poison, as various other poisons are thrown off, from the surface: and in very warm climates many of them are said to operate a radical cure; though the statements to this effect are rarely such as we can depend upon.

They have all had their trial, and the only one at present in much request is sarsaparilla, of the actual amount of whose virtues it is difficult to speak with precision. See *Smilax sarsaparilla.*

Of the antisyphilitics, whose influence seems to depend on their being loaded with oxygene, the principal are the mineral acids, and the metallic oxides.

Of the first, the nitric has chiefly been made a subject of experiment in our own country, though the sulphuric has been employed abroad. How far it exercises a chemical power upon the syphilitic virus, and forms a new and blander substance with it, is uncertain. Its general effects are, as we might expect them to be, tonic and sedative: whence the appetite is increased, a greater rigidity or firmness is given to the living fibre, and a greater density to the coagulable lymph; the action of the bowels, and even of the bladder, being diminished. Besides these, it has a particular effect on the mouth, approaching to that of ptyalism; for the gums are rendered slightly sore, the mouth and tongue become moist, and in India, and other warm climates, a real salivation is said to ensue. Under this change the syphilitic symptoms assume a better appearance, and especially those that belong to the primary set: but we have no decided case in which a perfect cure has been accomplished in our own country; though Dr. Scott affirms that in India this has been common. He was in the habit of employing the nitric and muriatic acids; and with the internal use of these he combined that of the acid bath. His object was to effect a cure without incurring any of the evils so frequent upon a mercurial course; and to this object the proposed plan has, in his opinion, given complete success. It would have been happy for the world if this success had been permanent and universal; but the plan has since fallen in its reputation, not much less in India than in Europe.

The metallic oxides have offered a large field for experiment, but little good has arisen from their employment.

The only metal, and indeed the only medicine, on which we can confidently rely for a perfect cure of syphilis in all its stages in our own climate, is mercury.

This has been tried from an early period in almost every variety of preparation; and, provided a sufficiency of it is introduced into the system, in every variety it has been found to succeed: so that in the present day the peculiar form is regarded of less importance than on its first use; though we may observe that it seems to be most rapidly efficacious in those forms that introduce the largest proportion of oxygene into the system. And as it operates chiefly, like most other medicines, through the medium of circulation, when it once becomes mixed with the current of the blood, it is equally efficient in the cure of a recent chancre and a chronic ulceration of the throat.

Mercury is an universal stimulant, and increases the action of all the secretories at one and the same time; for it operates simultaneously on the intestines, the skin, the salivary glands, and even the bladder; though it displays itself chiefly by its action on the salivary glands. It has also, when given in moderate doses, considerable pretensions to a tonic power, though this is overwhelmed by its stimulant effects when the dose is considerably increased. It seems therefore to unite most of the virtues of the preceding remedies, excepting the sedative; and hence it is greatly improved by the addition of opium and camphire, which give it the quality it stands in need of.

Independently, however, of its combining in itself many of the virtues of the preceding remedies, mercury seems also to possess some specific virtue unknown to the rest; for we can associate all the general qualities by a combination of different medicines without producing the same result. Mercury, indeed, to these general qualities adds that of peculiarly stimulating the salivary glands, which the other remedies employed in syphilis do not at all, or never in an equal degree: but that its specific power as an antidote does not depend upon its being a sialagogue is clear, because while it has sometimes excited salivation

without effect, it has at other times produced a perfect cure without any salivation whatever; for in some idiosyncrasies the salivary glands are not affected by its irritation.

It is not only an evacuant but an antidote. By what means, however, it becomes an antidote, or exerts its specific power, we know not. The matter of a chancre, mixed up with a quantity of Plenck's gummy solution of mercury, has been applied to a sound person without occasioning either a chancre or any other syphilitic symptoms. And it has hence been supposed that mercury neutralises the syphilitic virus, and produces a third and harmless substance; as it has been further supposed that it is by the disengagement of the oxygene which the various preparations of mercury introduce into the system that this effect is accomplished. All this is ingenious, and may be true, but the evidence does not come home to the conclusion. Even the experiment with chancrous matter and the mercurial solution has not been satisfactorily performed; and if the result were as here stated, the matter, while it has no power of assimilating the solution into its own nature, as it has the fluids of the human body, may only have been rendered inert by simple dilution.

Provided a sufficient quantity of mercury be introduced into the system, the particular preparation is of no great importance. Van Swieten preferred the oxymuriate, and every one followed his example. The calcined mercury came next into popularity, and triumphed over every other form. It was the leading article of most of the secret remedies that were sold for the complaint, and especially of Keyser's pills, the receipt for which was purchased with great formality by the French government.

In our own country, it is now most usual to employ the mercurial pill, or calomel, either alone or together with mercurial ointment. Yet, whatever plan is preferred, much caution is necessary in carrying it into effect; for the older practitioners, who employed larger doses, did as much mischief to the constitution by the antidote as it had received by the infection. If calomel be employed, about two grains a day will be sufficient, guarded when necessary by a grain of opium; and if the ointment be preferred, half a drachm of the strong mercurial ointment may be rubbed in night and morning. If the disease be not severe or of long standing, it will not be necessary, with a little management, to produce salivation, which in most instances may be regarded only as a test that the system is thoroughly impregnated with the medicine: but in chronic cases we ought not to be satisfied without it.

In all cases of its use, but particularly in cases of salivation, care should be taken to avoid cold, and flannel should be worn next the skin; for it is important that the excretories should harmonise in an increased defluxion. It is also of importance that the diet be light and simple, as the pulse is usually accelerated, and, by a stimulating regimen, would be so much quickened as to do serious mischief. Mr. Hunter lays no stress upon this point, but it ought by no means to be neglected.

If a bubo have formed in the groin, the mercurial ointment is best rubbed in a little below it, as it would increase the inflammation if applied to the tumour itself. In about a week or ten days, the mouth will become slightly sore, when the further use and proportion of the ointment or other preparation must be regulated by the violence or duration of the complaint. Where salivation is determined upon, the flux should be suffered to continue for about a month.

An injudicious use of mercury, or indeed any use of it, in highly irritable habits, will sometimes excite a very troublesome erythema that spreads itself in trails or patches over the whole surface; commonly, however, commencing about the genitals, and lower limbs. It is accompanied with a painful tenderness and itching of the skin, and, as the erythema meanders onward, the trails or patches first observed heal as new ones make their appearance. Mercury must in this case be desisted from, the bowels be loosened by some gentle aperient, and the irritability opposed by sedative and mild cardiacs, as camphire, guaiacum, and sarsaparilla, and particularly by the mineral acids.

Syphilis indica. See *Frambœsia.*

SYPHILOID. (*Syphiloides;* from *syphilis,* and εἶδος, resemblance.) Like unto syphilis. The name of a disease which resembles syphilis. There are many diseases which have a close resemblance to the venereal in its primary and constitutional forms: these have all been called syphiloid. The principal of this family of diseases is the pseudo-syphilis, or bastard pox, of Hunter and Abernethy.

It mostly commences with symptoms, though not always: but the local symptoms have a less resemblance to those of genuine syphilis than the constitutional by which they are succeeded. A few foul and highly irritable sores are unexpectedly discovered on the genitals, commonly larger than chancres, and less thickened than indurated, about the size of a sixpence, and frequently sprouting with fungous granulations. Rarely, but very rarely, they have the guise of a true chancre. These are sometimes succeeded by buboes, and sometimes not. And, where buboes take the lead, they run their course more rapidly, and with more violent inflammation, than in the true disease, and spread to a greater number of circumjacent glands. These often heal by the ordinary means without mercury, or constitutional symptoms of any kind. But not unfrequently, in a few weeks or months, they are followed by a soreness and ulceration of the tonsils, copper-coloured spots over the body, and nodes or swellings of the periosteum in various bones; and sometimes these symptoms change their order of succession, or appear single.

In a few instances, the constitutional symptoms take the lead, and the local follow. In all these cases, the virus seems to be more active and irritating than that of genuine syphilis; but which, while it pursues, though with much irregularity, the same general path, runs through its course much quicker, and is more effectually coped with by the natural strength, or remedial instinct of the constitution. And hence, all that we are here called upon to do in the way of treatment is, to support the general vigour, and second the instinctive effort. This is best to be accomplished by tonics and gentle stimulants, and, where necessary, by sedatives. The mineral acids are the best means of supplying the first intention; camphire, the decoction of the woods, and the compound calomel pill, where small doses of mercury do not irritate, the second; and opium the third: though to this last it will rarely be necessary to have recourse at all.

The distinction between syphyloid affections and genuine syphilis is frequently difficult, but of importance: since, as a full use of mercury seldom seems to do good, and often does serious mischief in the former, such a plan has a chance of overwhelming the constitution with a second disorder instead of freeing it from a first.

Syriæ oleum. A fragrant essential oil, obtained by distilling the canary balsam plant, or moldavica.

Syrian herb mastich. See *Teucrium.*

SYRI'GMUS. See *Paracusis.*

SYRI'NGA. (*a, æ.* f.; from συριγξ, a pipe: so called because from its branches pipes were made after the removal of the pith.) The pipe-tree.

SYRI'NGMOS. See *Paracusis.*

Syringo'tomum. (From συριγξ, a fistula, and τεμνω, to cut.) An instrument to cut fistulas.

SY'RINX. (*x, gis.* f. A Hebrew word.) A pipe. A syringe. A fistula.

Syrmai'smus. (From συρμαιζω, to evacuate.) A gentle evacuation by vomit or stool.

SYRUP. See *Syrupus.*

SYRU'PUS. (*us, i.* m. *Serab,* a potion, Arabian.) The name syrup is given to sugar dissolved in water; and in the present Pharmacopœia this is termed simple syrup. See *Syrupus simplex.*

Syrups are generally made with the juice of vegetables or fruits, or by adding vegetable extracts or other substances. To keep syrups without fermenting, it is necessary that their temperature should be attended to, and kept as near 55° as possible. A good cellar will answer this purpose; for there are few summers in which the temperature of such a place rises to 60°.

Syrupus aceti. Sugar and vinegar. A refrigerating syrup. See *Oxymel.*

Syrupus althææ. Syrup of marshmallow. *Syrupus ex althæâ. Syrupus de althæâ.* Take of the fresh root of marshmallow, bruised, half a pound; refined sugar, two pounds; water, a gallon. Boil down the water with the marshmallow root to half, and press out the liquor when cold. Set it by for twenty-four hours, that the feculencies may subside; then pour off the liquor, and, having added the sugar, boil it down to a proper consistence. An emollient and demulcent; mostly given to allay tickling coughs, hoarseness, &c. in conjunction with other remedies.

Syrupus aurantii. Syrup of orange. *Syrupus corticis aurantii. Syrupus è corticibus aurantiorum. Syrupus de cortice aurantiorum.* Take of fresh orange-peel, two ounces; boiling water, a pint; refined sugar, three pounds. Macerate the orange-peel in the water for twelve hours in a covered vessel; then pour off the liquor, and add the sugar. A pleasant bitter and stomachic.

Syrupus caryophylli rubri. A warm and stimulating syrup.

Syrupus colchici. An acrid and diuretic compound, given in dropsies.

Syrupus corticis aurantii. See *Syrupus aurantii.*

Syrupus croci. Syrup of saffron. Take of saffron, an ounce; boiling water, a pound; refined sugar, two pounds and a half. Macerate the saffron in the water for twelve hours in a covered vessel; then strain the liquor, and add the sugar. This imparts a beautiful colour to liquids, and is sometimes employed as a cordial. Amongst the vulgar, syrup of saffron is in high esteem in measles, small-pox, &c.

Syrupus limonum. Syrup of lemon. *Syrupus succi limonis. Syrupus è succo limonum. Syrupus è succo citrorum.* Take of lemon-juice, strained, a pint; refined sugar, two pounds. Dissolve the sugar in the lemon-juice in the manner directed for simple syrup. A very pleasant, cooling, and acid syrup, which may be exhibited with advantage in febrile and bilious affections.

Syrupus mori. Syrup of mulberry. *Syrupus mororum.* Take of mulberry-juice, strained, a pint; refined sugar, two pounds. Dissolve the sugar in the mulberry-juice in the manner directed for simple syrup. Syrup of mulberries is very grateful and aperient, and may be given with such intentions to children.

Syrupus papaveris. *Syrupus papaveris albi. Syrupus è meconio. Syrupus de meconio, sive diacodium.* Take of capsules of white poppy, dried and bruised, the seeds being separated, fourteen ounces; refined sugar, two pounds; boiling water, two gallons and a half. Macerate the capsules in the water for twenty-four hours; then boil it down, by means of a water-bath, to one gallon, and press out the liquor strongly. Boil down the liquor again, after being strained, to two pints, and strain it while hot. Set it by for twelve hours, that the feculencies may subside: then boil down the clear liquor to a pint, and add the sugar in the manner directed for simple syrup. It should be kept in stone bottles, and in a cellar. A useful anodyne preparation,

which may be added with advantage to a vast variety of medicines against diseases of the bowels, coughs, &c.

SYRUPUS PAPAVERIS ERRATICI. See *Syrupus rhœados.*

SYRUPUS RHAMNI. Syrup of buckthorn. Take of the fresh juice of buckthorn berries, four pints; ginger-root, sliced, allspice, powdered, of each half an ounce; refined sugar, three pounds and a half. Set by the juice for three days, that the feculencies may subside, and strain. To a pint of the clear juice add the ginger and allspice; then macerate in a gentle heat four hours, and strain; boil down what remains to one pint and a half; mix the liquors, and add the sugar in the manner directed for simple syrup.

This preparation, in doses of three or four spoonfuls, operates as a brisk cathartic. The principal inconvenience attending it is, that it is very unpleasant, and occasions a thirst and dryness of the mouth and fauces, and sometimes violent gripes. These effects may be prevented by drinking liberally of water-gruel, or other warm liquids, during the operation.

SYRUPUS RHŒADOS. *Syrupus papaveris erratici. Syrupus de papavere erratico.* Syrup of red poppy. Take of red poppy petals, fresh, a pound; boiling water, a pint and two fluid ounces; refined sugar, two pounds and a half. Having heated the water in a water-bath, add gradually the red poppy petals, frequently stirring them; then having removed the vessel, macerate for twelve hours; next press out the liquor, and set it by to settle; lastly, add the sugar as directed for simple syrup. This is a very mild anodyne, and used more for the colour than for its medical properties.

SYRUPUS RIBIS NIGRI. Syrup of black currants. Aperient and diuretic qualities are attributed to this preparation.

SYRUPUS ROSÆ. Syrup of roses. *Syrupus rosarum solutivus. Syrupus è rosis siccis.* Take of damask-rose petals, dried, seven ounces; refined sugar, six pounds; boiling water, four pints. Macerate the rose petals in the water for twelve hours, and strain; then evaporate the strained liquor, by means of a water-bath, to two pints and a half; then add the sugar in the manner described for simple syrup. A useful laxative for children. From ℨj. to ℥ss.

SYRUPUS RUBI IDÆI. Syrup of raspberry. A pleasant aperient syrup for children.

SYRUPUS SCILLITICUS. Expectorant and diuretic. See *Oxymel scillæ.*

SYRUPUS SENNÆ. Syrup of senna. Take of senna-leaves, two ounces; fennel-seed, bruised, an ounce; manna, three ounces; refined sugar, a pound; water, boiling, a pint. Macerate the senna-leaves and fennel-seeds in the water for an hour, with a gentle heat; strain the liquor, and mix with it the manna and sugar; then boil to the proper consistence. A useful purgative for children.

SYRUPUS SIMPLEX. *Syrupus.* Simple syrup. Take of refined sugar, two pounds and a half; water, a pint: dissolve the sugar in the water in a water-bath, then set it aside for twenty-four hours; take of the scum; and if there be any feculencies, pour off the clear liquor from them.

SYRUPUS TOLUTANUS. Syrup of Tolu. Take of balsam of Tolu, an ounce; water, boiling, a pint; refined sugar, two pounds. Boil the balsam in the water half an hour in a covered vessel, occasionally stirring it: strain the liquor when it is cold, and then add the sugar in the manner directed for simple syrup. A useful balsamic syrup, calculated to allay tickling coughs and hoarsenesses.

SYRUPUS VIOLÆ. A pleasant laxative for young children.

SYRUPUS ZINGIBERIS. Syrup of ginger. Take of ginger-root, sliced, two ounces; water, boiling, a pint; refined sugar, two pounds. Macerate the ginger-root in the water for twenty-four hours, and strain; then add the sugar in the manner directed for simple syrup. A carminative and stomachic syrup. Dose from one to three drachms.

SYSPA'SIA. (*a, æ.* f.; from συσπαω, *contraho, convello.*) A spasm.

SYSSARCO'SIS. (*is, is.* f.; from συν, and σαρξ, flesh.) A species of union of bones, in which one bone is united to another by means of an intervening muscle. In this manner the os hyoides is connected with the sternum and other parts.

SYSTATICUS. (From συνιστημι, *congredior, consocio.*) Applied by Dr. Good to designate nervous diseases which affect several, or all the sensorial powers simultaneously.

System, absorbent. See *Absorbent*, and *Lymphatic.*

System, genital. The parts of generation.

System, nervous. See *Nerve.*

System of plants. See *Classification.*

System, vascular. The arteries and veins.

SY'STOLE. (*e, es.* f.; from συστελλω, to contract.) The contraction of the heart.

SYSTRE'MMA. (*a, atis.* n.; from συστρεφω, *contorqueo*, to wind about, or twist.) The cramp.

T.

T-BANDAGE. A bandage so named from its figure. It is principally used for supporting the dressings, after the operation for fistula in ano, in diseases of the perinæum, and those of the groin, anus, &c.

TABA'CUM. (*um, i.* n.; so called from *Tobago*, the island from whence it was first brought.) Tobacco. See *Nicotiana*.

TABASHEER. The silica found in the hollow stem of the bamboo cane is so called. Its optical properties are peculiar.

TABE'LLA. (*a, æ.* f.; diminutive of *tabula*, a table.) A lozenge.

TA'BES. (*es, is.* f.; a Latin word, of doubtful origin. The lexicographers, says Dr. Good, derive it from the Greek τήκω, *macero*, varied in the Doric dialect to τάκω, whence Scaliger makes a compound of τακωβιος, *macerans vitæ*, a consuming life, or life of consumption; and supposes that such a word existed formerly, and that *tabes* is a derivative from it. *Tab-eo, tab-es*, is most probably derived from the Hebrew תאב, *tab*, literally to *pine away*, or *consume*, which is the exact meaning of the Latin terms.) A wasting of the body; characterised by emaciation, weakness, and fever, but without any cough or spitting. See *Atrophia*, and *Climactericus*.

The distinction of modern nosologists between atrophy and tabes is, that the latter is accompanied by fever, which atrophy is not. The common causes of tabes are supposed to be an acrimony in the blood, either pus which is absorbed from an abscess, or some poisonous substance, as mercury or arsenic; or a scrofulous taint; or an excess of venereal indulgence: and it is from these causes that four species have been instituted.

1. The *purulent tabes*. An absorption of pus into the blood, acting upon a peculiarity of constitution, is here the exciting cause: but unless the latter be present, pus will rarely, if ever, be found to produce a tabid frame; for, if absorbed pus be capable, independently of idiosyncrasy, of inducing a decline in one instance, it ought to do so in every instance: yet this we know is not the case, since buboes, empyemas, and other abscesses of large size, have been removed by absorption, and yet no tabes has accompanied the process. It is said to occur more frequently where an abscess or a vomica is open, in consequence of pus becoming more acrimonious by the action of the air. But this supposition is altogether gratuitous; and, where hectic fever accompanies a sore or open abscess, it is more probably from increased irritation on the edges or internal surface of the cavity.

With respect to the treatment, every thing depends on the local disease; the proper remedies for which must be exhibited, and the strength maintained by a nutritious diet, pure air, and bark with mineral acids; and if stimulants be required, with a view of acting more directly on the morbid irritation, and changing its nature, they should be limited to the milder resins, as myrrh, or the mild terebinthinates.

2. The *tabes venenata* is that which is produced by a poisonous acrimony in the blood, which excites and maintains the hectic fever. This is a disease only met with amongst miners, mineralogists, and labourers in chemical laboratories, and the poison is probably taken in with the atmosphere, or by cutaneous absorption.

The first thing to be done in assisting the cure is to remove the patient from the deleterious scene into a salubrious atmosphere of fresh air, and then to purify the blood by a course of alkalies, with sarsaparilla, mild bitters, and chalybeate mineral waters.

3. The *tabes scrofulosa* is produced by a state of the system which has apparently a very near relation to scrofula. The disease, perhaps, belongs to scrofula; but as it is peculiarly connected with a morbid condition of one or more of the organs of nutrition, including those of digestion and assimilation, and is uniformly accompanied with emaciation, irritation, and some degree of hectic fever, it more properly belongs to this family of diseases. Of all the contaminations that lurk in the blood, and are propagable in a dormant state, Dr. Good remarks, that of scrofula shows itself sooner than any of the rest. It is curious indeed, says he, to observe the different periods of time that hereditary diatheses of a morbid kind demand for their maturity, unless quickened into developements by some incidental cause. Scrofula very generally shows itself in infancy; phthisis rarely till at the age of puberty; gout, in mature life; mania, some years later; and cancer, still later than mania. Scrofula runs its course first, and becomes dormant, though rarely extinct; phthisis travels through a term of ten or twelve years, and, if it does not destroy its victim by the age of thirty-five, generally consents to a truce, and is sometimes completely subjugated. All the rest persevere through the journey of life: they may, indeed, hide their heads for a longer or shorter interval, but they commonly continue their harassings till the close of the scene.

When the strumous taint is excited into action in infant life, it generally fixes upon the chylific or chyliferous glands, especially when they are in a weakly state: most commonly upon the mesentery. This disease begins with languor and want of appetite, pain in the back and loins, fulness, and, as the dis-

ease advances, pain and tenderness of the abdomen. These symptoms are accompanied or succeeded by a chalky appearance, and want of consistency in the alvine evacuations, as if the chyle were rejected by the absorbents, and left in the state of a milky fluid in the intestines, and the functions of the liver were at the same time impaired, the natural tinge of the bile being wanting. The evacuations are also sometimes mixed with mucus and blood; and are attended by pain, irritation, and tenesmus, somewhat resembling those which occur in a mild dysentery. Occasionally, also, there are symptoms of dropsy, and especially ascites; as if the absorption of the fluid, secreted into the cavity of the abdomen, were prevented by local obstacles: the absorbent glands, which are enlarged, being rendered impervious, and pressing also on the lacteals and lymphatics which enter them and pass by them. The appetite, in some cases, becomes ravenous, and worms are sometimes found in the fæces.

The treatment of this species of tabes is similar in every respect to that of the other forms of scrofula. Very small doses of the grey or black oxides of mercury, carefully guarding against relaxing the bowels and acting on the gums, may be beneficially employed, with mild tonic bitters, conium, and sarsaparilla; and, in most cases, benefit is derived from a steady perseverance in chalybeates.

4. The *tabes dorsalis* is mostly caused by an intemperate indulgence in venereal pleasures; and the disease receives its specific appellation from the weakness of the back and loins which always attends it. The body gradually wastes away, and hectic fever uniformly accompanies it. There are frequent and untimely emissions of the semen, which increases the nervous debility, and produces loss of memory and weakness of all the senses.

The cure of this species is to be attempted, and often is effected, by attention to the mind; by cutting off the causes; by regular change of scene and country air, with a nutritive and invigorating diet; cold bathing, especially in the sea; and the moderate use of wine, with chalybeates, cinchona, and myrrh.

TABES COXARIA. A wasting of the thigh and leg from an abscess, or other cause, in the hip.

TABES DORSALIS. See *Tabes*.

TABES PULMONALIS. See *Phthisis*.

TABULAR SPAR. Table spar. Schaalstein of Werner. Prismatic augite of Jameson. A mineral of a greyish white colour, found in primitive rocks at Orawicza.

TACAMAHACA. (*a, æ.* f.; an Indian word.) See *Fragara octandra*.

TACT. See *Touch*.

TA'CTUS. (*us, ûs.* m.; from *tango*, to touch.) See *Touch*.

TÆ'DA. (*a, æ.* f. Δαιδα; from δαω, to burn.) A torch. A species of pine which burns like a torch. A medicated torch for fumigations.

TÆ'NIA. (*a, æ.* f. Ταινια, a Greek word, signifying a fillet: the name of a worm, from its resemblance to a fillet or tape.) The tape-worm. A genus of intestinal worms, characterised by a long, flat, and jointed body. See *Vermis*.

TAIL. See *Cauda*.

TALC. See *Talcum*.

TALCITE. Nacrite of Jameson. Earthy talc of Werner. A greenish white scaly mineral, found in the mining district of Freyberg.

TA'LCUM. (*um, i.* n.; from *talk*, German.) Talc. Of this mineral, which is Jameson's sixth subspecies of rhomboidal mica, there are two kinds:—1. *Common talc*, of a greenish white colour, greasy feel, breaks into curved plates or leaves, occurs in beds of mica slate, and clay slate, in several parts of Scotland. 2. *Indurated talc*, or *talc slate*, of a greenish grey colour, found in Scotland, and abundantly on the Continent. It is used by carpenters, tailors, hat-makers, and glaziers for drawing lines.

Talc is composed of pure magnesia, mixed with near twice its weight of silex, and less than its weight of alumine. The greenish foliaceous Venice talc was formerly used medicinally, as possessing antacid and aperient qualities.

TALLOW. See *Fat*.

TA'LPA. (*a, æ.* f.; from τυφλος, blind.) *Talparia*. 1. A mole.

2. Applied formerly to a tumour which, like a mole, crept under the skin.

TA'LUS. (*us, i.* m.; from *taxillus*, a small die.) 1. The ankle.

2. A bone of the ankle. See *Astragalus*.

TAMALAPA'TRA. See *Laurus cassia*.

TAMARI'NDUS. (*us, i.* m.; from *tamar*, or *tamarindi*, which is, in the Arabian language, a synonym of the dactylus or date.) 1. The name of a genus of plants. Class, *Monadelphia*; Order, *Triandria*. The tamarind-tree and fruit.

2. The pharmacopœial name of the tamarind. See *Tamarindus indica*.

TAMARINDUS INDICA. The systematic name of the tamarind-tree: called also, *Oxyphœnicon*, *Siliqua arabica*, *Balampulli*, *Tamarœa zecla*, *Oxyphœnicia*, and *Acacia indica*. This tree grows in hot climates, and is abundant in the West India islands. The preserve called in the shops tamarinds consists of a pulp, with the seeds connected together by numerous tough strings or fibres. According to Long, tamarinds are prepared for exportation, at Jamaica, in the following manner:—"The fruit or pods are gathered in June, July, and August, when full ripe, which is known by their fragility or easy breaking on small pressure between the finger and thumb. The fruit taken out of the pod, and cleared from the shelly fragments, is placed in layers in a cask, and boiling syrup, just before it begins to granulate, is poured in, till the cask is filled: the syrup pervades every part, quite down to the bottom, and when cool the cask is headed for sale." The tamarind is employed as a laxa-

tive, and for abating thirst or heat in various inflammatory complaints, and for correcting putrid disorders, especially of a bilious kind, in which the cathartic, antiseptic, and refrigerant qualities of the fruit have been found equally useful; with which intention they are mixed with barley-water, or any proper diluting fluid, and given as a drink. When intended merely as a laxative, it may be of advantage (Dr. Woodville observes) to join it with manna or purgatives of a sweet kind, by which its use is rendered safer and more effectual. Three drachms of the pulp are usually sufficient to open the body, but to prove moderately cathartic one or two ounces are required. It is an ingredient in the *confectio cassiæ*, and *confectio sennæ*.

TAMARI'SCUS. (*us, i.* m.) See *Tamarix.*

TA'MARIX. (*ix, icis.* f.; from *Tamarik*, abstersion, Heb.: named from its properties of cleansing and purifying the blood.) The name of a genus of plants. Class, *Pentandria*; Order, *Digynia*. The tamarisk-tree.

Tamarix gallica. The systematic name of the tamarisk-tree: also named, *Tamariscus*. Tamarisk. The bark, wood, and leaves of this tree were formerly employed medicinally, though seldom used at present: the former for its aperient and corroborant virtues in obstructions of the liver; the latter in icterus, hæmoptysis, and some affections of the skin.

TAME-POISON. See *Asclepias.*

TANACE'TUM. (*um, i.* n.; corrupted from *tanasia*, *athanasia*, the old name for tansy.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua*. Tansy.

2. The pharmacopœial name of the tansy. See *Tanacetum vulgare.*

Tanacetum balsamita. The systematic name of the officinal costmary, or alecost: named also, *Balsamita mas*, *Balsamita major*, *Tanacetum hortense*, and *Costus hortorum*. The plant which bears this name in the pharmacopœias, is the *Tanacetum balsamita*—*foliis ovatis, integris, serratis*, of Linnæus. A fragrant-smelling herb, somewhat like that of mint; formerly esteemed as a corroborant, carminative, and emmenagogue.

Tanacetum hortense. See *Tanacetum balsamita.*

Tanacetum vulgare. The systematic name of the common tansy: called also, *Tanasia*, *Atahnasia*, and *Parthenium mas.*

Tanacetum—*foliis bipinnatis incisis serratis*, of Linnæus. The leaves and flowers of tansy have a strong, not very disagreeable smell, and a bitter, somewhat aromatic taste. The virtues of tansy are tonic, stomachic, anthelmintic, emmenagogue, and resolvent. It has been much used as a vermifuge; and testimonies of its efficacy are given by many respectable physicians. Not only the leaves, but the seeds have been employed with this intention, and substituted for those of santonicum. We are told by Dr. Clark, that in Scotland tansy was found to be of great service in various cases of gout; and Dr. Cullen, who afterwards was informed of the effect it produced upon those who had used the herb for this purpose, says, "I have known several who have taken it without any advantage, and some others who reported that they had been relieved from the frequency of their gout." Tansy is also recommended in the hysteria, especially when this disease is supposed to proceed from menstrual obstructions.

This plant may be given in powder to the quantity of a drachm or more for a dose; but it has been more commonly taken in infusion, or drank in tea.

TANA'SIA. See *Tanacetum.*

TANNIN. This, which is one of the immediate principles of vegetables, was first distinguished by Seguin from the gallic acid, with which it had been confounded under the name of the *astringent principle*. He gave it the name of tannin, from its use in the tanning of leather; which it affects by its characteristic property, that of forming with gelatine a tough insoluble matter.

It may be obtained from vegetables by macerating them in cold water; and precipitated from this solution, which contains likewise gallic acid and extractive matter, by hyperoxygenised muriate of tin. From this precipitate, immediately diffused in a large quantity of water, the oxide of tin may be separated by sulphuretted hydrogene gas, leaving the tannin in solution.

Professor Proust has since recommended another method,—the precipitation of a decoction of galls by powdered carbonate of potash, washing well the greenish-grey flakes that fall down with cold water, and drying them in a stove. The precipitate grows brown in the air, becomes brittle and shining like a resin, and yet remains soluble in hot water. The tannin in this state, he says, is very pure.

Sir H. Davy, after making several experiments on different methods of ascertaining the quantity of tannin in astringent infusions, prefers for this purpose the common process of precipitating the tannin by gelatine; but he remarks, that the tannin of different vegetables require different proportions of gelatine for its saturation; and that the quantity of precipitate obtained is influenced by the degree in which the solutions are concentrated.

Chenevix observed, that coffee-berries acquired by roasting the property of precipitating gelatine; and Hatchett has made a number of experiments, which show that an artificial tannin, or substance having its chief property, may be formed, by treating with nitric acid matters containing charcoal. It is remarkable that this tannin, when prepared from vegetable substances, as dry charcoal of wood, yields, on combustion, products analogous to those of animal matters. From his experiments it would seem that tannin is, in reality, carbonaceous matter combined with oxygene; and the difference in the proportion of oxygene may occasion the differences in the tannin

procured from different substances, that from catechu appearing to contain most.

Bouillon Lagrange asserts that tannin, by absorbing oxygene, is converted into gallic acid.

It is not an unfrequent practice to administer medicines containing tannin in cases of debility, and at the same time to prescribe gelatinous food as nutritious. But this is evidently improper, as the tannin, from its chemical properties, must render the gelatine indigestible.

TANSY. See *Tanacetum.*

Tansy, maudlin. See *Achillea ageratum.*

Tansy, wild. See *Potentilla.*

TANTA'LUM. (*um, i.* n.) A metal, found in a state of oxide in the Vale of Menachan, in Cornwall.

TAPER. See *Acuminatus,* and *Attenuatus.*

TAPE-WORM. See *Vermis.*

TAPIOCA. See *Jatropha manihot.*

TAPPING. See *Paracentesis.*

TA'PSUS. (*us,* and *os, i.* f.) See *Verbascum nigrum.*

Tapsus barbatus. See *Verbascum.*

TAR. See *Pinus sylvestris.*

Tar, Barbadoes. See *Petroleum.*

Tar-water. A once celebrated remedy, but now neglected more than it deserves. It is made by infusing tar in water, stirring it from time to time, and, lastly, pouring off the clear liquor, now impregnated with the colour and virtues of the tar. It is drunk in many chronic affections, particularly of the lungs.

TARANTI'SMUS. (*us, i.* m.; from *tarantula,* the animal, the bite of which is supposed to be cured only by music.) The desire of dancing which is produced by the bite of the tarantula.

TARA'NTULA. (*a, æ.* f.; from *Taranta,* a city in Naples, where they abound.) A kind of venomous spider, the bite of which is said to be cured by music.

TARA'XACUM. (*um, i.* n.; from *ταρασσω,* to alter or change: so called because it alters the state of the blood.) See *Leontodon.*

TARA'XIS. (From *ταρασσω,* to disturb.) A slight inflammation of the eye. See *Ophthalmitis.*

Ta'rchon sylvestris. See *Achillea ptarmica.*

TARE. See *Ervum.*

TARGET. See *Pelta.*

Target-shaped. See *Peltatus.*

TARRAS. *Terras.* A volcanic earth, used as a cement.

Tarsi extensor minor. See *Plantaris.*

TA'RSUS. (*us, i.* m. *Ταρσος.*) 1. The instep, or that part of the foot which is between the leg and metatarsus: it is composed of seven bones, viz. the astragalus, os calcis, os naviculare, os cuboides, and three ossa cuneiformia.

2. The thin cartilage situated at the edges of the eyelids to preserve their firmness and shape.

TARTAR. (*Tartarum, i.* n.; from *ταρταρος,* infernal: because it is the sediment or dregs.) 1. The concretion which fixes to the inside of hogsheads containing wine. It is alloyed with much extractive and colouring matter, and in this impure or compounded state is called argal. It is either red or white, according to its colour. It is purified by decoction with argillaceous earths, by boiling its solution with $\frac{1}{20}$ of pipe-clay, and subsequent crystallisation. By this means it becomes perfectly white, and shoots out crystals, consisting of its peculiar acid called acid of tartar, imperfectly saturated with potash; it is therefore a super or bitartrate of that alkali which, when powdered, is the cream of tartar of the shops. See *Potassæ supertartras.*

2. A name heretofore given to many officinal preparations containing the acid of tartar, but, in consequence of recent changes in the chemical nomenclature, superseded by appellations more expressive of the respective compositions.

3. The human teeth are occasionally, after the age of puberty, and even before, and especially in advanced life, incrusted with an earthy-like substance, which is called tartar. It is deposited on them from the saliva, of which it is said to be a constituent. Berzelius says, that, when tartar first settles on the teeth, it is mere hardened mucus; and that, during the destruction of the mucus, phosphate of lime is traced on the enamel of the teeth, which in some cases increases to a great thickness, which, when analysed, is found to contain about one fifth of its weight of mucus. Rubbing the gums is the best prophylactic against this unnatural condition, with earthy dentifrices; but rubbing alone is sufficient, if regularly resorted to.

Tartar, cream of. The popular name of the pulverised supertartrate of potash.

Tartar, emetic. See *Antimonium tartarizatum.*

Tartar, oil of. See *Potassæ subcarbonatis liquor.*

Tartar, regenerated. See *Potassæ acetas.*

Tartar, salt of. See *Potassæ subcarbonas.*

Tartar, soluble. See *Potassæ tartras.*

Tartar, spirit of. See *Pyrotartareous acid.*

Tartar, vitriolated. See *Potassæ sulphas.*

TARTARIC. (*Tartaricus;* from *tartar.*) Appertaining to tartar.

Tartaric acid. *Acidum tartaricum;* called also, *Sal essentiale tartari,* and *Acidum tartari essentiale,* and tartareous acid. The casks in which some kinds of wine are kept become incrusted with a hard substance, tinged with the colouring matter of the wine, and otherwise impure, which has long been known by the name of *argal,* or tartar, and distinguished into red and white according to its colour. See *Tartar.* This being purified by solution, filtration, and crystallisation, was termed *cream,* or *crystals of tartar.* It was afterwards discovered, that it consisted of

a peculiar acid combined with potash; and the supposition that it was formed during the fermentation of the wine, was disproved by Boerhaave, Newman, and others, who showed that it existed ready formed in the juice of the grape. It has likewise been found in other fruits, particularly before they are too ripe; and in the tamarind, sumach, balm, carduus benedictus, and the roots of rest-harrow, germander, and sage. The separation of tartaric acid from this acidulous salt, is the first discovery of Scheele that is known. He saturated the superfluous acid by adding chalk to a solution of the supertartrate in boiling water as long as any effervescence ensued, and expelled the acid from the precipitated tartrate of lime by means of the sulphuric. Or four parts of tartar may be boiled in twenty or twenty-four of water, and one part of sulphuric acid added gradually. By continuing the boiling the sulphate of potash will fall down. When the liquor is reduced to one half, it is to be filtered; and if any more sulphate be deposited by continuing the boiling, the filtering must be repeated. When no more is thrown down, the liquor is to be evaporated to the consistence of a syrup; and thus crystals of tartaric acid, equal to half the weight of the tartar employed, will be obtained. The following is given by Dr. Ure as the best formula for procuring tartaric acid:—Take of the supertartrate of potash, two pounds and a half; three gallons of boiling hot water; one pound of prepared chalk; one pound of sulphuric acid. Boil the cream of tartar in two gallons of the water, and gradually throw in the chalk, until all effervescence ceases: set the liquor aside that the tartrate of lime may subside; pour off the liquor, and wash the tartrate of lime repeatedly with distilled water until it is tasteless. Then pour on it the sulphuric acid, diluted with the remaining gallon of boiling water, and set the whole aside for twenty-four hours, stirring it well now and then. Strain the liquor, and evaporate in a water-bath until crystals form. The virtues of this acid are antiseptic, refrigerant, and diuretic. It is used in acute fevers, scurvy, and hæmorrhage.

The tartaric acid may be procured in needle-like or laminated crystals, by evaporating a solution of it. Its taste is very acid and agreeable, so that it may supply the place of lemon-juice. It is very soluble in water. Burnt in an open fire, it leaves a coaly residuum; in close vessels it gives out carbonic acid and carburetted hydrogene gas. By distilling nitric acid off the crystals, they may be converted into oxalic acid, and the nitric acid passes to the state of nitrous.

This acid combines with alkaline, earthy, and metallic bases, and form *tartrates*, all of which have been examined by chemists.

The tartrates of potash, soda, and ammonia are not only susceptible of combining together, but also with the other tartrates, so as to form *double* or *triple salts*.

Tartrate of potash was formerly called *soluble tartar*, because much more so than the supertartrate. See *Potassæ tartras*.

The *supertartrate of potash* is much used in medicine, as well as in several chemical and pharmaceutical preparations. See *Potassæ supertartras*.

Mixed with an equal weight of nitre, and projected into a red-hot crucible, it detonates, and forms the *white flux*; treated in the same way with half its weight of nitre, it forms the *black flux*; and simply mixed with nitre in various proportions, it is called *raw flux*. It is likewise used in dyeing, in hat-making, in gilding, and in other arts.

By saturating the superfluous acid in the supertartrate with soda, a triple salt is formed which crystallises in larger regular prisms of eight nearly equal sides. See *Soda tartarizata*.

The *tartrate of soda* is much less soluble than this triple salt, and crystallises in slender needles or thin plates.

The *tartrate of ammonia* is a very soluble, bitter salt, and crystallises easily.

TARTARINE. The name given by Kirwan to the vegetable alkali.

TARTARUM. See *Tartar*.

TARTARUM EMETICUM. See *Antimonium tartarizatum*.

TARTARUM REGENERATUM. See *Potassæ acetas*.

TARTARUM SOLUBILE. See *Potassæ tartras*.

TARTARUS AMMONIÆ. See *Tartras ammoniæ*.

TARTARUS CHALYBEATUS. See *Ferrum tartarizatum*.

TARTRAS. (*as, atis.* m.; the tartaric being its acid base.) A tartrate, or salt formed by the combination of tartaric acid with a salifiable base; as tartrate of soda, potash, &c.

Those used in medicine are,

1. The tartrate of ammonia
2. ———————— potash.
3. ———————— potash and antimony.
4. ———————— potash and soda.
5. ———————— iron.
6. ———————— soda.
7. The supertartrate of potash.

TARTRAS AMMONIÆ. Tartrate of ammonia; called also *Alkali volatile tartarizatum*, by Bergman; and *Sal ammoniacum tartareum*, and *Tartarus ammoniæ*. A salt composed of tartaric acid and ammonia. Its virtues are diaphoretic, diuretic, and deobstruent. It is prescribed in fevers, atonic exanthemata, catarrh, arthritic and rheumatic pains, hysteric spasms, &c.

TARTRAS POTASSÆ. See *Potassæ tartras*.

TARTRAS POTASSÆ ACIDULUS. Acidulated a rtrate of potash. See *Potassæ supertartras*.

TARTRAS POTASSÆ ACIDULUS FERRATUS. The acidulated chalybeate tartrate of iron; called also *Globuli martiales*, *Tartarus chalybeatus*, *Mars solubilis*, and *Ferrum potabile*. Its virtues are astringent. It is principally used externally in the form of fomentations or bath in contusions, distortions, and luxations.

TARTRAS POTASSÆ ACIDULUS STIBIATUS. See *Antimonium tartarizatum*.

TARTRAS SODÆ. See *Soda tartarizata.*

TASTE. *Gustus.* Savours are only the impression of certain bodies upon the organ of taste. Bodies which produce it are called *sapid.*

It has been supposed that the degree of sapidity of a body could be determined by that of its solubility; but certain bodies, which are insoluble, have a very strong taste, whilst other bodies very soluble have scarcely any. The sapidity appears to bear relation to the chemical nature of bodies, and to the peculiar effects which they produce upon the animal economy.

Tastes are very numerous, and very variable. There have been numerous endeavours made to class them, though without complete success: they are better understood, however, than the odours, no doubt owing to the impressions received by the sense of taste being less fugitive than those received by the smell. Thus we are sufficiently understood when we speak of a body having a taste that is *bitter, acid, sour, sweet,* &c.

There is a distinction of taste which is sufficiently established, it being founded on the organisation: that of agreeable and disagreeable. Animals establish it instinctively. This is the most important distinction; for those things which have an agreeable taste are generally useful for nutrition, while those whose savour is disagreeable are, for the most part, hurtful.

Apparatus of Taste. — The tongue is the principal organ of taste: however, the lips, the internal surface of the cheeks, the palate, the teeth, the *velum pendulum palati,* the *pharynx, œsophagus,* and even the stomach, are susceptible of receiving impressions by the contact of sapid bodies.

The salivary glands, of which the *excretory ducts* open into the mouth; the follicles, which pour into it the *mucus* which they secrete, have a powerful effect in forming the taste. Independently of the mucous follicles, that the superior surface of the tongue presents, and which form upon it *fungous papillæ,* there are also little inequalities seen, one sort of which, very numerous, are called *villous papillæ;* the others, less numerous, and disposed in two rows on the sides of the tongue, are called *conical papillæ.*

All the nerves with which those parts are provided that are intended to receive the impressions of sapid bodies may be considered as belonging to the apparatus of taste. Thus the inferior maxillary nerves, many branches of the superior, amongst which it is necessary to notice the threads which proceed from the *spheno-palatine* ganglion, particularly the *naso-palatine* nerve of Scarpo, the nerve of the ninth pair, *glosso-pharyngeus,* appear to be employed in the exercise of taste.

The lingual nerve of the fifth pair is that which anatomists consider the principal nerve of taste, and, as a reason, they say that its threads are continued into the *villous* and *conical papillæ* of the tongue.

Mechanism of Taste. — For the full exercise of taste, the mucous membrane which covers the organs of it must be perfectly uninjured; it must be covered with *mucous fluid,* and the saliva must flow freely in the mouth. When the mouth becomes dry, the powers of taste cannot be excited.

It is also necessary that these liquids undergo no change: for if the mucus become thick, yellow, and the saliva acid, bitter, &c., the taste will be exerted but very imperfectly.

Some authors have assured us that the *papillæ* of the tongue become really erect during the time that the taste is exerted. This assertion I believe to be entirely without foundation.

It is quite enough that a body be in contact with the organs of taste, for us to appreciate its savour immediately; but if it is solid, in most cases it is necessary to dissolve in the saliva to be tasted: this condition is not necessary for liquids and gases.

There appears to be a certain chemical action of sapid bodies upon the epidermis of the mucous membrane of the mouth: it is seen evidently, at least in some, as vinegar, the mineral acids, a great number of salts, &c. In these different cases, the colour of the epidermis is changed, and becomes white, yellow, &c. By the same causes, like effects are produced upon dead bodies. Perhaps to this sort of combination may be attributed the different kinds of impressions made by sapid bodies, as well as the variable duration of those impressions.

Hitherto no one has accounted for the faculty possessed by the teeth, of being strongly influenced by certain sapid bodies. According to the researches of Miel, a distinguished dentist of Paris, this effect ought to be attributed to imbibition. The researches of Miel prove that the teeth imbibe very quickly liquids with which they are placed in contact. Different parts of the mouth appear to possess different degrees of sensibility for sapid bodies: for they act sometimes on the tongue, on the gums, and on the teeth; at other times they have an exclusive action on the palate, on the pharynx, &c. Some bodies leave their taste a long time in the mouth: these are particularly the aromatic bodies. This *after-taste* is sometimes felt in the whole mouth, sometimes only in one part of it. Bitter bodies, for example, leave an impression in the pharynx; acids upon the lips and teeth: peppermint leaves an impression which exists both in the mouth and pharynx.

Tastes, to be completely known, ought to remain some time in the mouth: when they traverse it rapidly, they leave scarcely any impression. For this reason, we swallow quickly those bodies which are disagreeable to us; on the contrary, we allow those that have an agreeable savour to remain a long time in the mouth.

When we taste a body which has a very strong and pertinacious taste, such as a vegetable acid, we become insensible to others which are feeble. This observation has been found va-

luable in medicine, in administering disagreeable drugs to the sick. We are capable of distinguishing a number of tastes at the same time, as also their different degrees of intensity: this is used by chemists, tasters of wine, &c. By this means we arrive, sometimes, at a tolerably exact knowledge of the chemical nature of bodies; but such delicacy of taste is not acquired until after long practice.

Is the lingual nerve that which is essential to taste? Nothing is known which can make us attribute this property entirely to it.

The choice of food depends entirely on the taste: joined to smell, it enables us to distinguish between substances that are hurtful and those that are useful. It is this sense which gives us the most correct knowledge of the composition of chemical bodies. — *Magendie.*

TA'XIS. (From ταἀσσω, to put in order.) An operation, by which those parts which have quitted their natural situation are replaced by the hand without the assistance of instruments; as in reducing hernia, &c.

TEA. See *Thea.*

TEAR. *Lachryma.* The limpid fluid secreted by the lachrymal glands, and flowing on the surface of the eyes.

The organ which secretes this liquid is the lachrymal gland, one of which is situated in the external canthus of each orbit, and emits six or seven excretory ducts, which open on the internal surface of the upper eyelid above its tarsus, and pour forth the tears. The tears have mixed with them an arterious roscid vapour, which exhales from the internal surface of the eyelids, and external of the tunica conjunctiva, into the eye. Perhaps the aqueous humour also transudes through the pores of the cornea on the surface of the eye. A certain part of this aqueous fluid is dissipated in the air; but the greatest part, after having performed its office, is propelled by the orbicular muscle, which so closely constringes the eyelid to the ball of the eye as to leave no space between, unless in the internal angle, where the tears are collected. From this collection the tears are absorbed by the orifices of the puncta lachrymalia; from thence they are propelled, through the lachrymal canals, into the lachrymal sac, and flow through the ductus nasalis into the cavity of the nostrils, under the inferior concha nasalis. The *lachrymal sac* appears to be formed of longitudinal and transverse muscular fibres; and its three orifices furnished with small sphincters, as the spasmodic constriction of the puncta lachrymalia proves, if examined with a probe.

The tears have no smell, but a saltish taste, as people who cry perceive. They are of a transparent colour and aqueous consistence.

The *quantity*, in its natural state, is just sufficient to moisten the surface of the eye and eyelids; but from sorrow, or any kind of stimulus applied to the surface of the eye, so great is the quantity of tears secreted, that the puncta lachrymalia are unable to absorb them. Thus the greatest part runs down from the internal angle of the eyelids, in the form of great and copious drops, upon the cheeks. A great quantity also descends, through the lachrymal passages, into the nostrils: hence those who cry have an increased discharge from the nose.

Use of the Tears.—1. They continually moisten the surface of the eye and eyelids, to prevent the pellucid cornea from drying and become opake, or the eye from concreting with the eyelids. 2. They prevent that pain which would otherwise arise from the friction of the eyelids against the bulb of the eye from continually winking. 3. They wash and clean away the dust of the atmosphere, or any thing acrid that has fallen into the eye. 4. Crying unloads the head of congestions.

TE'CTUS. Covered: applied as opposed to *nudus*, or naked; as to the seeds of the angiosperm plants.

TEETH. (*Dens*, a tooth; *quasi edens*, from *edo*, to eat.) Small bones fixed in the alveoli of the upper and under jaw. In early infancy, Nature designs us for the softest aliment, so that the gums alone are then sufficient for the purpose of manducation; but, as we advance in life, and require a different food, she wisely provides us with teeth. These are the hardest and whitest of our bones, and, at full maturity, we usually find thirty-two in both jaws; viz. sixteen above, and as many below. Their number varies indeed in different subjects; but it is seldom seen to exceed thirty-two, and it will very rarely be found to be less than twenty-eight.

Each tooth may be divided into two parts; viz. its body, or that part which appears above the gums; and its fangs or root, which is fixed into the socket. The boundary between these two, close to the edge of the gum, where there is usually a small circular depression, is called the neck of the tooth. The teeth of each jaw are commonly divided into three classes; but, before each of these is treated of in particular, it will be right to say something of their general structure.

Every tooth is composed of its *cortex* or *enamel*, and its internal bony substances. The enamel, or, as it is sometimes called, the vitreous part of the tooth, is a very hard and compact substance, of a white colour, and peculiar to the teeth. It is found only upon the body of the tooth, covering the outside of the bony or internal substance. When broken it appears fibrous or striated; and all the striæ are directed from the circumference to the centre of the tooth. This enamel is thickest on the grinding surface, and on the cutting edges or points of the teeth, becoming gradually thinner as it approaches the neck, where it terminates insensibly. Some writers have described it as being vascular, but it is certain that no injection will ever reach this substance; that it receives no tinge from madder; and that it affords no appearance of a circulation of fluids. The bony part of a tooth resembles other bones in its structure,

but is much harder than the most compact part of bones in general. It composes the inner part of the body and neck, and the whole of the root of the tooth. This part of a tooth, when completely formed, does not, like the other bones, receive a tinge from madder, nor do the minutest injections penetrate into its substance, although many writers have asserted the contrary. Mr. Hunter has been therefore induced to deny its being vascular, although he is aware that the teeth, like other bones, are liable to swellings, and that they are found anchylosed with their sockets. He supposes, however, that both these may be original formations; and, as the most convincing proof of their not being vascular, he reasons from the analogy between them and other bones. He observes, for instance, that in a young animal that has been fed with madder, the parts of the teeth which were formed before it was put on madder diet will appear of their natural colour, but that such parts as were formed while the animal was taking the madder will be of a red colour: whereas, in other bones, the hardest parts are susceptible of the dye, though more slowly than the parts which are growing. Again he tells us, that if you leave off feeding the animal with madder a considerable time before you kill it, you will find the above appearances still subsisting, with this addition, that all the parts of the teeth which were formed after leaving off the madder will be white. This experiment proves, that a tooth once tinged does not lose its colour; whereas other bones dò (though very slowly) return again to their natural appearance: and, as the dye in this case must be taken into the habit by absorbents, he is led to suspect that the teeth are without absorbents as well as other vessels. These arguments are very ingenious, but they are far from being satisfactory. The facts adduced by Mr. Hunter are capable of a different explanation from that which he has given them; and, when other facts are added relative to the same subject, it will appear that this bony part of a tooth has a circulation through its substance, and even lymphatics, although, from the hardness of its structure, we are unable to demonstrate its vessels. The facts which may be adduced are, 1st, We find that a tooth recently drawn and transplanted into another socket, becomes as firmly fixed, after a certain time, and preserves the same colour as the rest of the set; whereas a tooth that has been long drawn before it is transplanted, will never become fixed. Mr. Hunter, indeed, is aware of this objection, and refers the success of the transplantation, in the first instance, to the living principle possessed by the tooth, and which, he thinks, may exist independent of a circulation. But however applicable such a doctrine may be to zoophytes, it is suspected that it will not hold good in man, and others of the more perfect animals: and there does not appear to be any doubt but that, in the case of a transplanted tooth, there is a real union by vessels. 2dly, The swellings of the fangs of a tooth, which, in many instances, are known to be the effects of disease, and which are analogous to the swelling of other bones, are a clear proof of a similarity of structure, especially as we find them invested with a periosteum. 3dly, It is a curious fact, though as yet perhaps not generally known, that, in cases of phthisis pulmonalis, the teeth become of a milky whiteness, and in some degree transparent. Does not this prove them to have absorbents?

Each tooth has an inner cavity, which, beginning by a small opening at the point of the fang, becomes larger, and terminates in the body of the tooth. This cavity is supplied with blood-vessels and nerves, which pass through the small hole in the root. In old people this hole sometimes closes, and the tooth becomes then insensible.

The teeth are invested with periosteum from their fangs to a little beyond their bony sockets, where it is attached to the gums. This membrane seems to be common to the tooth which it encloses, and to the sockets which it lines. The teeth are likewise secured in their sockets by a red substance called the *gums*, which every where covers the alveolar processes, and has as many perforations as there are teeth. The gums are exceedingly vascular, and have something like cartilaginous hardness and elasticity, but do not seem to have much sensibility. The gums of infants, which perform the offices of teeth, have a hard ridge extending through their whole length; but in old people, who have lost their teeth, this ridge is wanting. The three classes into which the teeth are commonly divided are, *incisores, canini,* and *molares,* or *grinders.*

The *incisores* are the four teeth in the forepart of each jaw: they derive their name from their use in dividing and cutting the food in the manner of a wedge, and have each of them two surfaces which meet in a sharp edge. Of these surfaces, the anterior one is convex, and the posterior one somewhat concave. In the upper jaw they are usually broader and thicker, especially the two middle ones, than those of the under jaw, over which they generally fall by being placed a little obliquely.

The *canini,* or *cuspidati,* are the longest of all the teeth, deriving their name from their resemblance to a dog's tusk. There is one of these teeth on each side of the incisores, so that there are two in each jaw. They are the longest of all the teeth. Their fangs differ from that of the incisores only in being much larger, and their shape may be easily described to be that of an incisor with its edge worn off, so as to end in a narrow point instead of a thin edge. The canini not being calculated for dividing like the incisores, or for grinding, seem to be intended for laying hold of substances. Mr. Hunter remarks of these teeth, that we may trace in them a similarity in shape, situation, and use, from the most imperfect carnivorous animal, which we believe to be the human

species, to the lion, which is the most perfectly carnivorous.

The *molares*, or grinders, of which there are ten in each jaw, are so called, because from their size and figure they are calculated for grinding the food. The canini and incisores have only one fang, but the three last grinders in the under jaw have constantly two fangs, and the same teeth in the upper jaw three fangs. Sometimes these fangs are divided into two points near their base, and each of these points has, perhaps, been sometimes considered as a distinct fang. The grinders likewise differ from each other in their appearance. The two first on each side, which Mr. Hunter appears to have distinguished very properly by the name of *bicuspides*, seem to be a middle nature between the incisores and grinders; they have in general only one root, and the body of the tooth terminates in two points, of which the anterior one is the highest, so that the tooth has in some measure the appearance of one of the canini. The two grinders beyond these, on each side, are much larger. Their body forms almost a square with rounded angles; and their grinding surface has commonly five points or protuberances, two of which are on the inner, and three on the outer part of the tooth. The last grinder is shorter and smaller than the rest, and, from its coming through the gums later than the rest, and sometimes not appearing till late in life, is called *dens sapientiæ*. The variation in the number of teeth usually depends on these dentes sapientiæ.

Having thus described the appearance of the teeth in the adult, the manner of their formation and growth in the fœtus is next to be considered. We shall find that the alveolar process, which begins to be formed at a very early period, appears, about the fourth month, only as a shallow longitudinal groove, divided by slight ridges into a number of intermediate depressions, which are to be the future alveoli or sockets. These depressions are, at first, filled with small pulpy substances, included in a vascular membrane; and these pulpy substances are the rudiments of the teeth. As these advance in their growth, the alveolar processes become gradually more completely formed. The surface of the pulp first begins to harden; the ossification proceeding from one or more points, according to the kind of tooth that is to be formed. Thus, in the incisores and canini, it begins from one point; in the bicuspides, from two points, corresponding with the future shape of those teeth; and in the molares from four or five points. As the ossification advances, the whole of the pulp is gradually covered with bone, excepting its under surface, and then the fang begins to be formed. Soon after the formation of this bony part, the tooth begins to be encrusted with its enamel; but in what manner this is deposited we are, as yet, unable to explain. Perhaps the vascular membrane which encloses the pulp may serve to secrete it. It gradually crystallises upon the surface of the bony part, and continues to increase in thickness, especially at the points and basis of the tooth, till some time before the tooth begins to pass through the gum; and when this happens, the enamel seems to be as hard as it is afterwards, so that the air does not appear to have the least effect in hardening it, as has been sometimes supposed. While the enamel is thus forming, the lower part of the pulp is gradually lengthened out and ossified, so as to form the fang. In those teeth which are to have more than one fang, the ossification begins from different parts of the pulp at one and the same time. In this manner are formed the incisores, the canini, and two molares on each side, making in the whole twenty teeth, in both jaws, which are sufficient for the purposes of manducation early in life. As the fangs of the teeth are formed, their upper part is gradually pushed upwards, till at length, about the seventh, eighth, or ninth month after birth, the incisores, which are the first formed, begin to pass through the gum. The first that appears is generally in the lower jaw. The canini and molares not being formed so soon as the incisores, do not appear till about the twentieth or twenty-fourth month. Sometimes one of the canini, but more frequently one of the molares, appears first.

The danger to which children are exposed, during the time of dentition, arises from the pressure of the teeth in the gum, so as to irritate it, and excite pain and inflammation. The effect of this irritation is, that the gum wastes, and becomes gradually thinner at this part, till at length the tooth protrudes. In such cases, therefore, we may, with great propriety, assist nature by cutting the gum. These twenty teeth are called *temporary* or *milk* teeth, because they are all shed between the age of seven and fourteen, and are supplied by others of a firmer texture, with large fangs, which remain till they become affected by disease, or fall out in old age, and are, therefore, called the *permanent* or *adult* teeth. The rudiments of these adult teeth begin to be formed at different periods. The pulp of the first adult incisor, and of the first adult grinder, may be perceived in a fœtus of seven or eight months, and the ossification begins in them about six months after birth. Soon after birth the second incisor, and canine tooth on each side, begin to be formed. About the fifth or sixth year the first bicuspis, and about the seventh the second bicuspis begins to ossify. These bicuspides are destined to replace the temporary grinders. All these permanent teeth are formed in a distinct set of alveoli; so that it is not by the growing of one tooth under another in the same socket, that the uppermost tooth is gradually pushed out, as is commonly imagined; but the temporary teeth, and those which are to succeed them, being placed in separate alveoli, the upper sockets gradually disappear, as the under ones in-

crease in size, till at length the teeth they contain, having no longer any support, consequently fall out. But, besides these twenty teeth, which succeed the temporary ones, there are twelve others to be added, to make up the number thirty-two. These twelve are three grinders on each side in both jaws; and in order to make room for this addition, we find the jaws grow as the teeth grow, so that they appear as completely filled with twenty teeth as they are afterwards with thirty-two. Hence, in children, the face is flatter and rounder than in adults. The first adult grinder usually passes through the gum about the twelfth year; the second, which begins to be formed in the sixth or seventh year, cuts the gum about the seventeenth or eighteenth; and the third, or dens sapientiæ, which begins to be formed about the twelfth year, passes through the gum between the age of twenty and thirty. The dentes sapientiæ have, in some instances, been cut at the age of forty, fifty, sixty, and even eighty years; and it sometimes happens that they do not appear at all. Sometimes, likewise, it happens that a third set of teeth appear about the age of sixty or seventy. Diemerbroek tells us that he himself, at the age of fifty-six, had a fresh canine tooth, in the place of one he had lost several years before. M. Du Fay saw two incisores and two canini cut the gum in a man aged eighty-four. Mr. Hunter has seen two fore-teeth shoot up in the lower jaw of a very old person; and an account was lately published of a man who had a complete set of teeth at the age of sixty. Other instances of the same kind are to be met with in authors. The circumstance is curious; and, from the time of life at which it takes place, and the return of the catamenia, which sometimes happens to women at the same age, it has been very ingeniously supposed, that there is some effort in nature to renew the body at that period.

The teeth are subject to a variety of *accidents*. Sometimes the gums become so affected as to occasion them to fall out, and the teeth themselves are frequently rendered carious by causes which have not hitherto been satisfactorily explained. The disease usually begins on that side of the tooth which is not exposed to pressure, and gradually advances till an opening is made into the cavity: as soon as the cavity is exposed, the tooth becomes liable to considerable pain, from the air coming into contact with the nerve. Besides these accidental means by which the teeth are occasionally affected, old age seldom fails to bring with it sure and natural causes for their removal. The alveoli fill up, and the teeth consequently fall out. The gums then no longer meet in the forepart of the mouth, the chin projects forwards, and the face being rendered much shorter, the whole physiognomy appears considerably altered. Having thus described the formation, structure, growth, and decay of the teeth, it remains to speak of their uses, the chief of which we know to be in mastication. And here we cannot help observing the great variety in the structure of the human teeth, which fits us for such a variety of food, and which, when compared with the teeth given to other animals, may, in some measure, enable us to explain the nature of the aliment for which man is intended by Nature. Thus, in ruminating animals, we find incisores only in the lower jaw, for cutting the grass, and molares for grinding it; in graminivorous animals, we see molares alone; and in carnivorous animals, canine teeth for catching at their prey, and incisores and molares for cutting and dividing it. But, as man is not designed to catch and kill his prey with his teeth, we observe that our canini are shaped differently from the fangs of beasts of prey, in whom we find them either longer than the rest of the teeth, or curved. The incisores likewise are sharper in those animals than in man. Nor are the molares in the human subject similar to the molares of carnivorous animals; they are flatter in man than in these animals; and, in the latter, we likewise find them sharper at the edges, more calculated to cut and tear the food, and, by their greater strength, capable of breaking the bones of animals. From these circumstances, therefore, we may consider man as partaking of the nature of these different classes; as approaching more to the carnivorous than to the herbivorous tribe of animals; but, upon the whole, formed for a mixed aliment, and fitted equally to live upon flesh and upon vegetables. Those philosophers, therefore, who would confine a man wholly to vegetable food, do not seem to have studied nature. As the molares are the last teeth that are formed, so they are usually the first that fall out: this would seem to prove that we require the same kind of aliment in old age as in infancy. Besides the use of the teeth in mastication, they likewise serve a secondary purpose, by assisting in the articulation of the voice.

Teeth, tartar of. See *Tartar.*

TEETHING. See *Dentition.*

Teething, difficult. See *Dentition, difficult.*

Te'gula hibernica. See *Lapis hibernicus.*

TEGUMENTS. Under the term common integuments, anatomists comprehend the cuticle, rete mucosum, skin, and adipose membrane, as being the covering to every part of the body except the nails. See *Epidermis, Rete mucosum,* and *Cutis.*

TE'LA. (*a, æ.* f.; from *texo,* to weave.) A web of cloth. The cellular membrane is so called from its likeness to a fine web. See *Membrana.*

Tela cellulosa. See *Membrana.*

TELE'PHIUM. (*um, ii.* n.: because it heals old ulcers; such as that of Telephus, made by Ulysses.) See *Sedum telephium.*

TELE'SIA. Sapphire.

TELLURETTED HYDROGENE. A combination of tellurium and hydrogene. To make this compound, hydrate of potash and oxide of tellurium are ignited with char-

coal, and the mixture acted on by dilute sulphuric acid, in a retort connected with a mercurial pneumatic apparatus. An elastic fluid is generated, consisting of hydrogene holding tellurium in solution. It is possessed of very singular properties. It is soluble in water, and forms a claret-coloured solution. It combines with the alkalies. It burns with a bluish flame, depositing oxide of tellurium. Its smell is very strong and peculiar, not unlike that of sulphuretted hydrogene. This elastic fluid was discovered by Sir H. Davy, in 1809.

TELLURIC ACID. *Acidum telluricum.* The oxide of tellurium combines with many of the metallic oxides, acting the part of an acid, and producing a class of compounds which have been called *tellurates*.

TELLU'RIUM. (*um, ii.* n.) The name given by Klaproth to a metal extracted from several Transylvanian ores. It is of a tin-white colour, verging to lead-grey, with a high metallic lustre, of a foliated fracture, and very brittle, so as to be easily pulverised. Tellurium is oxidised and dissolved by the principal acids. Fused with an equal weight of sulphur, in a gentle heat, it forms a lead-coloured, striated sulphuret. It does not easily amalgamate with quicksilver.

TEMPERAME'NTUM. (*um, i.* n.; from *tempero,* to mix together.) The peculiar constitution of the humours. Temperaments have been variously distinguished: the division most generally received is into the sanguineous, phlegmatic, choleric, and melançholic.

TEMPERATURE. *Temperatura.* A definite degree of sensible heat, as measured by the thermometer. Thus we say a high temperature, and a low temperature, to denote a manifest intensity of heat or cold; the temperature of boiling water, or 212° Fahrenheit; and a range of temperature, to designate the intermediate points of heat between two distant terms of thermometric indication.

TEMPLE. (*Tempora, um.* pl. n.; and *tempus, oris.* n.) The lateral and flat parts of the head above the ears.

TEMPORAL. (*Temporalis;* from *tempus.*) Belonging to the temple.

Temporal artery. *Arteria temporalis.* A branch of the external carotid, which runs on the temples, and gives off the frontal artery.

Temporal bone. *Os temporis.* Two bones situated one on each side of the head, of a very irregular figure. They are usually divided into two parts, one of which, from the manner of its connection with the neighbouring bones, is called *os squamosum,* and the other, *os petrosum,* from its irregularity and hardness.

In both these parts there are processes and cavities to be described. Externally there are three processes: one anterior, called *zygomatic* process, which is stretched forwards to join with the os malæ, and thus forms the bony jugum under which the temporal muscle passes; one posterior, called the *mastoid* or *mammillary* process, from its resemblance to a nipple; and one inferior, called the *styloid* process, from its shape, which is said to resemble that of the ancient *stylus scriptorius.* In young subjects, this process is united with the bone by an intermediate cartilage, which sometimes, even in adults, is not completely ossified. Three muscles have their origin from this process, and borrow half of their names from it, viz. stylo-glossus, stylo-hyoideus, and stylo-pharyngeus. Round the root of this process there is a particular rising of the os petrosum, which some writers describe as a process, and, from its appearance with the styloid, have named it *vaginalis.* Others describe the semicircular ridge of the meatus auditorius externus as a fifth process, to which they give the name of *auditory.* The depressions and cavities are, 1. A large fossa, which serves for the articulation of the lower jaw: it is situated between the zygomatic auditory, and vaginal processes, and is separated in its middle by a fissure, into which the ligament that secures the articulation of the lower jaw with this bone is fixed. The fore part of this cavity, which receives the condyle of the jaw, is covered with cartilage; the back part only with the periosteum. 2. A long fossa behind the mastoid process, where the digastric muscle has its origin. 3. The *meatus auditorius externus,* the name given to a large funnel-like canal that leads to the organ of hearing. 4. The *stylo-mastoid hole;* so called from its situation between the styloid and mastoid processes. It is likewise called the aqueduct of Fallopius, and affords a passage to the portio dura of the auditory, or seventh pair of nerves. 5. Below, and on the fore-part of the last foramen, we observe part of the jugular fossa, a thimble-like cavity, in which the beginning of the internal jugular vein is lodged. 6. Before, and a little above this fossa, is the orifice of a foramen, through which pass the internal carotid artery and two filaments of the intercostal nerve. This conduit runs first upward and then forward, forming a kind of elbow, and terminates at the end of the os petrosum. 7. At this part of the ossa temporum we observe the orifice of a canal which runs outwards and backwards in a horizontal direction, till it terminates in the cavity of the ear called tympanum. This canal, which in the recent subject is continued from the ear to the mouth, is called the *Eustachian tube.* 8. A small hole behind the mastoid process, which serves for the transmission of a vein to the lateral sinus. But this, like other foramina in the skull that serve only for the transmission of vessels, is neither uniform in its situation, nor to be met with in every subject. The internal surface of these bones may easily be divided into three parts. The first, uppermost, and largest, is the squamous part, which is slightly concave from the impression of the brain. Its semicircular edge is sloping, so that the external lamella of the bone advances farther than the internal, and thus rests more securely on the parietal bones. The second and middlemost, which is the pe-

trous part of the bone, forms a hard, craggy protuberance, nearly of a triangular shape. On its posterior side we observe a large foramen, which is the meatus auditorius internus; it receives the double nerve of the seventh pair, viz. the portio dura and portio mollis of that pair. About the middle of its anterior surface is a small foramen, which opens into the aqueduct of Fallopius, and receives a twig of the portio dura of the seventh pair of nerves. This foramen having been first described by Fallopius, and by him named *hiatus*, is sometimes called *hiatus Fallopii*. Besides these, we observe other smaller holes for the transmission of blood-vessels and nerves. Below this craggy protuberance is the third part, which, from its shape and connection with the os occipitis by means of the lambdoidal suture, may be called the lambdoidal angle of the temporal bone. It is concave from the impression of the brain; it helps to form the posterior and inferior fossæ of the skull, and has a considerable furrow, in which is lodged part of the lateral sinus. The temporal bones differ a little in their structure from the other bones of the cranium. At their upper parts they are very thin, and almost without diploë, but below they have great strength and thickness. In the fœtus, the thin upper part and the lower craggy part are separated by a cartilaginous substance; there is no appearance either of the mastoid or styloid processes, and, instead of a long, funnel-like meatus auditorius externus, there is only a smooth bony ring, within which the membrana tympani is fastened. Within the petrous part of these bones there are several cavities, processes, and bones, which belong altogether to the ear, do not enter into the formation of the cranium, and are described under the article *Ear*. The ossa temporum are connected by suture with the ossa parietalia, the os occipitis, the ossa malarum and the os sphenoides, and are articulated with the lower jaw.

TEMPORA'LIS. (From *tempus*, the temple.) Belonging to the temple.

TEMPORALIS MUSCULUS. A muscle of the lower jaw, situated in the temple. *Crotaphites*, of Winslow. It arises fleshy from the lower, lateral, and anterior part of the parietal bone; from all the squamous portion of the temporal bone; from the lower and lateral part of the os frontis; from the posterior surface of the os malæ; from all the temporal process of the sphenoid bone; and sometimes from a ridge at the lower part of this process. This latter portion, however, is often common to this muscle and the pterygoideus externus. It is of a semicircular shape, and its radiated fibres converge, so as to form a strong middle tendon, which passes under the jugum, and is inserted into the coronoid process of the lower jaw, to which it adheres on every side, but more particularly at its fore-part, where the insertion is continued down to the body of the bone. This muscle is covered by a pretty strong fascia, which some writers have erroneously described as a part of the aponeurosis of the occipito-frontalis. This fascia adheres to the bones, round the whole circumference of the origin of the muscle, and, descending over it, is fixed below to the ridge where the zygomatic process begins, just above the meatus auditorius, to the upper edge of the zygomatic process itself, and anteriorly to the os malæ. This fascia serves as a defence to the muscle, and likewise gives origin to some of its fleshy fibres. The principal use of the temporal muscle is to draw the lower jaw upwards, as in the action of biting; and as it passes a little forwards to its insertion, it may at the same time pull the condyle a little backwards, though not so much as it would have done if its fibres had passed in a direct line from their origin to their insertion, because the posterior and lower part of the muscle passes over the root of the zygomatic process, as over a pully.

TENCH. This well known fish is the *Cyprinus tinca* of the Linnæan system. It inhabits streams of fresh water, is easy of digestion, and much esteemed by some.

TENDO. (*o, inis. vel onis.* m.; from *tendo*, to stretch out or extend.) The white and glistening extremity of a muscle. See *Muscle*.

TENDO ACHILLIS. See *Achillis tendo*.

TENDON. See *Tendo*.

TENDRIL. See *Cirrus*.

TENE'SMUS. (*us, i.* m.; from τειvω, to constringe: so called from the perception of a continual constriction or bound state of the part.) A continual inclination to go to stool, without a discharge, accompanied by a straining.

The cause of this is an irritation of the muscles of the sphincter ani, produced generally by acrimonious substances, as bile, indurated fæces, gall-stones, extraneous bodies, aloetic medicines, &c. The disease is sometimes very violent, and the straining so great as to cause a protrusion of the bowel. Every time any attempt is made to pass the fæces, the irritation returns, and it is sometimes accompanied by painful micturition in men; and a burning painful feeling continues after the stool has passed, with more or less of an urgency to expel. It is often a symptomatic affection of diseases of the urinary bladder, uterus, prostate gland, piles, worms, and organic diseases of the rectum. The best remedies are opium, preparations of lead, and fomentations. A starch glyster, with laudanum, is perhaps the most effectual in allaying the irritation.

TENNANTITE. A variety of grey copper ore found in Cornwall in copper veins, that intersect granite and clay-slate, associated with copper pyrites. It is of a lead-grey or iron-black colour, and consists of copper, sulphur, arsenic, iron, and silica.

TE'NSOR. (*or, oris.* m.; from *tendo*, to stretch.) A muscle, the office of which is to extend the part to which it is fixed.

TENSOR PALATI. See *Circumflexus*.

Tensor tympani. *Internus auris*, of Douglas and Cowper. *Internus malleus*, of Winslow. A muscle of the ear, which pulls the malleus and the membrane of the tympanum towards the petrous portion of the temporal bone, by which the membrana tympani is made more concave and tense.

Tensor vaginæ femoris. *Fascialis membranosus*, of Douglas. *Membranus vel fascia lata*, of Cowper. *Musculus aponeurosis, vel fasciæ latæ*, of Winslow. A muscle situated on the outside of the thigh, which stretches the membraneous fascia of the thigh, assists in the abduction of the thigh, and somewhat in its rotation inwards. It arises by a narrow, tendinous, and fleshy beginning from the external part of the anterior, superior, spinous process of the ilium, and is inserted a little below the great trochanter into the membraneous fascia.

TENT. A roll of lint for dilating openings, sinuses, &c. See *Spongia præparata*.

Tent-wort. See *Asplenium murale*.

TENTO'RIUM. (*um, ii.* n.; *à tendendo.*) A process of the dura mater, separating the cerebrum from the cerebellum. It extends from the internal horizontal spine of the occipital bone, directly forwards to the cella turcica of the sphenoid bone.

TENUIS. Thin; slender.

Terebe'lla. (Diminutive of *terebra*, a piercer or gimblet.) A trepan or instrument for sawing out circular portions of the skull. A trephine.

TEREBI'NTHINA. (*a, æ.* f.; from τερεϐινθος, the turpentine-tree.) Turpentine, the produce of pine-trees. See *Turpentine*.

Terebinthina argentoratensis. Strasburg turpentine. This species is generally more transparent and less tenacious than either the Venice or Chio turpentines. It is of a yellowish brown colour, and of a more agreeable smell than any of the turpentines, except the Chio. It is extracted in several parts of Germany, from the red and silver fir, by cutting out successively narrow strips of the bark. In some places a resinous juice, called *Lachryma abiegna*, and *Oleum abietinum*, is collected from under the bark.

Terebinthina canadensis. Canada turpentine. See *Pinus balsamea*.

Terebinthina chia. See *Pistacia*.

Terebinthina communis. See *Pinus*.

Terebinthina cypria. See *Pistacia*.

Terebinthina veneta. See *Pinus*.

Terebinthina vulgaris. See *Pinus*, and *Turpentine*.

Terebinthinæ oleum. The oil distilled from the liquid resin of the *Pinus sylvestris*.

TE'RES. Round, cylindrical: applied to, 1. Some muscles and ligaments; as *teres major*, *ligamentum teres*, &c.

2. The *ascaris lumbricoides*, or round worm, which infests the intestines. See *Vermis*.

3. Roots, stems, leaves, leafstalks, seeds, &c.

Teres ligamentum. The ligament at the bottom of the socket of the hip joint.

Teres major. Riolanus, who was the first that distinguished this and the other muscles of the scapula by particular appellations, gave the name of *teres* to this and the following muscle, on account of their long and round shape. This muscle, which is longer and thicker than the teres minor, is situated along the inferior costa of the scapula, and is in part covered by the deltoides. It arises fleshy from the outer surface of the inferior angle of the scapula, (where it covers some part of the infra-spinatus and teres minor, with both which its fibres intermix,) and likewise from the lower and posterior half of the inferior costa of the scapula. Ascending obliquely towards the os humeri, it passes under the long head of the triceps brachii, and then becomes thinner and flatter, to form a thin tendon of about an inch in breadth, and somewhat more in length, which runs immediately behind that of the latissimus dorsi, and is inserted along with it into the ridge at the inner side of the groove that lodges the long head of the biceps. These two tendons are included in a common capsula, besides which the tendon of this muscle adheres to the os humeri by two other capsulæ which we find placed one above the other.

This muscle assists in the rotatory motion of the arm, and likewise in drawing it downwards and backwards; so that we may consider it as the congener of the latissimus dorsi.

Teres minor. This muscle seems to have been first described by Fallopius. The teres minor is a thin fleshy muscle, situated along the inferior edge of the infra-spinatus, and is in part covered by the posterior part of the deltoides.

It arises fleshy from all the convex edge of the inferior costa of the scapula; from thence it ascends obliquely upwards and forwards, and terminates in a flat tendon, which adheres to the lower and posterior part of the capsular ligament of the joint, and is inserted into the lower part of the great tuberosity of the os humeri, a little below the termination of the infra-spinatus.

The tendinous membrane, which is continued from the infra-spinatus, and spread over the teres minor, likewise forms a thin septum between the two muscles. In some subjects, however, they are so closely united as to be with difficulty separated from each other. Some of the fibres of the teres minor are intermixed with those of the teres major and subscapularis.

The uses of this muscle are similar to those of the infra-spinatus.

TERETIU'SCULUS. Roundish.

TE'RETRUM. (*um, i.* n.; from τερεω, to pierce.) The trepan.

TERGEMINUS. Doubly twin-forked: applied to a leaf-stalk, when it has two leaflets at the end of each, and two more at the division of the fork.

TERMINA'LIS. Terminal. In the language of *Botany*, opposed to lateral: applied to a flower-stalk when it terminates a stem or branch; as in *Centaurea scabiosa*.

TERMI'NTHUS. (*us, i.* m.; from *τερμινθος*, the turpentine-tree: so called from their resemblance to the fruit of the turpentine-tree.) A black and ardent pustule, mostly attacking the legs of females.

TERNARY. *Ternarius.* Consisting of the number three, which some chemical and mystical writers have made strange work with: but the most remarkable distinction of this kind, and the only one worth notice, is that of Hippocrates, who divides the parts of a human body into continentes, contenta, and impetum facientes, though the latter is resolvable into the mechanism of the two former, rather than any thing distinct in itself.

TERNA'TUS. Ternate: applied to a leaf which consists of three leaflets; as that of the trefoil.

TERNUS. Ternate: by threes. Applied to leaves, when there are three together; as in many of the plants of Chili and Peru, which seem particularly disposed to this arrangement, and in *Verbena triphylla.*

TE'RRA. (*a, æ.* f.: so called *ab eo quòd teratur pedibus.*) See *Earth.*

TERRA ABSORBENS. An absorbent earth, distinguishable from other earthy and stony substances by its solubility in acids; as chalk, crabs'-claws, oyster-shells, egg-shells, pearl, coral, &c.

TERRA CARIOSA. Rotten-stone, a species of chalk, of a brown colour.

TERRA CATECHU. See *Acacia catechu.*

TERRA DAMNATA. See *Caput mortuum.*

TERRA FOLIATA TARTARI. See *Potassæ acetas.*

TERRA JAPONICA. See *Acacia catechu.*

TERRA LEMNIA. See *Bole.*

TERRA LIVONICA. See *Bole.*

TERRA MARITA. See *Curcuma longa.*

TERRA MORTUA. See *Caput mortuum.*

TERRA PONDEROSA. The heavy spar.

TERRA PONDEROSA SALITA. See *Murias barytæ.*

TERRA SIENNA. A brown ochre found at Sienna, in Italy, used in painting.

TERRA SIGILLATA. See *Bole.*

TERRA VERTE. An ore used in painting, which contains iron in some unknown state mixed with clay, and sometimes with chalk and pyrites.

TERRÆ OLEUM. See *Petroleum.*

TERRE'NUS. Terrene: earthy. Applied to plants which grow in the earth only, in opposition to those which live in water, and not in the earth.

TE'RTHRA. (From *τερθρον*, a crane.) The middle and lateral parts of the neck.

Tertian ague. See *Ague.*

TERTIA'NA. See *Ague.*

TERTIANA DUPLEX. A tertian fever that returns every day; but the paroxysms are unequal, every other fit being alike.

TERTIANA DUPLICATA. A tertian fever returning every other day; but there are two paroxysms in one day.

TERTIANA TRIPLEX. A tertian fever returning every day; every other day there are two paroxysms, and but one in the intermediate one.

TERTIANA'RIA. (*a, æ.* f.; from *tertiana*, a species of intermittent fever, which is said to be cured by this plant.) See *Scutellaria galericulata.*

TERTIUM SAL. (From *tertius*; third.) A neutral salt, as being the product of an acid and an alkali, making a third body different from either.

TESSELLA'TUS. (From *tessera*, a square.) Tesselate: chequered.

TE'SSERA. (From *τεσσαρα*, four.) A four-side or cuboid bone.

TEST. Any reagent which, added to a substance, teaches us to discover its chemical nature or composition. See *Reagent.*

TE'STA. (*a, æ.* f.; *quasi tosta;* from *torreo*, to burn.) 1. The shell of a fish, as the oyster-shell.

2. In *Botany*, it is the name of the skin which contains all the parts of a seed, as the embryo, the lobes, the vitellus, and albumen, and which gives shape to the seed, for the skin is perfectly formed while they are but a homogeneous liquid. The testa differs in thickness and texture in different plants. It is sometimes single, but more frequently lined with a finer and very delicate film, called by Gærtner *membrana*, as may be seen in a walnut, and the kernel of a peach, almond, or plum. —*Smith.*

TESTA PROBATRIX. A cupel or test. A pot for separating baser metals from gold and silver.

TESTACEOUS. (*Testaceus;* from *testa*, a shell.) Having a shell: applied to powders, and compounds of shells, which were formerly much used.

TESTÆ PREPARATÆ. Prepared oyster-shells Wash the shells, previously cleared of dirt with boiling water, then prepare them by repeated washings.

TESTES CEREBRI. See *Tubercula quadrigemina.*

TESTICLE. See *Testis.*

Testicle, swelled. See *Orchitis.*

TESTI'CULUS. (*us, i.* m.; diminutive of *testis.*) 1. A small testicle.

2. The *orchis* plant: so named from the resemblance of its roots to a testicle.

TESTICULUS CANINUS. See *Orchis mascula.*

TE'STIS. (*is, is.* m.; a witness: the *testes* being the witnesses of our manhood.) *Orchis.* The testicle. They are also called *didymi*, and by some *perin.* Two little oval bodies situated within the scrotum, and covered by a strong, white, and dense coat, called tunica albuginea. Each testicle is composed of small vessels, bent in a serpentine direction, arising from the spermatic artery, and convoluted into little heaps, separated from one another by cellular partitions. In each partition there is a duct receiving semen from the small vessels; and all the ducts constitute a net which is attached to the tunica albuginea. From this network twenty or more vessels arise, all of which are variously contorted, and, being reflected, ascend to the posterior margin

of the testis, where they unite into one common duct, bent into serpentine windings, and forming a hard body called the *epididymis*. The spermatic arteries are branches of the aorta. The spermatic veins empty themselves into the vena cava and emulgent vein. The nerves of the testicle are branches of the lumbar and great intercostal nerve. The use of the testicle is to secrete the semen.

TESTU'DO. (*o, inis.* f.; from *testa*, a shell: because it is covered with a shell.) 1. The name of a genus of animals, of the class *Amphibia*, and order of *Reptiles*. The tortoise.

2. An ulcer or tumour, which, like a snail, creeps under the skin.

TETANIC. *Tetanicus*. Appertaining to tetanus or cramp.

Tetano'ma. (From τετανοω, to smooth.) *Tetanothra*. A medicine which smoothes the skin, and removes wrinkles.

TETA'NUS. (*us, i.* m.; from τεινω, to stretch.) Spasm with rigidity. *Convulsio indica*. *Holotonicos*. *Rigor nervosus*. A disease, characterised by a spasmodic rigidity of almost the whole body. The varieties of tetanus are, 1. *Opisthotonos*, where the body is thrown back by spasmodic contractions of the muscles. 2. *Emprosthotonos*, the body being bent forwards. 3. *Trismus*, the locked jaw. Tetanus is often symptomatic of syphilis and worms.

These affections arise more frequently in warm climates than in cold ones, and are very apt to occur when much rain or moisture quickly succeeds excessively dry and sultry weather. They attack persons of all ages, sexes, temperaments, and complexions, but the male sex more frequently than the female, and those of a robust and vigorous constitution than those of a weak habit. An idea is entertained by many, Dr. Thomas observes, that negroes are more predisposed to attacks of tetanus than white people; they certainly are more frequently affected with it, but this circumstance does not arise from any constitutional predisposition, but from their being more exposed to punctures and wounds in the feet, by nails, splinters of wood, pieces of broken glass, &c. from usually going barefooted.

Tetanic affections are occasioned either by exposure to cold, or by some irritation of the nerves, in consequence of local injury by puncture, incision, or laceration. Lacerated wounds of tendinous parts prove, in warm climates, a never-failing source of these complaints. In cold climates, as well as in warm, the locked jaw frequently arises in consequence of the amputation of a limb.

When the disease has arisen in consequence of a puncture, or any other external injury, the symptoms show themselves generally about the eighth day; but when it proceeds from exposure to cold, they generally make their appearance much sooner.

In some instances it comes on suddenly, and with great violence; but it more usually makes its attack in a gradual manner; in which case, a slight stiffness is at first perceived in the back part of the neck, which, after a short time, becomes considerably increased and at length renders the motion of the head both difficult and painful.

With the rigidity of the head there is likewise an uneasy sensation at the root of the tongue, together with some difficulty in swallowing, and a great tightness is perceived about the chest, with a pain at the extremity of the sternum, shooting into the back. A stiffness also takes place in the jaws, which soon increases to such a height, that the teeth become so closely set together as not to admit of the smallest opening. This is what is termed the locked jaw, or *trismus*.

In some cases, the spasmodic affection extends no further. In others, the spasms at this stage of the disease, returning with great frequency, become likewise more general, and now effect not only the muscles of the neck and jaws, but likewise those of the whole spine, so as to bend the trunk of the body very forcibly backwards; and this is what is named *opisthotonos*. Where the body is bent forwards the disease is called *emprosthotonos*.

During the whole course of the disorder, the abdominal muscles are violently affected with spasm, so that the belly is strongly retracted, and feels very hard, most obstinate costiveness prevails, and both the flexor and extensor muscles of the lower extremities are commonly affected at the same time so as to keep the limbs rigidly extended.

The flexors of the head and trunk become at length so strongly affected as to balance the action of the extensor, and to keep the head and trunk so rigidly extended and straight, as to render it incapable of being moved in any direction. The arms, which were little affected before, are now likewise rigidly extended, the tongue also becomes affected with spasm, and, being convulsively darted out, is often much injured by the teeth at that moment snapping together. It is to this state of the disease that the term tetanus has been strictly applied.

The disorder continuing to advance, every organ of voluntary motion becomes affected: the eyes are rigid and immoveable; the countenance is hideously distorted, and expresses great distress; the strength is exhausted, and the pulse becomes irregular; and one universal spasm puts a period to a most miserable state of existence.

Attacks of tetanus are seldom attended with any fever, but always with violent pain, and the spasms do not continue for a constancy, but the muscles admit of some remission in their contraction, which is frequently renewed, especially if the patient makes the least attempt to speak, drink, or alter his position.

When tetanic affections arise in consequence of a wound, puncture, or laceration, in warm climates, Dr. Thomas observes, they are almost sure to prove fatal. The locked jaw in consequence of an amputation likewise proves usually fatal. When these affections are pro-

duced by an exposure to cold, they may in most cases be removed by a timely use of proper remedies, although a considerable space will probably elapse before the patient will be able to recover his former strength.

On dissections of this disease, slight effusions within the cranium have been observed in a few instances; but in by far the greater number, nothing has been discovered, either in the brain or any other organ.

The general indications are,—1. To remove any local irritation which may appear to have excited the disease. 2. To lessen the general irritability, and spasmodic tendency. 3. To restore the tone of the system. —If a thorn, or other extraneous substance, be lodged in any part, it must be extracted; any spicula of bone which may have brought on the disease after amputation, should be removed; a punctured wound ought to be dilated, &c. Some have proposed dividing the nerve going to the part, or even amputating this, to cut off the irritation; others paralysing the nerves by powerful sedatives, or destroying them by caustics; others again, exciting a new action in the part by active stimulants; but the efficacy, and even propriety, of such measures is doubtful. To fulfil the second indication, various means have been proposed. The abstraction of blood, recommended by Dr. Rush, might perhaps appear advisable in a vigorous plethoric habit in the beginning of the disease, but it has generally proved of little utility, or even hurtful, and is rather contra-indicated by the state of the blood. Purging is a less questionable measure, as costiveness generally attends the disease, and in many cases it has appeared very beneficial, especially when calomel was employed. It has been found, also, that a salivation, induced by mercury, has sometimes greatly relieved the disorder; but in other instances it has failed altogether. The remedy which has been oftenest employed, and with the most decided advantage, is opium, and sometimes prodigious quantities of it have been exhibited: indeed, small doses are useless, and even large ones have only a temporary effect, so that they must be repeated as the violence of the symptoms is renewed; and, where the patient cannot swallow, it may be tried in glyster, or freely rubbed into the skin. Other sedative and antispasmodic remedies have been occasionally resorted to, as hemlock, tobacco, musk, camphire, &c. but for the most part with less satisfactory results. The warm bath has sometimes proved a useful auxiliary in cold climates; but the cold bath is much more relied upon, especially in the West Indies, usually in conjunction with the liberal use of opium. In Germany, alkaline baths, and the internal use of the same remedies, are stated to have been decidedly serviceable. Others have advised the large use of bark and wine, which seem, however, rather calculated to be preventives, or to fulfil the third indication; yet wine may be employed rather as nourishment, since in severe cases of the disease little else can be taken. Electricity seems too hazardous a remedy to be tried in a general affection, especially in the muscles of respiration; but if confined to the jaw, it may be useful in a mild form. At the period of convalescence, the strength must be restored by suitable diet and medicines, the cold bath, regular exercise, &c.; and removing the patient from the West Indies to a colder climate, till the health is fully established, would be a very proper precaution.

TETARTÆ'US. (Τεταρταιος, fourth.) A quartan fever.

TETRADYNA'MIA. (*a, æ.* f.; from τεσσαρες, four, and δυναμις, power.) The name of a class of plants in the sexual system of Linnæus, containing hermaphrodite flowers, with six stamens, four of which are long, and two short.

TETRAGONUS. Four-cornered; quadrangular; square. Applied to several parts of plants; as *caulis tetragonus, folium tetragonium*, &c.

TETRAGY'NIA. (*a, æ.* f.; from τεσσαρες, four, and γυνη, a wife.) The name of an order of plants in several of the classes of the sexual system of Linnæus, consisting of plants which, to the classic character, whatever it is, add the circumstance of having four pistils.

TETRAO. The name of a genus of birds, of the order *Gallinæ*.

Tetrao tetrix. The black cock, black fowl, or black grouse. A rare bird, the flesh of which is white and brown on the breast: it is of easy digestion when tender.

Tetramy'rum. (From τετρας, four, and μυρον, an ointment.) An ointment of four ingredients.

TETRA'NDRIA. (*a, æ.* f.; from τεσσαρες, four, and ανηρ, a husband.) The name of a class of plants in the sexual system of Linnæus. To it belong those which have hermaphrodite flowers, with four stamina of equal length.

Tetrangu'ria. (From τετρας, four, and αγγος, a cup: so called because its fruit resembles a cup divided into four parts.) A species of citrul. Not now in use.

TETRAPETALOUS. *Tetrapetela.* Four-petalled: applied to the flower that consists of four single petals or leaves placed around the pistil.

TETRAPHA'RMACUM. (*um, i.* n.; from τετρας, four, and φαρμακον, a drug.) A medicine composed of four ingredients.

TETRAPHYLLOUS. (*Tetraphyllus*; from τετρας, four, and φυλλον, a leaf.) Four-leaved.

TETRASPERMAL. (*Tetraspermalis*; from τετρας, four, and σπερμα, a seed.) Four-seeded.

TETTER. See *Psoriasis*.

Tetter, dry. See *Psoriasis*.

Tetter, humid. See *Impetigo*.

TEU'CRIUM. (*um, ii.* n.; from *Teucer*, who discovered it.) The name of a genus of

plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia*. The herb speedwell.

TEUCRIUM CAPITATUM. The systematic name of the poley mountain of Montpelier. *Polium montanum.* This plant bears the winter of our climate, and is generally substituted for the Candy species.

TEUCRIUM CHAMÆDRYS. The systematic name of the common germander. *Chamædrys. Chamædrys minor repens, vulgaris. Quercula calamandrina. Trissago. Chamædrops*, of Paulus Ægineta, and Oribasius. This plant, called also creeping germander, small germander, and English treacle, *Teucrium—foliis cuneiformi-ovatis, incisis, crenatis, petiolatis; floribus ternis; caulibus procumbentibus, subpilosis*, of Linnæus, has a moderately bitter and somewhat aromatic taste. It was in high repute amongst the ancients in intermittent fevers, rheumatism, and gout; and where an aromatic bitter is wanting, germander may be administered with success. The best time for gathering this herb is when the seeds are formed, and the tops are then preferable to the leaves. When dry, the dose is from ʒss. to ʒj. Either water or spirit will extract their virtue; but the watery infusion is more bitter. This plant is an ingredient in the once celebrated powder called from the Duke of Portland.

TEUCRIUM CHAMÆPITYS. The systematic name of the common ground-pine. *Chamæpitys. Arthetica. Arthretica. Ajuga. Abiga. Iva arthritica. Holocyron. Ionia. Sideritis.* This low hairy plant, *Teucrium—foliis trifidis, linearibus, integerrimis; floribus sessilibus, lateralibus, solitariis; caule diffuso*, of Linnæus, has a moderately bitter taste, and a resinous, not disagreeable smell, somewhat like that of the pine. The tops or leaves are recommended as aperients and corroborants of the nervous system, and said to be particularly serviceable in female obstructions and paralytic disorders.

TEUCRIUM CRETICUM. The systematic name of the poley mountain of Candy. *Polium creticum.* The tops and whole herb enter the antiquated compounds *mithridate* and *theriaca*. The plant is obtained from the island of Candy; has a moderately aromatic smell, and a nauseous bitter taste. It is placed amongst the aperients and corroborants.

TEUCRIUM IVA. French ground-pine. *Chamæpitys moschata. Iva moschata monspeliensium. Chamæpitys anthyllus.* It is weaker, but of similar virtues to chamæpitys.

TEUCRIUM MARUM. The systematic name of the Marum germander, or Syrian herb mastich. *Marum syriacum. Marum creticum. Majorana syriaca. Marum verum. Marum cortusi. Chamedrys incana maritima.* This shrub is the *Teucrium—foliis integerrimis ovatis acutis petiolatis, subtus tomentosis; floribus racemosis secundis*, of Linnæus. It grows plentifully in Greece, Egypt, Crete, and Syria. The leaves and younger branches, when recent, on being rubbed betwixt the fingers, emit a volatile aromatic smell, which readily excites sneezing; to the taste they are bitterish, accompanied with a sensation of heat and acrimony. Judging from these sensible qualities of the plant, it may be supposed to possess very active powers. It is recommended as a stimulant, aromatic, and deobstruent; and Linnæus, Rosenstein, and Bergius speak highly of its utility. Dose, ten grains to half a drachm of the powdered leaves, given in wine. At present, however, marum is chiefly used as an errhine.

TEUCRIUM MONTANUM. The systematic name of the common poley mountain.

TEUCRIUM POLIUM. The systematic name of the golden poley mountain. Neither this nor the former are now used.

TEUCRIUM SCORDIUM. The systematic name of the water germander. *Scordium. Trissago palustris. Chamædrys palustris. Allium redolens.* The leaves of this plant have a smell somewhat of the garlic kind, from which circumstance it is supposed to take its name: to the taste they are bitterish and slightly pungent. The plant was formerly in high estimation, but is now justly fallen into disuse, although recommended by some in antiseptic cataplasms and fomentations.

TEU'THRUM. The *Teucrium polium.*

THA'LAMUS. (*us, i.* m. Θαλαμος, a bed.) A bed.

1. In *Anatomy*, applied to what is supposed to be the origin of the optic nerve. See *Thalamus nervi optici.*

2. In *Botany*, the receptacle of parts of fructification of plants. See *Receptaculum.*

THALAMUS NERVI OPTICI. Two bodies which form in part the optic nerve, placed near to each other, in appearance white, protruding at the base of the lateral ventricles, and running in their direction inwards, a little downwards and upwards, are called the *Thalami nervorum opticorum.*

THALASSO'MELI. (From θαλασσα, the sea, and μελι, honey.) A medicine composed of sea water and honey.

THALI'CTRUM. (*um, i.* n.; from θαλλω, to flourish.) 1. The name of a genus of plants in the Linnæan system. Class, *Polyandria*; Order, *Polygynia.*

2. The pharmacopœial name of the poor man's rhubarb. See *Thalictrum flavum.*

THALICTRUM FLAVUM. The systematic name of the poor man's rhubarb. The root of this plant is said to be aperient and stomachic, and to come very near in its virtues to rhubarb. It is a common plant in this country, but seldom used medicinally.

THALLITE. Epidote, or pistacite.

THALLUS. (*us, i.* m.; from θαλλος, an olive bud, or green bough; from θαλλω, to be verdant, to shoot forth, or spread abroad.) A term applied by Acharius for the frond or foliage of a lichen, whether that part be of a leafy, fibrous, scaly, or crustaceous nature.

THA'PSIA. (*a, æ.* f.; from *Thapsus*, the island where it was found.) The name

of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

THAPSIA ASCLEPIAS. The deadly carrot. The root operates violently both upwards and downwards, and is not used in the present practice.

THA'PSUS. (From the island *Thapsus*.) The great white mullein, or cows' lungwort. See *Verbascum thapsus*.

THE'A. (*a*, *æ*. f.) Tea. The dried leaves of the tea-tree, of which there are two species, viz.—1. The *Thea nigra*, bohea, or black tea; and, 2. The *viridis*, or green tea; both of which are natives of China or Japan, where they attain the height of five or six feet.

Great pains are taken in collecting the leaves *singly*, at three different times, viz. about the middle of February, in the beginning of March, and in April. Although some writers assert, that they are first exposed to the steam of boiling water, and then dried on copper plates, yet it is now understood that such leaves are simply dried on *iron* plates, suspended over a fire, till they become dry and shrivelled: when cool, they are packed in tin boxes to exclude the air, and in that state exported to Europe.

Teas are divided in Britain into three kinds of *green*, and five of *bohea*. The former class includes,—

1. *Imperial* or *bloom tea*, having a large leaf, a faint smell, and being of a light green colour.

2. *Hyson*, which has small curled leaves, of a green shade inclining to blue.

3. *Singlo* tea, thus termed from the place where it is cultivated.

The boheas comprehend,—

1. *Souchong*, which, on infusion, imparts a yellowish green colour.

2. *Camho*, a fine tea, emitting a fragrant violet smell, and yielding a pale shade; it receives its name from the province where it is reared.

3. *Pekoe tea*, which is known by the small white flowers that are mixed with it.

4. *Congo*, which has a larger leaf than the preceding variety, and yields a deeper tint to water; and,

5. *Common bohea*, the leaves of which are of an uniform green colour. There are besides other kinds of tea, sold under the names of *gunpowder tea*, &c. which differ from the preceding only in the minuteness of their leaves, and being dried with additional care.

The following interesting results of experiments on tea by Brande have been published by him in his Journal:—

One-hundred parts of Tea.	Soluble in Water.	Soluble in Alkohol.	Precipit. with Jelly.	Inert Residue.
Green Hyson....14*s*. per lb.	41	44	31	56
Ditto...............12*s*.	34	43	29	57
Ditto...............10*s*.	36	43	26	57
Ditto............... 8*s*.	36	42	25	58
Ditto............... 7*s*.	31	41	24	59
Black Souchong 12*s*.	35	36	28	64
Ditto ....10*s*.	34	37	28	63
Ditto............... 8*s*.	37	35	28	63
Ditto......... ..... 7*s*.	36	35	24	64
Ditto............... 6*s*.	35	31	23	65

Much has been said and written on the medicinal properties of tea. In its natural state it is a *narcotic* plant, on which account the Chinese refrain from its use till it has been divested of this property by keeping it at least for twelve months. If, however, good tea be drunk in moderate quantities, with sufficient milk and sugar, it invigorates the system, and produces a temporary exhilaration; but when taken too copiously, it is apt to occasion weakness, tremor, palsies, and various other symptoms arising from narcotic plants, while it contributes to aggravate hysterical and hypochondriacal complaints. Tea has also been supposed to possess considerable diuretic and sudorific virtues, which, however, depend more on the *quantity* of warm water employed as a vehicle, than the quality of the tea itself. Lastly, as infusions of these leaves are the safest refreshment after undergoing great bodily fatigue or mental exertion, they afford an agreeable beverage to those who are exposed to cold weather; at the same time tending to support and promote perspiration, which is otherwise liable to be impeded.

THEA GERMANICA. The male speedwell. See *Veronica officinalis*.

THEBA'ICUS. (*A Thebaide regione*; from the country about the ancient city of Thebes in Egypt, where it flourished.) Thebian: applied as a trivial name to articles which grow or come from Thebes; as the Egyptian poppy.

THEBESII FORAMINA. The orifices of veins in the cavities of the heart.

THE'CA. (*a*, *æ*. f.; from τιθημι, to place.) A case, sheath, or box. 1. The canal of the vertebral column. See *Spine*.

2. The capsule or dry fructification adhering to the apex of a frondose stem.

THECA VERTEBRALIS. The vertebral canal. See *Vertebræ*.

THE'NAR. (*ar*, *aris*. n. Θεναρ.) The palm of the hand or sole of the foot.

THEOBRO'MA. (*a*, *æ*. f.; from Θεοι, the gods, and βρωμα, food: so called from

the deliciousness of its fruit.) 1. The name of a genus of plants. Class, *Polyadelphia*; Order, *Decandria*.

2. The name of a compound used as a food.

THEOBROMA CACAO. The systematic name of the tree which affords cocoa and chocolate. Cocoa is the name given to the fruit, which is of the size of a kidney bean, and is enclosed in a thin shell. The shells are often ground and boiled for an article of diet; and the seed, ground down, is formed into cakes called chocolate. Both are highly nourishing when boiled with milk; to which eggs are sometimes added. When the stomach can bear this food it is admirably calculated for the sick, and especially the tabid. To those in health it is a luxury.

THEODO'RICUM. (From θεοι, the gods, and δωρον, a gift.) The pompous and obsolete name of some antidotes.

THERAPEI'A. (*a, æ.* f.; from θεραπευω, to heal.) *Therapia.* See *Therapeutics.*

THERAPEUTICS. (*Therapeuticus*; from θεραπευω, to cure.) *Therapia. Methodus medendi.* Therapia, or therapeutice, is that division of pathology, or science, which considers the application of the remedies and means employed with a view to prevent and to cure diseases.

The cure of a disease depends on the removal of its proximate cause. This is effected either by the powers of nature alone, or conjointly with the assistance of art: so that the cure of a disease may be said to be either natural or artificial.

The powers of nature, denominated the *vires medicatrices naturæ*, are inherent in the solids and fluids, and it is by their exertion that a stop is occasionally put to the progress of a disease, or that it is cured without the administration of medicine; and it is also by their co-operation that the medical art is so beneficial. These healing powers of nature are arranged into,—

1. *An increased vital energy.*
2. *A diminished vital power.*
3. *An excerning power.*
4. *An absorbent power.*
5. *A regenerative power.*
6. *A suppurative power.*
7. *A peculiar appetite or desire.*

We are in ignorance, most probably, of the greater part of the healing powers of nature. Many diseases are cured by attention merely to the air we breathe, the food we eat, the state of the mind, the rest and exercise of the body; and many are naturally removed as life advances, and by alteration of habits, change of temperature, clothing, and climate, without the aid of medicines.

The assistance with which the medical art is enabled to attempt, and to effect, the cure of diseases is arranged under three heads; viz.—

1. The *hygienal;* which embraces the diet and regimen.

2. The *medicinal;* which regards the administration of medicines, both external and internal.

3. The *surgical;* or the assistance of manual, fascial, and instrumental operations.

As some diseases admit of being prevented, some of being partially, and others of being wholly removed or cured, there is a natural distinction into,—

1. The *prophylactic.*
2. The *palliative.*
3. The *radical* cure.

The *methodus medendi*, or method of cure, is the plan which regulates all the circumstances, rules, regulations, &c. for the welfare of the diseased. It therefore not only embraces the knowledge of the remedy to be exhibited, but also the consideration of the state of the body, the knowledge of the nature of the disease, and the operation of the remedies; for when disease is going on the functions are not performed in a healthy manner, and one or more of the moving powers take on a particular change of action, in which change the disease consists. The removal, therefore, of the disease requires the return from morbid to healthy action. This must, of course, be effected by bringing about certain alterations in the moving fibres. This being admitted, it follows that the application of the remedy must be so managed as to produce such alterations as are known by experience to diminish or destroy the diseased action; so that, to attempt the cure of a disease, we must first be acquainted with the alterations we wish to produce, and we must also know what means are capable of effecting the change we desire. Pathologists have arranged the consideration of these several circumstances under four heads: namely, the indicant, the indication, the thing indicated, and the contra-indication; and unless these are duly considered before we attempt either to palliate or cure a disease, the attempt will most probably be unsuccessful; at any rate it will be empirical.

1. The *indicant;* or diseased action from which the symptoms arise, and every thing that should not exist, is an indicant.

2. The *indication;* or that which is calculated to remove the indicant.

3. The *thing indicated;* or the remedy.

4. The *contra-indication;* or that about the patient or the disease which prevents the use or application of the usual remedies.

These several divisions are well illustrated in hysteria: the hysterical action of the nerves and muscles are the indicant or disease, the symptoms of which are the unnatural and peculiar movements of the muscles affected; the indication is to allay those unnatural and inordinate contractions; the thing indicated is opium, or æther, or camphire, or all in combination. It may happen that the smallest quantity of opium or æther would produce much after-inquietude; that peculiarity is a contra-indication to its use, and some other must be preferred.

THERI'ACA. (*a, æ.* f.; from θηρ, a viper, or venomous wild beast.) 1. Treacle, or molasses. See *Saccharum officinale.*

2. A medicine appropriated to the cure of the bites of venomous animals, or to resist poisons.

THERIACA ANDROMACHI. See *Mithridatium.*

THERIACA CŒLESTIS. The tinctura opii.

THERIACA DAMOCRATIS. See *Mithridatium.*

THERIACA EDINENSIS. See *Confectio opii.*

THERIACA GERMANORUM. A rob of juniper berries.

THERIACA LONDINENSIS. A cataplasm of cummin seed, bay-berries, germander, snake-root, cloves, and honey.

THERIACA RUSTICORUM. See *Allium.*

THERIACA VENETA. See *Mithridatium.*

THERIO'MA. (From θηριοω, to rage like a wild beast.) A malignant ulcer.

THE'RMA. (*a, æ.* f.; from θερμη, heat.) A warm bath or spring. See *Mineral waters,* and *Bath.*

THERMOMETER. (*Thermometrum,* *i.* n.; from θερμη, heat, and μετρον, a measure.) An instrument for measuring the degrees of heat. A thermometer is a hollow tube of glass, hermetically sealed, and blown at one end in the shape of a hollow globe. The bulb and part of the tube are filled with mercury, which is the only fluid which expands equally. When we immerse the bulb of the thermometer in a hot body, the mercury expands, and of course *rises* in the tube; but when we plunge it into a cold body, the mercury contracts, and of course *falls* in the tube.

The rising of the mercury indicates, therefore, an increase of heat; its falling, a diminution of it; and the quantity which it rises or falls, denotes the proportion of increase or diminution. To facilitate observation, the tube is divided into a number of equal parts, called degrees.

Further, if we plunge a thermometer ever so often into melting snow or ice, it will always stand at the same point. Hence we learn that *snow* or *ice* always begins to melt at the same temperature.

If we plunge a thermometer repeatedly into water kept boiling, we find that the mercury rises up to a certain point. This is, therefore, the point at which water always boils, provided the pressure of the atmosphere be the same.

There are four different thermometers used at present in Europe, differing from each other in the number of degrees into which the space between the freezing and boiling points is divided. These are Fahrenheit's, Réaumur's, Celsius's, and Delisle's.

The thermometer uniformly used in Britain is Fahrenheit's: in this the freezing point is fixed at 32°—the boiling point, at 212° above 0°—or the part at which both the ascending and descending series of numbers commence.

In the thermometer which was first constructed by Réaumur, the scale is divided into a smaller number of degrees upon the same length, and contains not more than 80° between the freezing and the boiling points. The freezing point is fixed in this thermometer precisely at 0°, the term between the ascending and the descending series of numbers. Again, 100 is the number of the degrees between the freezing and the boiling points in the scale of Celsius, which has been introduced into France, under the name of the Centigrade thermometer; and the freezing point is in this, as in the thermometer of Réaumur, fixed at 0°. One degree on the scale of Fahrenheit appears, from this account, to be equal to 4-9ths of a degree on that of Réaumur, and to 5-9ths of a degree on that of Celsius.

The space in Delisle's thermometer between the freezing and boiling points is divided into 150°, but the graduation begins at the boiling point, and increases towards the freezing point. The boiling point is marked 0, the freezing point 150. Hence 180 F. = 150 D., or 6 F. = 5 D. To reduce the degrees of Delisle's thermometer *under* the boiling point to those of Fahrenheit, we have F. = 212 — 6-5 D.; to reduce those *above* the boiling point, F. = 212 + 6-5 D. Upon the knowledge of this proportion it is easy for the student to reduce the degrees of any of these thermometers into the degrees of any other of them.

Thieves'-vinegar. (So called because it was introduced to judges and those in court as a preservative against the infection that might be caught from the thieves.) See *Acetum prophylacticum.*

THIGH. See *Femur.*

THIGH-BONE. See *Femoris os.*

THIRST. *Sitis.* 1. In *Physiology,* the sensation by which we experience a desire to drink. It is variable according to individuals, and it is rarely uniform in the same person. Generally speaking, it consists of a feeling of dryness, of heat and constriction, which reigns in the back part of the mouth, the pharynx, œsophagus, and sometimes the stomach. Though thirst continue but for a short time, these parts swell and become red, the mucous secretion ceases almost entirely; that of the follicles changes, becomes thick and tenacious; the flowing of the saliva diminishes, and its viscosity is sensibly augmented. These phænomena are accompanied by a vague inquietude, by a general heat; the eyes become red, the mind is troubled, the motion of the blood is accelerated, the respiration becomes laborious, the mouth is frequently opened wide, in order to bring the external air into contact with the irritated parts, and thus to produce a momentary ease. For the most part the inclination to drink is developed, when by some cause, for example, heat and dryness of the atmosphere, the body has lost a great deal of fluid; but it appears under a great many different circumstances, such as having spoken long, having eaten certain sorts of food, or swallowed a substance which remains in the œsophagus, &c. The vicious habit of frequently drinking, and the desire of tasting some liquids, such as brandy, wine, &c. cause the developement of a feeling which has the greatest analogy with thirst.

There are people who have never felt thirst,

who drink from a sort of sympathy, but who could live a long time without thinking of it, or without suffering from the want of it; there are other persons in whom thirst is often renewed, and becomes so strong as to make them drink from forty to sixty pints of liquid in twenty-four hours: in this respect great individual differences are remarked. Thirst, then, is an internal sensation, an instinctive feeling: it belongs essentially to the organisation, and admits of no explanation.

II. In *Pathology*, this is frequently morbid, and in this state it is either in excess or deficient.

1. *Immoderate thirst* is accompanied by a sense of dryness in the mouth and throat, and a constant desire to drink. This, though a common symptom in most febrile diseases, occasionally exists as an idiopathic disease. Four hundred pints of wine and water are said to have been drank daily; and the most intolerable torture is often felt from thirst when a person is reluctantly compelled to a confession of guilt. Excessive thirst, when a disease, is best removed by mercurial purges.

2. *Thirstlessness.* This is a very unusual thing, and with difficulty can it be considered a disease. Sauvages, in his Nosology, mentions two instances of it; and the writer of this article knows at this time a gentleman who would never drink from a desire so to do.

THISTLE. See *Carduus.*

Thistle, carline. See *Carlina acaulis.*

Thistle, creeping. See *Serratula.*

Thistle, holy. See *Centaurea benedicta.*

Thistle, ladies'. See *Carduus.*

Thistle, milk. See *Carduus.*

Thistle, pine. See *Carlina gummifera.*

Thistle, way. See *Serratula.*

THLA'SPI. (*pi.* n. indeclinable: from θλαω, to break; because its seed appears as if it were broken or bruised.) 1. The name of a genus of plants in the Linnæan system. Class, *Tetradynamia;* Order, *Siliculosa.*

2. The pharmacopœial name of the herb penny-cress. Two species of thlaspi are directed in some pharmacopœias for medicinal uses,—the *Thlaspi arvense*, of Linnæus, or treacle mustard, and *Thlaspi campestre*, of Linnæus, or mithridate mustard. The seeds of both have an acrid biting taste, approaching to that of common mustard, with which they agree nearly in their pharmaceutic qualities. They have also an unpleasant flavour, somewhat of the garlic or onion kind.

THLASPI ARVENSE. The treacle mustard. See *Thlaspi.*

THLASPI CAMPESTRE. The mithridate mustard. See *Thlaspi.*

THORACIC. (*Thoracicus;* from *thorax*, the chest.) Belonging to the thorax or chest.

Thoracic aorta. See *Aorta, thoracic.*

THORACIC DUCT. *Ductus thoracicus. Ductus Pecquetii.* The trunk of the absorbents. It is of a serpentine form, and about the diameter of a crow-quill, and lies upon the dorsal vertebræ, between the aorta and vena azygos, extending from the posterior opening of the diaphragm to the angle formed by the union of the left subclavian and jugular veins, into which it opens and evacuates its contents. In this course the thoracic duct receives the absorbent vessels from almost every part of the body. See *Absorbent.*

THO'RAX. (*ax, acis.* f.; from θορεω, to leap: because in it the heart leaps.) The chest, or that part of the body situated between the neck and the abdomen. The external parts of the thorax are, the common integuments, the breasts, various muscles, and the bones of the thorax. (See *Bone*, and *Respiration.*) The parts within the cavity of the thorax are, the pleura and its productions, the lungs, heart, thymus gland, œsophagus, thoracic duct, arch of the aorta, part of the vena cava, the vena azygos, the eighth pair of nerves, and part of the great intercostal nerve.

THORI'NA. (*a, æ.* f.) An earth discovered in 1816 by Berzelius. He found it in small quantities in the gadolinite of Korarvet, and two new minerals, which he calls the deutofluate of cerium, and the double fluate of cerium and yttria. It resembles zirconia.

To obtain it from those minerals that contain protoxide of cerium and yttria, we must first separate the oxide of iron by succinate of ammonia. The new earth, indeed, may, when alone, be precipitated by the succinates; but in the analytical experiments in which he has obtained it, it precipitated in so small a quantity along with iron, that he could not separate it from that oxide. The deutoxide of cerium is then precipitated by the sulphate of potash; after which the yttria and the new earth are precipitated together by caustic ammonia. Dissolve them in muriatic acid. Evaporate the solution to dryness, and pour boiling water on the residue, which will dissolve the greatest part of the yttria; but the undissolved residue still contains a portion of it. Dissolve it in muriatic or nitric acid, and evaporate it till it becomes as exactly neutral as possible. Then pour water upon it, and boil it for an instant. The new earth is precipitated, and the liquid contains disengaged acid. By saturating this liquid, and boiling it a second time, we obtain a new precipitate of the new earth.

This earth, when separated by the filter, has the appearance of a gelatinous, semi-transparent mass. When washed and dried, it becomes white, absorbs carbonic acid, and dissolves with effervescence in acids. Though calcined, it retains its white colour; and when the heat to which it has been exposed was only moderate, it dissolves readily in muriatic acid; but if the heat has been violent, it will not dissolve till it be digested in strong muriatic acid. This solution has a yellowish colour; but it becomes colourless when diluted with water, as is the case with glucina, yttria, and alumina. If it be mixed with yttria, it dissolves more readily after having been exposed to heat. The neutral solutions of this earth have a purely astringent taste,

which is neither sweet, nor saline, nor bitter, nor metallic. In this property it differs from all other species of earths, except zirconia.

When dissolved in sulphuric acid with a slight excess of acid, and subjected to evaporation, it yields transparent crystals, which are not altered by exposure to the air, and which have a strong styptic taste.

This earth dissolves very easily in nitric acid; but after being heated to redness, it does not dissolve in it except by long boiling. The solution does not crystallise, but forms a mucilaginous mass, which becomes more liquid by exposure to the air, and which, when evaporated by a moderate heat, leaves a white opake mass, similar to enamel, in a great measure insoluble in water.

It dissolves in muriatic acid, in the same manner as in nitric acid. The solution does not crystallise. When evaporated by a moderate heat, it is converted into a syrupy mass, which does not deliquesce in the air, but dries, becomes white like enamel, and afterwards dissolves only in very small quantity in water, leaving a subsalt undissolved; so that by spontaneous evaporation it lets the portion of muriatic acid escape to which it owed its solubility.

This earth combines with avidity with carbonic acid. The precipitates produced by caustic ammonia, or by boiling the neutral solutions of the earth in acids, absorb carbonic acid from the air in drying. The alkaline carbonates precipitate the earth combined with the whole of their carbonic acid.

The ferruginous prussiate of potash, poured into a solution of this earth, throws down a white precipitate, which is completely re-dissolved by muriatic acid.

Caustic potash and ammonia have no action on this earth newly precipitated, not even at a boiling temperature.

The solution of carbonate of potash, or carbonate of ammonia, dissolves a small quantity of it, which precipitates again when the liquid is supersaturated with an acid, and then neutralised by caustic ammonia; but this earth is much less soluble in the alkaline carbonates than any of the earths formerly known that dissolve in them.

Thorina differs from the other earths by the following properties: — From alumina, by its insolubility in hydrate of potash; from glucina, by the same property; from yttria, by its purely astringent taste, without any sweetness, and by the property which its solutions possess of being precipitated by boiling when they do not contain too great an excess of acid. It differs from zirconia by the following properties: — 1. After being heated to redness, it is still capable of being dissolved in acids. 2. Sulphate of potash does not precipitate it from its solutions, while it precipitates zirconia from solutions containing even a considerable excess of acid. 3. It is precipitated by oxalate of ammonia, which is not the case with zirconia. 4. Sulphate of thorina crystallises readily, while sulphate of zirconia, supposing it free from alkali, forms, when dried, a gelatinous, transparent mass, without any trace of crystallisation.

THORI'NUM. (*um, i.* n.: so called because it is the base of thorina.) The supposed metallic basis of thorina.

THORN. See *Spina.*

Thorn, Ægyptian. See *Acacia vera.*

THORN-APPLE. See *Datura.*

THORNBACK. See *Raia clavata.*

THREAD. See *Filimentum.*

Thread-shaped. See *Filiformis.*

Three-edged. See *Trigonus.*

Three-fibred. See *Trinervus.*

Three-lobed. See *Trilobatus.*

THROMBO'SIS. (*is, is.* f.; from θρομβος.) The same as thrombus.

THRO'MBUS. (*us, i.* m.; from θροεω, to disturb.) A small tumour which sometimes arises after bleeding, from the blood escaping from the vein into the cellular structure surrounding it.

THRUSH. See *Aphthæ.*

THRY'PTICUS. (From θρυπτω, to break.) Having the power of destroying stone in the bladder.

THULITE. A hard peach blossom coloured mineral, found at Souland, in Tellemark, in Norway.

THUMERSTONE. See *Axinite.*

THU'RIS CORTEX. A name of the cascarilla bark. See *Croton.*

THUS. (*us, uris.* n.; from θυω, to sacrifice: so called from its great use in sacrifices.) The resinous juice of the spruce fir. See *Juniperus lycia,* and *Pinus abies.*

THUS JUDÆORUM. See *Thymiama.*

THUS MASCULUM. See *Juniperus lycia.*

THUY'A. (*a, æ.* f.; from θυον, odour: so named from its fragrant smell.) *Thuja.* The name of a genus of plants. Class, *Monœcia;* Order, *Monadelphia.*

THUYA OCCIDENTALIS. The systematic name of the tree of life. *Arbor vitæ.* *Thuya — strobilis lævibus; squamis obtusis,* of Linnæus. The leaves and wood were formerly in high estimation as resolvents, sudorifics, and expectorants, and were given in phthisical affections, intermittent fevers, and dropsies.

THYLACION. A word used by ancient writers to express the bag formed by the membranes of the fœtus at the orifice of the pudenda, before the birth.

THY'MBRA. (*a, æ.* f.; a name borrowed from Dioscorides, whose real θυμβρα, however, is a species of *Satureia.*) 1. The name of a genus of plants. Class, *Didynamia;* Order, *Gymnospermia.*

2. See *Satureia hortensis.*

THYMBRA HISPANICA. The name given by Tournefort to the common herb mastich. See *Thymus mastichina.*

THYME. See *Thymus.*

Thyme, lemon. See *Thymus serpyllum.*

Thyme, mother of. See *Thymus serpyllum.*

THYMELÆ'A. (From θυμος, thyme, and ελαια, an olive; the first alluding to the leaf, and the latter to the shape and oiliness of the fruit.) See *Daphne gnidium.*

THYMIA'MA. (*a, atis.* n.; from θυμα, an odour: so called from its odoriferous smell.) Musk-wood. *Thus judæorum.* A bark in small brownish grey pieces, intermixed with bits of leaves, seeming as if the bark and leaves had been bruised and pressed together, brought from Syria, Cilicia, &c. and supposed to be the produce of the liquid storax tree. This bark has an agreeable balsamic smell, approaching to that of liquid storax, and a subacrid bitterish taste, accompanied with some slight astringency.

THY'MIUM. (From θυμος, thyme; because it is of the colour of thyme.) A small wart upon the skin.

THYMOXA'LME. (From θυμος, thyme, οξυς, acid, and αλς, salt.) A composition of thyme, vinegar, and salt.

THY'MUS. (*us, i.* m. Απο του θυμω, because it was used in faintings; or from θυμα, an odour, because of its fragrant smell.) 1. The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Gymnospermia.* Thyme.

2. The pharmacopœial name of the common thyme. See *Thymus vulgaris.*

3. A small indolent fleshy tubercle like a wart, arising about the anus, or the pudenda, resembling the flowers of thyme, from whence it takes its name.

THYMUS CITRATUS. Lemon thyme. See *Thymus serpyllum.*

THYMUS CRETICUS. See *Satureia capitata.*

THYMUS GLAND. Θυμος. A gland of considerable size in the fœtus, situated in the anterior duplicature or space of the mediastinum, under the superior part of the sternum. An excretory duct has not yet been detected, but lymphatic vessels have been seen going from it to the thoracic duct. Its use is unknown.

THYMUS MASTICHINA. The systematic name of the common herb mastich. *Marum vulgare. Sampsuchus. Clinopodium mastichina gallorum. Thymbra hispanica. Jaca indica.* A low shrubby plant, a native of Spain, which is employed as an errhine. It has a strong agreeable smell, like mastich. Its virtues are similar to those of the *Marum syriacum,* but less powerful.

THYMUS SERPYLLUM. The systematic name of the *Serpyllum. Serpillum. Gilarum. Serpyllum vulgare minus.* Wild or mother of thyme. *Thymus—floribus capitatis, caulibus repentibus, foliis planis obtusis basi ciliatis,* of Linnæus. This plant has the same sensible qualities as those of the garden thyme, but has a milder and rather more grateful flavour. Lemon thyme, the *Serpyllum citratum,* is merely a variety of this plant. It is very pungent, and has a particularly grateful odour, approaching to that of lemons.

THYMUS VULGARIS. The systematic name of the common thyme. This herb, the *Thymus —erectus foliis revolutis ovatis, floribus verticillato spicatis,* of Linnæus, has an agreeable aromatic smell, and a warm pungent taste. Its virtues are said to be resolvent, emmenagogue, tonic, and stomachic; yet there is no disease mentioned in which its use is particularly recommended by any writer on the materia medica.

THYRO. Names compounded with this word belong to muscles which are attached to the thyroid cartilage; as,

THYRO-ARYTÆNOIDEUS. A muscle situated about the glottis, which pulls the arytenoid cartilage forwards nearer to the middle of the thyroid, and consequently shortens and relaxes the ligament of the larynx.

THYRO-HYOIDEUS. A muscle situated between the os hyoides and trunk, which pulls the os hyoides downwards, and the thyroid cartilage upwards.

THYRO-PHARYNGEUS. See *Constrictor pharyngis inferior.*

THYRO-PHARYNGO-STAPHILINUS. See *Palato-pharyngeus.*

THYRO-STAPHILINUS. See *Palato-pharyngeus.*

THYROID. (*Thyroideus*; from θυρεος, a shield, and ειδος, resemblance: from its supposed resemblance to a shield.) Resembling a shield.

THYROID CARTILAGE. *Cartilago thyroidea. Cartilago scutiformis.* Scutiform cartilage. The cartilage which is placed perpendicular to the cricoid cartilages of the larynx, constituting the anterior, superior, and largest part of the larynx. It is harder and more prominent in men than in women, in whom it forms the *pomum adami.*

THYROID GLAND. *Glandula thyroidea.* A large gland situated upon the cricoid cartilage, trachea, and horns of the thyroid cartilage. It is uncertain whether it be conglobate or conglomerate. Its excretory duct has never been detected, and its use is not yet known.

THY'RSUS. (*us, i.* m.; a young sprout.) In *Botany,* a dense and close panicle, bunch, or cluster, more or less of an ovate form. It is *oblong* in *Tussilago hybrida,* and *ovate* in *Tussilago petasites.*

TI'BIA. (*a, æ.* f.; the hautboy: qu. *tubia,* from *tuba,* a tube: so called from its pipe-like shape.) *Focile majus. Arundo major. Fosilus. Canna major. Canna-domestica cruris.* The largest bone of the leg. It is of a long, thick, and triangular shape, and is situated on the internal part of the leg. Its upper extremity is large, and flattened at its summit, where we observe two articulating surfaces, a little concave, and separated from each other by an intermediate irregular protuberance. Of these two cavities, the internal one is deepest, and of an oblong shape, while the external one is rounded, and more superficial. Each of these, in the recent subject, is covered by a cartilage, which extends to the intermediate protuberance, where it terminates. These two little cavities receive the condyles of the os femoris, and the eminence between them is admitted into the cavity which is seen between the two condyles of that bone; so that this articulation affords a specimen of the complete ginglymus. Behind the intermediate protuberance, or tubercle, is a pretty

deep depression, which serves for the attachment of a ligament, and likewise to separate the two cavities from each other. Under the edge of the external cavity is a circular flat surface, covered with cartilage, which serves for the articulation of the fibula; and at the fore-part of the bone is a considerable tuberosity, of an inch and a half in length, to which the strong ligament of the rotula is fixed.

The body of the tibia is smaller than its extremities, and, being of a triangular shape, affords three surfaces. Of these, the external one is broad, and slightly hollowed by muscles above and below; the internal surface is broad and flat; and the posterior surface is narrower than the other two, and nearly cylindrical. This last has a slight ridge running obliquely across it, from the outer side of the upper end of the bone to about one third of its length downwards. A little below this we observe a passage for the medullary vessels, which is pretty considerable, and slants obliquely downwards. Of the three angles which separate these surfaces, the anterior one, from its sharpness, is called the *spine* or *shin*. This ridge is not straight, but describes a figure like an italic *f*, turning first inwards, then outwards, and lastly, inwards again. The external angle is more rounded, and serves for the attachment of the interosseous ligament; and the internal one is more rounded still by the pressure of muscles.

The tibia enlarges again a little at its lower extremity, and terminates in a pretty deep cavity, by which it is articulated with the uppermost bone of the foot. This cavity, in the recent subject, is lined with cartilage. Its internal side is formed into a considerable process, called *malleolus internus*, which, in its situation, resembles the styloid process of the radius. This process is broad, and of considerable thickness. At its back part we find a groove, lined with a thin layer of cartilage, in which slide the tendons of the flexor digitorum longus, and of the tibialus posticus; and a little behind this is a smaller groove, for the tendon of the flexor longus pollicis. On the side opposite to the malleolus internus, the cavity is interrupted, and immediately above it is a rough triangular depression, which is furnished with cartilage, and receives the lower end of the fibula.

The whole of this lower extremity of the bone seems to be turned somewhat outwards, so that the malleolus internus is situated more forwards than the inner border of the upper extremity of the bone.

In the fœtus, both ends of the tibia are cartilaginous, and become afterwards epiphyses.

TIBIAL. (*Tibialis;* from *tibia*, the bone of the leg so called.) Belonging to the tibia.

Tibial artery. *Arteria tibialis.* The two principal branches of the popliteal artery: the one proceeds forwards, and is called the *anterior tibial;* the other backwards, and is called the *posterior tibial;* of which the external tibial, the fibular, the external and internal plantar, and the plantar arch, are branches.

TIBIA'LIS. See *Tibial.*

Tibialis anticus. A flexor muscle of the foot, situated on the leg, which bends the foot by drawing it upwards, and at the same time turns the toes inwards.

Tibialis gracilis. See *Plantaris.*

Tibialis posticus. A flexor muscle of the foot, situated on the leg, which extends the foot, and turns the toes inwards.

TIC DOULOUREUX. A painful affection of a nerve, so called from its sudden and momentary excruciating stroke. The more appropriate name is *neuralgia.* It mostly attacks the face, particularly that branch of the fifth pair which comes out of the infra-orbitary foramen.

TICK. See *Acarus.*

Tick, domestic. See *Acarus domesticus.*

Tick, harvest. See *Acarus.*

Tick, itch. See *Acarus scabiei.*

Ti'glia grana. See *Croton tiglium.*

TILBURY. A small town in Essex, celebrated for its fort. A mineral water is found at West Tilbury. It is an aperient and chalybeate, now seldom used medicinally.

TILE ORE. A species of octohedral red copper ore.

TILED. See *Imbricatus.*

TI'LIA. (*a, æ.* f. Πτελεα, *ulmus*, the elm-tree.) 1. A genus of plants in the Linnæan system. Class, *Polyandria;* Order, *Monogynia.*

2. The pharmacopœial name of the lime, or linden-tree. See *Tilia europæa.*

Tilia europæa. The systematic name of the lime-tree. The flowers of this tree are supposed to possess anodyne and antispasmodic virtues. They have a moderately strong smell, in which their virtue seems to consist, and abound with a strong mucilage. They are in high esteem in France. See *Tilia.*

Tilli grana. See *Croton tiglium.*

TI'LMUS. (From τιλλω, to pluck.) Floccitation, or picking of bed-clothes, observable in the last stages of some disorders.

Timac. The name of a root imported from the East Indies, which is said to possess diuretic virtues, and therefore exhibited in dropsies. It is not known from what plant it is obtained.

TIN. *Stannum. Jupiter* of the alchemists. It has been much doubted whether this metal is found native. The *native oxide of tin*, or *tin stone*, occurs both massive and crystallised. The *wood tin ore* is a variety of the native oxide, termed so from its fibrous texture. This variety has hitherto been found only in Cornwall. Tin is also found mineralised by sulphur, associated always with a portion of copper, and often of iron. This ore is called *tin pyrites.* Its colour is yellowish grey. It has a metallic lustre, and a fibrous or lamellated texture: sometimes it exhibits prismatic colours. Tin is comparatively a rare metal, as it is not found in great quantity any where but in Cornwall or Devonshire; though it is likewise met with in the mines of Bohemia, Saxony, the island of Banca, the peninsula of Malacca, and in the East Indies.

Tin is a metal of a yellowish white colour, considerably harder than lead, scarcely at all sonorous, very malleable, though not very tenacious. Under the hammer it is extended into leaves, called tinfoil, which are about one thousandth of an inch thick, and might easily be beaten to less than half that thickness, if the purposes of trade required it. Its specific gravity is 7·29. It melts at about the 442° of Fahrenheit's thermometer; and by a continuance of the heat it is slowly converted into a white powder by oxidation. Like lead, it is brittle when heated almost to fusion, and exhibits a grained or fibrous texture if broken by the blow of a hammer. It may also be granulated by agitation at the time of its transition from the fluid to the solid state. The oxide of tin resists fusion more strongly than that of any other metal; from which property it is useful to form an opake white enamel when mixed with pure glass in fusion. The brightness of its surface, when scraped, soon goes off by exposure to the air; but it is not subject to rust or corrosion by exposure to the weather.

To obtain pure tin, the metal should be boiled in nitric acid, and the oxide which falls down reduced by heat, in contact with charcoal, in a covered crucible.

There are two definite combinations of tin and oxygene: —

1. The *protoxide*, which is grey.
2. The *peroxide*, which is white.

There are also two *chlorides* and two *sulphurets* of tin.

The sulphuric, nitric, muriatic acids, and aqua regia, consisting of two parts nitric and one muriatic acid, all act on this metal; the acetic scarcely at all. The operation of other acids upon this metal has been little enquired into.

If small pieces of phosphorus be thrown on tin in fusion, it will take up from fifteen to twenty per cent., and form a silvery white phosphuret.

Tin unites with bismuth by fusion, and becomes harder and more brittle in proportion to the quantity of that metal added. With nickel it forms a white brilliant mass. It cannot easily be united in the direct way with arsenic, on account of the volatility of this metal. Cobalt unites with tin by fusion, and forms a grained mixture, of a colour slightly inclining to violet. Zinc unites very well with tin, increasing its hardness, and diminishing its ductility, in proportion as the quantity of zinc is greater. This is one of the principal additions used in making pewter, which consists for the most part of tin.

Antimony forms a very brittle hard mixture with tin. Tungsten, fused with twice its weight of tin, affords a brown spongy mass, which is somewhat ductile.

The uses of tin are very numerous. It is seldom used in the cure of diseases: the only preparation of it is the filings, the use of which is attended with dangerous consequences.

TI'NCA. (*a, æ.* f.; *quasi tincta*: so called because it appears as if it were dyed.) The tench. See *Tench*.

TINCÆ OS. (So called from its resemblance to a tench's mouth.) The mouth of the uterus.

TINCAL. Crude borax, as it is imported from the East Indies in yellow greasy crystals. See *Borax*.

TINCTO'RIUS. (From *tingo*, to dye.) An epithet of a species of broom, because it is used as a dye. The *Genista tinctoria*, of Linnæus.

TINCTU'RA. (*a, æ.* f.; from *tingo*, to dye.) A tincture. A solution of any substance in spirit of wine. Rectified spirit of wine is the direct menstruum of the resins, and essential oils of vegetables, and totally extracts these active principles from several vegetable matters, which yield them to water not at all, or only in part. It dissolves likewise the sweet saccharine matter of vegetables, and generally those parts of animal bodies in which their peculiar smell and taste reside.

The virtues of many vegetables are extracted almost equally by water and rectified spirit; but in the watery and spirituous tinctures of them there is this difference, that the active parts in the watery extractions are blended with a large proportion of inert gummy matter, on which their solubility in this menstruum in a great measure depends, while rectified spirit extracts them almost pure from gum. Hence, when the spirituous tinctures are mixed with watery liquors, a part of what the spirit had taken up from the subject generally separates and subsides, on account of its having been freed from that matter, which, being blended with it in the original vegetable, made it soluble in water. This, however, is not universal, for the active parts of some vegetables, when extracted by rectified spirits, are not precipitated by water, being almost soluble in both menstrua.

Rectified spirit may be tinged by vegetables of all colours, except blue. The leaves of plants, in general, will give out little of their natural colour to watery liquors, but communicate to spirit the whole of their green tincture, which for the most part proves elegant, though not very durable.

Fixed alkaline salts deepen the colour of spirituous tinctures; and hence they have been supposed to promote the dissolving power of the menstruum, though this does not appear from experience. In the trials which have been made, no more was found to be taken up in the deep-coloured tinctures than in the paler ones, and often not so much. If the alkali be added after the extraction of the tincture, it will heighten the colour as much as when mixed with the ingredients at first. The addition of these salts in making tinctures is not only needless but prejudicial, as they generally injure the flavour of aromatics, and superadd a quality sometimes contrary to the intention of the medicine.

Volatile alkaline salts, in many cases, promote the action of the spirits. Acids gene-

rally weaken it; unless when the acid has been previously combined with the vinous spirit into a compound of new qualities, called dulcified spirit.

TINCTURA ALOES. Tincture of aloes. Take of the extract of spike aloe, powdered, half an ounce; extract of liquorice, an ounce and a half; water, a pint; rectified spirit, four fluid ounces: macerate in a sand-bath until the extracts are dissolved, and then strain. This preparation possesses stomachic and purgative qualities, but should never be given where there is a tendency to hæmorrhoids. In chlorotic cases, and amenorrhœa, it is preferred to other purges. The dose is from half to a whole fluid ounce.

TINCTURA ALOES COMPOSITA. Compound tincture of aloes; formerly called *elixir aloes*, and *elixir proprietatis*. Take of extract of spiked aloe, powdered, saffron, of each three ounces; tincture of myrrh, two pints: macerate for fourteen days, and strain. A more stimulating compound than the former. It is a useful application to old indolent ulcers. The dose is from half a fluid drachm to two.

TINCTURA ALOES VITRIOLATA. With the bitter infusion, a drachm or two of this elegant tincture is extremely serviceable against gouty and rheumatic affections of the stomach and bowels, and also in the weaknesses of those organs which frequently attend old age.

TINCTURA ASSAFŒTIDÆ. Tincture of assafœtida; formerly known by the name of *tinctura fœtida*. Take of assafœtida, four ounces; rectified spirit, two pints: macerate for fourteen days, and strain. Diluted with water, this is mostly given in all kinds of fits by the vulgar. It is a useful preparation as an antispasmodic, especially in conjunction with sulphate of zinc. The dose is from half a fluid drachm to two.

TINCTURA AURANTII. Tincture of orange-peel; formerly *tinctura corticis aurantii*. Take of fresh orange-peel, three ounces; proof spirit two pints: macerate for fourteen days, and strain. A mild and pleasant stomachic bitter.

TINCTURA BENZOINI COMPOSITA. Compound tincture of benzoin; formerly known by the names of *tinctura benzoes composita*, and *balsamum traumaticum*. Take of benzoin, three ounces; storax balsam, strained, two ounces; balsam of Tolu, an ounce; extract of spiked aloe, half an ounce; rectified spirit, two pints: macerate for fourteen days, and strain. This tincture is more generally applied externally to ulcers and wounds than given internally, though possessing expectorant, antispasmodic, and stimulating powers. Against coughs, spasmodic affections of the stomach and bowels, and diarrhœa, produced by ulcerations of those parts, it is a very excellent medicine. The dose, when given internally, is from half a fluid drachm to two.

TINCTURA CALUMBÆ. Tincture of calumba; formerly called *tinctura columbæ*. Take of calumba root, sliced, two ounces and a half; proof spirit, two pints; macerate for fourteen days, and strain. This tincture contains the active part of the root, and is generally given with the infusion of it, as a stomachic and astringent.

TINCTURA CAMPHORÆ COMPOSITA. Compound tincture of camphire; formerly called *tinctura opii camphorata*, and *elixir paregoricum*. Take of camphire, two scruples; opium, dried and powdered, benzoic acid, of each a drachm; proof spirits, two pints; macerate for fourteen days, and strain. The London college has changed the name of this preparation, because it was occasionally the source of mistakes under its old one, and tincture of opium was sometimes substituted for it. It differs also from the former preparation in the omission of the oil of aniseed, which was often complained of as disagreeable to the palate, and to which, as an addition, no increase of power could be affixed. The dose is from half a fluid drachm to half a fluid ounce.

TINCTURA CANTHARIDIS. Tincture of blistering fly; formerly called *tinctura lyttæ*, and *tinctura cantharidum*. Take of blistering flies, bruised, three drachms; proof spirit, two pints: macerate for fourteen days, and strain. In the present London Pharmacopœia, the colouring matter of the former preparation is omitted as useless, and the proportion of the fly increased. It is a very acrid, diuretic, and stimulating preparation, which should always be administered with great caution, from its known action on the parts of generation. In chronic eruptions on the skin, and dropsical diseases of the aged, it is often very useful when other medicines have been inert. The dose is from half a fluid drachm to two.

TINCTURA CAPSICI. Tincture of capsicum. Take of capsicum berries, an ounce; proof spirit, two pints: macerate for fourteen days, and strain.

TINCTURA CARDAMOMI. Tincture of cardamom. Take of cardamom seeds, bruised, three ounces; proof spirit, two pints: macerate for fourteen days, and strain. A powerful stimulating carminative. In spasm of the stomach, an ounce, with some other diluted stimulant, is given with advantage. The dose may vary according to circumstances, from half a drachm to an ounce and upwards.

TINCTURA CARDAMOM COMPOSITA. Compound tincture of cardamom; formerly called *tinctura stomachica*. Take of cardamom seeds, caraway seeds, cochineal, of each, powdered, two drachms; cinnamon-bark, bruised, half an ounce; raisins, stoned, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. A useful and elegant carminative and cordial. The dose from half a fluid drachm to half a fluid ounce and upwards.

TINCTURA CASCARILLÆ. Tincture of cascarilla. Take of cascarilla-bark, powdered, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. A stimulating aromatic tonic, that may be exhibited in debility of the bowels and stomach, and in those cases of fever in which the Peruvian

bark proves purgative. The dose from half a drachm to two drachms.

Tinctura castorei. Tincture of castor. Take of castor, powdered, two ounces; rectified spirit, two pints: macerate for seven days, and strain. A powerful stimulant and antispasmodic, mostly exhibited in hysterical affections in a dilute form. The dose is from half a fluid drachm to two.

Tinctura catechu. Tincture of catechu; formerly known by the name *tinctura japonica.* Take of extract of catechu, three ounces; cinnamon-bark, bruised, two ounces; proof spirit, two pints: macerate for fourteen days, and strain. An aromatic astringent, mostly given in protracted diarrhœa. The dose is from half a fluid drachm to two.

Tinctura cinchonæ. Tincture of cinchona; formerly known by the name of *tinctura corticis peruviani simplex.* Take of lance-leaved cinchona bark, powdered, seven ounces; proof spirit, two pints: macerate for fourteen days, and strain. The dose is from a fluid drachm to half a fluid ounce. For its virtues, see *Cinchona.*

Tinctura cinchonæ ammoniata. Ammoniated tincture of cinchona. Volatile tincture of bark. Take of lance-leaved cinchona bark, powdered, four ounces; aromatic spirit of ammonia, two pints: macerate for ten days, and strain.

Tinctura cinchonæ composita. Compound tincture of cinchona. Take of lance-leaved cinchona bark, powdered, two ounces; orange-peel, dried, an ounce and a half; serpentary-root, bruised, three drachms; saffron, a drachm; cochineal, powdered, two scruples; proof spirit, twenty fluid ounces: macerate for fourteen days, and strain. The dose is from one fluid drachm to half a fluid ounce. For its virtues, see *Cinchona.*

Tinctura cinnamomi. Tincture of cinnamon; formerly called *aqua cinnamomi fortis.* Take of cinnamon bark, bruised, three ounces; proof spirit, two pints: macerate for fourteen days, and strain. The dose is from a fluid drachm to three or more.

Tinctura cinnamomi composita. Compound tincture of cinnamon; formerly called *tinctura aromatica.* Take of cinnamon bark, bruised, six drachms; cardamon seeds, bruised, three drachms; long pepper, powdered, ginger-root, sliced, of each two drachms; proof spirit, two pints: macerate for fourteen days, and strain. The dose is from half a fluid drachm to two or more.

Tinctura digitalis. Tincture of foxglove. Take of fox-glove leaves, dried, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. This tincture is introduced in the London Pharmacopœia as possessing the properties of the plant in a convenient, uniform, and permanent form. It is a saturated tincture, and in the same proportions has been long used in general practice. The dose is from ten to forty minims. For its virtues, see *Digitalis.*

Tinctura ferri acetatis. This preparation is directed in the Dublin pharmacopœia, with acetate of potash, two ounces; sulphate of iron, one ounce; and rectified spirit, two pints.

Tinctura ferri ammoniati. Tincture of ammoniated iron; formerly called *tinctura ferri ammoniacalis, tinctura florum martialium,* and *tinctura martis Mynsichti.* Take of ammoniated iron, four ounces; proof spirit, a pint: digest and strain. This is a most excellent chalybeate in all atonic affections, and may be given with cinchona in the cure of dropsical and other cachectic diseases. The dose is from half a fluid drachm to two.

Tinctura ferri muriatis. Tincture of muriate of iron; formerly called *tinctura martis in spiritu salis,* and *tinctura martis cum spiritu salis;* and lately known by the name of *tinctura ferri muriati.* Take of subcarbonate of iron, half a pound; muriatic acid, a pint; rectified spirit, three pints. Pour the acid upon the subcarbonate of iron in a glass vessel, and shake it occasionally for three days. Set it by, that the fæces, if there be any, may subside; then pour off the solution, and add the spirit. Cline strongly recommends this in ischuria, and many diseases of the kidneys and urinary passages. The dose is from ten to twenty drops. It is a good chalybeate, and serviceable against most diseases of debility without fever.

Tinctura gentianæ composita. Compound tincture of gentian; formerly called *tinctura amara.* Take of gentian-root, sliced, two ounces; orange-peel, dried, an ounce; cardamom-seeds, bruised, half an ounce; proof spirit, two pints: macerate for fourteen days, with a gentle heat, and strain. The dose is from one fluid drachm to two. For its virtues, see *Gentiana.*

Tinctura guaiaci. Tincture of guaiacum. Take of guaiacum resin, powdered, half a pound; rectified spirit, two pints: macerate for fourteen days, and strain. This tincture, which possesses all the active parts of this peculiar vegetable matter, is now first introduced into the London Pharmacopœia. The dose is from one fluid drachm to two. For its virtues, see *Guaiacum.*

Tinctura guaiaci ammoniata. Ammoniated tincture of guaiacum; formerly called *tinctura guaiacina volatilis.* Take of guaiacum resin, powdered, four ounces; aromatic spirit of ammonia, a pint and a half: macerate for fourteen days, and strain. The dose is from one fluid drachm to two.

Tinctura hellebori nigra. Tincture of black hellebore; formerly called *tinctura melampodii.* Take of black hellebore-root, sliced, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. The dose is from half to a whole fluid drachm. For its virtues, consult *Helleborus niger.*

Tinctura humuli. Tincture of hop. Take of hops, five ounces; proof spirit, two pints; macerate for fourteen days, and strain. Various modifications of the preparations of this bitter have lately been strongly recommended by

Freke (Observations on Humulus Lupulus), and employed by many practitioners, who believe that it unites sedative and tonic powers, and thus forms a useful combination. The dose is from half to a whole fluid drachm. See *Humulus*.

Tinctura hyoscyami. Tincture of henbane. Take of henbane leaves, dried, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. That the henbane itself is narcotic is abundantly proved; that the same power is also found in its tincture is also certain, but to produce the same effects requires a much larger dose. In some of the statements made to the College of Physicians of London, a different opinion has been given, and twenty-five drops have been considered as equivalent to twenty of tincture of opium. It does not produce costiveness, or the subsequent confusion of head which follows the use of opium, and will therefore be, even if its powers be weaker, of considerable use. The dose is from ten minims to one fluid drachm.

Tinctura jalapæ. Tincture of jalap; formerly called *tinctura jalapii.* Take of jalap-root, powdered, eight ounces; proof spirit, two pints: macerate for fourteen days, with a gentle heat, and strain. The dose is from one fluid drachm to half a fluid ounce. For its virtues, see *Convolvulus jalapa.*

Tinctura kino. Tincture of kino. Take of kino, powdered, three ounces; proof spirit, two pints: macerate for fourteen days, and strain. All the astringency of kino is included in this preparation. The dose is from half a fluid drachm to two. See *Kino.*

Tinctura lyttæ. See *Tinctura cantharidis.*

Tinctura myrrhæ. Tincture of myrrh. Take of myrrh, bruised, four ounces; rectified spirit, two pints; water, a pint: macerate for fourteen days, and strain. The dose is from half to a whole fluid drachm. For its virtues, see *Myrrha.*

Tinctura opii. Tincture of opium. Take of hard opium, powdered, two ounces and a half; proof spirit, two pints: macerate for fourteen days, and strain. The dose is from ten minims, or twenty drops, to half a fluid drachm. For its virtues, see *Opium.*

Tinctura rhei. Tincture of rhubarb; formerly known by the names of *tinctura rhabarbari,* and *tinctura rhabarbari spirituosa.* Take of rhubarb-root, sliced, two ounces; cardamom-seeds, bruised, half an ounce; saffron, two drachms; proof spirit, two pints: macerate for fourteen days, with a gentle heat, and strain. The dose is from half a fluid ounce to one and a half. For its virtues, see *Rheum.*

Tinctura rhei composita. Compound tincture of rhubarb; formerly called *tinctura rhabarbari composita.* Take of rhubarb-root, sliced, two ounces; liquorice-root, bruised, half an ounce; ginger-root, sliced, saffron, of each two drachms; proof spirit, a pint; water, twelve fluid ounces: macerate for fourteen days, with a gentle heat, and strain. This is a mild stomachic aperient. The dose is from half a fluid ounce to one and a half.

Tinctura scillæ. Tincture of squill. Take of squill-root, fresh dried, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. The virtues of this squill (see *Scilla*) reside in the tincture, which is administered in doses of from twenty drops to a fluid drachm.

Tinctura sennæ. Tincture of senna; formerly called *elixir salutis.* Take of senna-leaves, three ounces; caraway-seeds, bruised, three drachms; cardamom-seeds, bruised, a drachm; raisins, stoned, four ounces; proof spirit, two pints: macerate for fourteen days, with a gentle heat, and strain. A carminative, aperient, and purgative, in doses from two fluid drachms to a fluid ounce. See *Cassia senna.*

Tinctura serpentariæ. Tincture of serpentary; formerly called *tinctura serpentariæ virginianæ.* Take of serpentary-root, three ounces; proof spirit, two pints: macerate for fourteen days, and strain. This tincture possesses, in addition to the virtues of the spirit, those of the serpentaria. The dose is from half a fluid drachm to two. See *Aristolochia serpentaria.*

Tinctura valerianæ. Tincture of valerian; formerly called *tinctura valerianæ simplex.* Take of valerian-root, four ounces; proof spirit, two pints: macerate for fourteen days, and strain. A useful antispasmodic in conjunction with others. The dose from half a fluid drachm to two. See *Valeriana.*

Tinctura valerianæ ammoniata. Ammoniated tincture of valerian; formerly called *tinctura valerianæ volatilis.* Take of valerian-root, four ounces; aromatic spirit of ammonia, two pints: macerate for fourteen days, and strain. A strong antispasmodic and stimulating tincture. The dose is from half a fluid drachm to two.

Tinctura veratri. A very active alterative, recommended in the cure of epilepsy and cutaneous eruptions. Its administration requires great caution, the white hellebore being a powerful poison.

Tinctura zingiberis. Tincture of ginger. Take of ginger-root, sliced, two ounces; proof spirit, two pints: macerate for fourteen days, and strain. A stimulating carminative. The dose is from a fluid drachm to three.

TINCTURE. See *Tinctura.*

TI'NEA. (*a, æ.* f.; from *teneo,* to hold.) *Tinea capitis.* The scald-head. See *Porrigo.*

Tin-glass. See *Bismuth.*

TINNI'TUS. (*us, ûs.* m.; a ringing.) A ringing or tingling noise.

Tinnitus aurium. A noise like ringing or tingling in the ears. See *Paracusis.*

TISSUE. A term introduced by the French anatomists to express the textures which compose the different organs of animals, or what was before generally called cellular membrane. See *Membrane.*

TITANIC. (*Titanicus;* from *titanium,* its base.) Appertaining to titanium.

TITANIC ACID. *Acidum titanicum.* An oxide of titanium which acts with alkalies precisely as an acid.

TITANITE. An ore of titanium which contains that metal in a state of oxide.

TITA'NIUM. (*um, ii.* n.) The name of a metal which is obtained by the reduction of its oxide, which is found, mixed with iron, manganese, and silex, in a greyish black sand found in the vale of Menachan, in Cornwall, named menachanite.

TITHY'MALUS. (*us, i.* m.; from τιθος, a dug, and μαλος, tender: so called from its smooth leaves and milky juice.) Spurge. Two plants are directed for medicinal purposes by this name. See *Euphorbia,* and *Esula.*

TITHYMALUS CYPARISSIUS. See *Esula.*

TITHYMALUS PARALIOS. See *Euphorbia.*

TITHYMELÆ'A. See *Daphne.*

TITI'LLICUM. (*um, i.* n.; from *titillo,* to tickle: so called from its being easily tickled.) The arm-pit.

TOAD-FLAX. See *Antirrhinum.*

TOBACCO. See *Nicotiana.*

Tobacco, English. See *Nicotiana rustica.*

Tobacco, Virginian. See *Nicotiana.*

TOE. *Digitus pedis.* The toes are terminated by nails, are covered by the common integuments, under which the vessels and tendons run, protected by their ligaments, which extend or bend them, to be inserted into their respective phalanges. Each toe consists of three distinct bones disposed in rows, called phalanges, or ranks of the toes. The great toe has but two phalanges; the others have three ranks of bones, which have nothing particular, only the joints are made round and free, formed by a round head on one bone, and by a pretty deep hollow for receiving it, in the one above it.

TOFFANIA AQUA. (*Toffana,* or *Tophania:* the name of an infamous woman, who resided at Palermo, and afterwards at Naples, who sold this poison.) See *Aquetta.*

Tolu balsam. See *Toluifera balsamum.*

TOLUI'FERA. (*a, æ.* f.; so called because it produces the balsam of Peru.) A genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia.*

TOLUIFERA BALSAMUM. The systematic name of the tree which affords the Tolu balsam. *Balsamum Tolutanum.* Balsam of Tolu. It grows in South America, in the province of Tolu, behind Carthagena, whence we are supplied with the balsam, which is brought to us in little gourd-shells. The balsam is obtained by making incisions into the bark of the tree, and is collected into spoons, which are made of black wax, from which it is poured into proper vessels. It thickens, and in time becomes concrete: it has a fragrant odour, and a warm sweetish taste. It dissolves entirely in alkohol, and communicates its odour and taste to water by boiling. It contains acid of benzoin. This is the mildest of all the balsams. It has been used an an expectorant; but its powers are very inconsiderable, and it is at present employed principally on account of its flavour, somewhat resembling that of lemons. It is directed, by the pharmacopœias, in the syrupus Tolutanus, tinctura Tolutana, and syrupus balsamicus.

TOLUTANUM BALSAMUM. See *Toluifera balsamum.*

TOMATUM. (*um, i.* n.) Love-apple. See *Solanum lycopersicum.*

TOMBAC. A white alloy of copper with arsenic.

TOMEI'UM. (From τεμνω, to cut.) An incision-knife.

TOMENTO'SUS. Downy; woolly; cottony. Applied to stems, leaves, &c.; as the stem of the *Geranium rotundifolium.*

TOME'NTUM. (*um, i.* n.; a flock of wool.) 1. In *Anatomy,* applied to the small vessels of the brain, which appear like wool.

2. In *Botany,* a species of pubescence, very soft to the touch, of a white or ferruginous colour, giving the surface a downy appearance, and so thick that they cannot be seen separately.

TOMENTUM CEREBRI. The small vessels that penetrate the cortical substance of the brain from the pia mater, which, when separated from the brain, and adhering to the pia mater, give it a flocky appearance.

TONGUE. *Lingua.* A soft fleshy viscus, very moveable in every direction, situated inferiorly in the cavity of the mouth, and constituting the organ of taste. It is divided into a base, body, and back, and inferior surface, and two lateral parts. It is composed of muscular fibres, covered by a nervous membrane, on which are a great number of nervous papillæ, particularly at the apex and lateral parts; the rete mucosum, and epidermis. The arteries of the tongue are branches of the ranine and labial. The veins empty themselves into the great linguals, which proceed to the external jugular. The nerves come from the eighth, ninth, and fifth pair. The use of this organ is for chewing, swallowing, sucking, and tasting. See also *Taste.*

Tongue-shaped. See *Lingulatus.*

TONIC. (*Tonicus.* Τονικος; from τεινω, to pull or draw.) 1. A rigid contraction of the muscles, without relaxation; as in trismus, tetanus, &c. See *Tetanus.*

2. (From τονοω, to strengthen.) That which increases the tone of the muscular fibre; such as vegetable bitters, stimulants, astringents, &c.

TONSIL. (*Tonsillæ, arum.* f.) *Amygdala. Tola. Toles. Tolles.* An oblong, suboval gland, situated on each side of the fauces, and opening into the cavity of the mouth by twelve or more large excretory ducts.

TONSILLI'TIS. (*is, idis.* f.; from *tonsilla,* the seat of the disease, and *itis,* which signifies inflammation.) This is described by Dr. Cullen, and other writers, as a species of sore throat, under the name of cynanche tonsillaris, and cynanche maligna. There are, therefore, two species of inflammation of the tonsils: the one is phlegmonoid, the

other erythematous or erysipelatous: they are perfectly distinct diseases.

1. *Tonsillitis phlegmonoidea.* This is the common quinsey, or inflammation of the cellular tissue of or about the tonsils. The common quinsey, or inflammatory sore throat, of most writers. It begins with a soreness or stiffness about one side of the throat; the swallowing becomes impeded; the mouth is clammy; and when the jaw is moved, or there is any attempt to swallow, there is a pain extending from the throat to the ear. As these symptoms come on, there is an accession of fever: a shivering often announces the disease; the pulse becomes frequent, the face flushed, and exacerbations of fever are established of an inflammatory character. As the local disease advances, the fever increases; deglutition becomes more difficult; the speech is obstructed; a great secretion of saliva or a salivation supervenes; and, if the inflammation be not resolved, which it seldom is, the part becomes more tumid, deglutition more impeded, the febrile symptoms exacerbate more violently; a tumour is felt in the gland, if the mouth can be opened so as to permit the finger to reach the gland; suppuration soon follows, and, though the patient be in the greatest misery from the symptoms already mentioned, the abscess bursts, and he is instantly relieved. In eight of ten cases suppuration results, and all inconvenience is soon removed: but it sometimes happens, that no sooner is one abscess burst, before the state of the opposite gland tells us that the same symptoms are to be encountered from inflammation there; which, in its turn, suppurates also. The suppuration occasionally extends round the pharynx, and a large quantity of pus evacuated, either by spontaneous rupture or by an opening from the lancet. This species of tonsillitis is produced by cold, and is a common disease in spring and autumn, and seldom attended with any danger.

The chief danger arising from this species of quinsey is, the inflammation occupying both tonsils, and proceeding to such a degree as to prevent a sufficient quantity of nourishment for the support of nature from being taken, or to occasion suffocation; but this seldom happens, and its usual termination is either in resolution or suppuration. It is never contagious, and mostly attacks the young and sanguine. It is apt to produce a disposition to return from slight causes.

At the very commencement, the inflammation is occasionally, though not often, resolved: to effect this, blood is seldom taken from the arm; but if the febrile and local symptoms are strongly marked, and the patient is young and robust, and there is no reason why blood should not be abstracted, recourse should be had to the lancet: leeches externally are proper. A purgative and antiphlogistic diet are required, with iced acidulated gargles, and such antifebrile remedies as are recommended against inflammation. Very many quinseys are resolved by the following:—

℞. Antimonii tartarisati, gr. vj.; sacchari purificati, ℥iij. Optimè in pulverem contere; dein divide in partes duodecim æquales: sumat unam in horas.

The patient is to be directed to put one of these powders into his mouth, and to let it dissolve in his saliva, and to swallow it; and to continue through the day, every hour or every two hours, keeping up a constant nausea or vomiting during that time.

It is during the inflammatory stage of quinsey that blisters are useful, and particularly so when there is external as well as internal swelling: blisters do no good when suppurative action has commenced. Writers mention danger of suffocation in some cases, and recourse to tracheotomy. There is occasionally danger of suffocation: but the surgeon is to open the abscess, and not the trachea.

When the abscess has burst, or the pus is evacuated, the after-treatment is very little required: detergent gargles and nourishment soon put all right again.

2. *Tonsillitis maligna.* This is the ulcerated, specky, malignant, putrid, gangrenous sore throat of authors. The inflammation is always superficial on the membrane which covers the tonsils, and not in the cellular tissue beneath. No sooner does the inflammation take place, than it passes immediately into small ulcers, which have a varied appearance; being whitish, cineritious, brown, or black; of smaller or larger extent, sometimes the size of a lentil or pea, and sometimes much larger, mostly spreading so as to extend over the pharynx and the whole fauces, into the nostrils, and even around the glottis, and down the œsophagus. As these ulcerations increase, they have a sloughing appearance; are seldom deeper than the membrane of the fauces, which occasionally is separated in large sloughs. The system is alarmed at the beginning of the local affection, for fever of the nervous or typhoid character is present; the pulse is small, and rapid; the heat considerable; the prostration of strength great; and there is mostly some disturbance of the sensorium. The disease is highly contagious, and mostly epidemic; and according to the nature of the epidemic, the character of the fever, and other circumstances, the danger is to be appreciated. A very frequent concomitant of the malignant, ulcerated sore throat is a scarlet eruption over the body, in a simple form, or with blotches of a scarlet colour, or petechiæ, or vibices. This mostly increases the danger, though very many fall victims to the malignant form of tonsillitis without any eruption on the skin. Dr. Cullen regards the eruption, like scarlet fever, as a pathognomonic symptom of this disease: but this is surely incorrect; for every experienced practitioner knows that the poison from a person under the disease with a scarlet eruption will produce the malignant sore throat and fever without any eruption in five cases out of ten. Malignant tonsillitis, without any scarlet erup-

tion, is an idiopathic disease: when the eruption is present, the malignant sore throat is symptomatic of scarlatina. See *Scarlatina.* Malignant tonsillitis is generally produced by a particular state of the atmosphere: hence it is mostly epidemic, and the system under its influence generates more contagion; so that when it attacks one of a family, scarcely any escape its ravages.

When the local symptoms are mild, the fever is seldom great, and the danger comparatively little: but when the ulcerations assume a sloughing character, spread rapidly, and the fever is high, with delirium, and more especially if, in addition to this, there be purple spots or gangrene, the danger is great indeed. The known nature of the disease, when epidemic, is also to be borne in mind: many are carried off, especially children, without any apparent malignancy of the symptoms; and in other epidemics the malignancy is obvious, and yet, under proper management, most recover.

In conducting the cure, cleanliness, pure air, and a free ventilation are here of the utmost importance, and especially the removing of all the excretions and cleansings of the fauces, which contain the contagion in its most active form. The remedies are similar to those recommended against typhus, which the fever of malignant tonsillitis is, and against gangrene. Many are fond of emetics in the beginning; but they more frequently increase the debility and disturb the sensorium than produce any good effect. The nitro-muriatic acid is here an excellent remedy, and possesses great advantages with children and youth, who cannot, perhaps, be prevailed on to take the other less palatable medicines.

℞. Aquæ cinnamomi, f. ℥x.
Acidi muriatici,
Acidi nitrici, singulorum, ♏ j.

Misce pro haustu, tertia, vel quarta, vel quinta quaque hora sumendo.

This is the dose for an adult.

All the acids are proper: the sulphuric, in the infusum rosæ compositum, is an excellent drink when more diluted; the citric acid is grateful in lemonade; and the tartaric in the drink called imperial. The subacid fruits, in their season, are also good assistants.

The antiseptic tonics are more powerful in destroying the fever and the disease than the former medicines, and in the more malignant forms are not to be forgotten. Cinchona, cascarilla, and columba are the best: their infusions and decoctions, and the sulphate of the first, may be made into mixtures, and acidulated with either of the acids.

When these are required, port wine is also, and is to be given freely, as being, perhaps, more efficacious. When wine, from any circumstance, does not agree, brandy should be substituted in a dilute form.

If the bowels, from the free use of acids, become loose, aromatics and astringents are proper, with spiced wine and cordials.

The local treatment consists in the use of stimulating gargles, especially of port wine, capsicum, or the mineral acids. In administration of these, the best rule is to proportion them to the effect they produce: their biting or stimulating the part is necessary; and, in some cases, half a fluid drachm of the tincture of Cayenne pepper will produce as much effect, in half a pint of dilute port wine or compound infusion of roses, as three times that quantity in others. The diet should consist of arrow-root, sago, gruel, and the like, with wine or brandy. Bottled porter, that gives off its carbonic acid gas freely, is a good medicine.

TOOTH. See *Teeth.*

Tooth-ache. See *Odontalgia.*

Tooth-rash. See *Strophulus.*

Tooth-shape. See *Dentatus.*

TOPAZ. According to Jameson, this mineral species contains three subspecies,—common topaz, schorlite, and physalite.

Common topaz is of a wine-yellow colour, in granular crystallised concretions, harder than emerald. It comes from the Brazils, Siberia, Asia Minor, and Saxony. It forms an essential constituent of the topaz-rock.

TOPAZOLITE. A variety of precious garnet found at Mussa, in Piedmont.

TO'PHUS. (*us, i.* m. *Toph,* Hebrew.)
1. A toph, or soft swelling on a bone.
2. The concretion in the joints.
3. Gravel.

TOPICAL. (*Topicus;* from τοπος, a place.) Medicines applied to a particular place.

Topina'ria. A species of tumour in the skin of the head.

TO'RCULAR. (From *torqueo,* to twist.) The tourniquet: a bandage to check hæmorrhages after wounds or amputations.

Torcular herophili. *Lechenon. Lenos.* The press of Herophilus. That place where the four sinuses of the dura mater meet together, first accurately described by Herophilus, the anatomist.

TORDY'LIUM. (*um, ii.* n.; *quasi tortilium;* from *torqueo,* to twist: so named from its tortuous branches, or from the neat orbicular figure of its seeds, which seem as if artificially wrought or turned.) A genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Digynia.*

Tordylium officinale. The officinal *seseli creticum.* The seeds are said to be diuretic.

TO'RMEN. (*en, inis.* n.) A severe pain of the bowels.

TORMENTIL. See *Tormentilla.*

TORMENTI'LLA. (*a, æ.* f.; from *tormentum,* pain: because it was supposed to relieve pain in the teeth.) 1. The name of a genus of plants in the Linnæan system. Class, *Icosandria;* Order, *Monogynia.*

2. The pharmacopœial name of the upright septfoil. See *Tormentilla erecta.*

Tormentilla erecta. The systematic name of the upright septfoil. *Heptaphyllum. Consolida rubra. Tormentilla — caule erecti-*

usculo, foliis sessilibus, of Linnæus. The root is the only part of the plant which is used medicinally: it has a strong styptic taste, but imparts no peculiar sapid flavour: it has been long held in estimation as a powerful astringent; and, as a proof of its efficacy in this way, it has been substituted for oak bark in the tanning of skins for leather. Tormentil is ordered in the *pulvis cretæ compositus*, of the London Pharmacopœia.

TORME'NTUM. The iliac passion was so called from its severely painful nature. See *Iliac passion*.

TOROSUS. Protuberant: applied to seed vessels occasioned by the swelling of the enclosed seeds; as in the pods of the *Sinapis*.

Torpedo. See *Raia torpedo*.

TO'RPOR. A numbness, or deficient sensation.

TORSK. See *Gadus ciliaris* and *brosme*.

TORTICO'LLIS. (*is, is*. m.; from *torqueo*, to twist, and *collum*, the neck.) The wry neck.

TORTILIS. Twisted.

TORTULO'SUS. Tortulous: a little swelling out. Applied to the knotty pod of the *Rhaphanus sativus*.

TORTU'RA OSSIS. The locked jaw.

TORULOSUS. A little swelling out.

TOTA BONA. See *Chenopodium*.

TOUCH. *Tactus*. " The sense by which we are enabled to know the properties of bodies; and as it is less subject to deception than the other senses, enabling us in certain cases to clear up errors into which the others have led us, it has been considered the first, and the most excellent of all the senses; but several of the advantages which have been attributed to it by physiologists and metaphysicians should be considerably limited.

Tact should be distinguished from touch. *Tact* is, with some few exceptions, generally diffused through all our organs, and particularly over the cutaneous and mucous surfaces. It exists in all animals; whilst touch is exerted evidently only by parts that are intended particularly for this use. It does not exist in all animals, and it is nothing else but *tact* united to muscular contractions directed by the will.

In the exercise of *tact*, we may be considered as passive, whilst we are essentially active in the exercise of *touch*.

Physical properties of bodies which employ the action of touch.— Almost all the physical properties of bodies are susceptible of acting upon the organs of touch: form, dimensions, different degrees of consistence, weight, temperature, locomotion, vibration, &c. are all so many circumstances that are exactly appreciated by the touch.

The organs destined to touch do not alone exercise this function; so that in this respect the touch differs much from the other senses. As in most cases it is the skin which receives the tactile impressions produced by the bodies which surround us, it is necessary to say something of its structure.

The skin forms the envelope of the body: it is lost in the mucous membranes at the entrance of all the cavities; but it is improper to say that these membranes are a continuation of it.

The skin is formed principally by the *cutis vera*, a fibrous layer of various thickness, according to the part which it covers: it adheres by a cellular tissue, more or less firm; at other times by fibrous attachments. The *cutis* is almost always separated from the subjacent parts by a layer of a greater or less thickness, which is of use in the exercise of touch.

The external side of the *cutis vera* is covered by the epidermis, a solid matter secreted by the skin. We ought not to consider the epidermis as a membrane: it is a homogeneous layer, adherent by its internal face to the *chorion*, and full of a great number of holes, of which the one sort are for the passage of the hair, and the other for that of cutaneous perspiration: they serve at the same time for the absorption which takes place by the skin. These last are called the pores of the skin.

It is necessary to notice, with regard to the epidermis, that it is void of feeling; that it possesses none of the properties of life; that it is not subject to putrefaction; that it wears and is renewed continually; that its thickness augments or lessens as it may be necessary: it is even said to be proof to the action of the digestive organs.

The connection of the epidermis to the *cutis vera* is very close; and yet it cannot be doubted that there is a particular layer between these two parts, in which certain particular phænomena take place. The organisation of this layer is yet little known. Malpighi believed it to be formed of a particular mucus, the existence of which has been long admitted, and which bore the name of the corpus mucosum of Malpighi. Other authors have considered it, more justly, as a vascular network. Gall makes it similar to the grey matter which is seen in many parts of the brain.

Gautier, in examining attentively the external surface of the true skin, has noticed some small reddish projections, disposed in pairs: they are easily perceived when the skin is laid bare by a blister. These little bodies are regularly disposed upon the palm of the hand, and on the sole of the foot. They are sensible, and are reproduced when they have been torn out. They appear to be essentially vascular. These bodies, without being understood, have been long called the *papillæ* of the skin. The epidermis is pierced by little holes, opposite their tops, through which small drops of sweat are seen to issue, when the skin is exposed to an elevated temperature. The skin contains a great number of sebaceous follicles: it receives a great number of vessels and nerves, particularly at the points where the sense of touch is more immediately exercised. The mode in which the nerves are terminated in the skin is totally unknown: all that has been said of the cutaneous nervous papillæ is entirely hypothetical.

The exercise of tact and of touch is facilitated by the thinness of the *cutis vera*, by a gentle elevation of temperature, by an abundant cutaneous perspiration, as well as by a certain thickness and flexibility of the epidermis: when the contrary dispositions exist, the tact and the touch are always more or less imperfect.

Mechanism of Tact. — The mechanism of tact is extremely simple: it is sufficient that bodies be in contact with the skin to furnish us with *data*, more or less exact, of their tactile properties. By tact we judge particularly of the temperature. When bodies deprive us of caloric, we call them cold; when they yield it to us, we say they are hot; and according to the quantity of caloric which they give or take, we determine their different degrees of heat or cold. The notions that we have of temperature are, nevertheless, far from being exactly in relation to the quantity of caloric that bodies yield to us, or take from us; we join with it unawares a comparison with the temperature of the atmosphere, in such a manner that a body colder than ours, but hotter than the atmosphere, appears hot, though it really deprive us of caloric when we touch it. On this account, places which have a uniform temperature, such as cellars or wells, appear cold in summer, and hot in winter. The capacity also of bodies for caloric has a great influence upon us with regard to temperature: as an example of this we have only to notice the great difference of sensation produced by iron and wood, though the temperature of both be the same.

A body which is sufficiently hot to cause a chemical decomposition of our organs produces the sensation of burning. A body whose temperature is so low as to absorb quickly a great portion of the caloric of any part, produces a sensation of the same sort nearly: this may be proved in touching frozen mercury.

The bodies which have a chemical action upon the epidermis, those that dissolve it, as the caustic alkalies, and concentrated acids, produce an impression which is easy to be recognised, and by which these bodies may be known.

Every part of the skin is not endowed with the same sensibility; so that the same body applied to different points of the skin in succession, will produce a series of different impressions.

The mucous membranes possess great delicacy of tact. Every one knows the great sensibility of the lips, the tongue, of the conjunctiva, the pituitary membrane, of the mucous membrane, of the trachea, of the urethra, of the vagina, &c. The first contact of bodies, which are not destined naturally to touch these membranes, is painful at first, but this soon wears off.

Mechanism of Touch. — In man the hand is the principal organ of touch: all the most suitable circumstances are united in it. The epidermis is thin, smooth, flexible; the cutaneous perspiration abundant, as well as the oily secretion. The vascular eminences are more numerous there than any where else. The *cutis vera* has but little thickness; it receives a great number of vessels and nerves; it adheres to the subjacent *aponeuroses* by fibrous adhesions; and it is sustained by a highly elastic cellular tissue. The extremities of the fingers possess all these properties in the highest degree: the motions of the hand are very numerous, and performed with facility, and it may be applied with ease to any body of whatsoever form.

As long as the hand remains immoveable at the surface of a body, it acts only as an organ of *tact*. To exercise *touch*, it must move, either by passing over the surface, to examine form, dimensions, &c., or it must press for the purpose of determining its consistence, elasticity, &c.

We use the whole hand to touch a body of considerable dimensions: if, on the contrary, a body is very small, we employ only the points of the fingers. This delicacy of touch in the fingers has given man a great advantage over the animals. His touch is so delicate, that it has been considered the source of his intelligence.

From the highest antiquity the touch has been considered of more importance than any of the other senses: it has been supposed the cause of human reason. This idea has continued to our times: it has been even remarkably extended in the writings of Condillac, of Buffon, and other modern physiologists. Buffon, in particular, gave such an importance to the touch, that he thought one man had little more ability than another, but only in so far as he had been in the habit of making use of his hands. He said it would be well to allow children the free use of their hands, from the moment of their birth.

The touch does not really possess any prerogative over the other senses; and if in certain cases it assists the eye or the ear, it receives aid from them in others, and there is no reason to believe that it excites ideas in the brain of a higher order than those which are produced by the action of the other senses.

Of internal sensations. — All the organs, as well as the skin, possess the faculty of transmitting impressions to the brain, when they are touched by exterior bodies, or when they are compressed, bruised, &c. It may be said, that they generally possess *tact*. There must be an exception made of the bones, the tendons, the aponeuroses, the ligaments, &c., which in a healthy state are insensible, and may be cut, burned, or torn without any thing being felt by the brain.

This important fact was not known to the ancients: they considered all the white parts as nervous, and attributed to them all those properties which we now know belong only to the nerves. These useful results, which have had a great influence upon the recent progress of surgery, we owe to Haller and his disciples.

All the organs are capable of transmitting spontaneously a great number of impressions to the brain without the intervention of any external cause. They are of three sorts. The first kind take place when it is necessary for the organs to act: they are called *wants, instinctive desires.* Such are hunger, thirst; the necessity of making water, of respiration; the venereal impulse, &c. The second sort take place during the action of the organs; they are frequently obscure, sometimes very violent. The impressions which accompany the different excretions, as of the semen, the urine, are of this number.

Such are also the impressions which inform us of our motions, of the periods of digestion: even thought seems to belong to this kind of impression.

The third kind of internal sensations are developed when the organs have acted. To this kind belongs the feelings of fatigue, which is variable in the different sorts of functions.

The impressions which are felt in sickness ought to be added to these three sorts: these are much more numerous than the others. The study of them is absolutely necessary to the physician.

All those sensations which proceed from within, and which have no dependance upon the action of exterior bodies, have been collectively denominated *internal sensations,* or *feelings.*" — *Magendie's Physiology.*

Touch-me-not. See *Noli me tangere.*

TOUCHSTONE. Lydian stone. A variety of flinty slate.

Touchwood. See *Agaricus.*

TOURMALINE. Rhomboidal tourmaline is divided into two subspecies,—schorl and tourmaline. The latter mineral is of a green, brown, and red colour, in prismatic concretions, rolled pieces, but generally crystallised. It occurs in gneiss, mica slate, talc slate, &c.

TOURNEFORT, Joseph Pitton de, was born at Aix, in Provence, in 1656. Early in life he displayed an ardent devotion to botany, which ever after made the chief object of his life. His zeal in this pursuit led him to encounter considerable danger in exploring the Alps, Pyrenees, &c. during several seasons, passing the intermediate winters at Montpellier. His merits as a botanist soon became conspicuous at Paris. He published several botanical works, of which the principal is entitled, *Institutiones Rei Herbariæ.* In the year 1700 he set out, under royal patronage, on a voyage to the Levant, with the view of investigating the plants of ancient writers, and making new discoveries; and on his return, after two years, he wrote a very interesting and valuable account of the expedition, in French, which was not published, however, till after his death in 1708.

TOURNIQUET. (French; from *tourner,* to turn.) An instrument used for stopping the flow of blood into a limb.

TOXICA'RIA. (*a, æ.* f.; from τοξικον, a poison: so called from its poisonous quality.) The name of a plant.

Toxicaria macassariensis. An Indian poison, obtained from a tree hitherto undescribed by any medical botanist, known by the name of Boas-upas: it is a native of South America. Concerning this plant, various and almost incredible particulars have been related, both in ancient and modern times; some of them true, others probably founded on superstition. Rumphius testifies that he had not met with any other more dreadful product from any vegetable; and he adds, that this poison, of which the Indians boast, was much more terrible to the Dutch than any warlike instrument. He likewise says, it is his opinion that it is of the same natural order, if not of the same genus, as the cestrum.

TOXICODE'NDRUM. (*um, i.* n.; from τοξικον, a poison, and δενδρον, a tree.) The poison tree, which is so noxious that no insects ever come near it. See *Rhus toxicodendron.*

TOXICOLOGY. (*Toxicologia, æ.* f.; from τοξον, an arrow or bow, because the darts of the ancients were usually besmeared with some poisonous substance, and λογος, a discourse.) A dissertation on poisons. See *Poison.*

TO'XICUM. (*um, i.* n.; from τοξον, an arrow, which was sometimes poisoned.) A poison. See *Poison.*

Toxite'sia. The artemisia or mugwort.

TRABE'CULA. (*a, æ.* f.; a small beam.) This word is mostly applied by anatomists to the thread-like processes in the longitudinal sinus of the dura mater, and to the small medullary fibres of the brain, which constitute the commissures.

TRA'CHEA. (*a, æ.* f. Τραχεια, from its roughness; from τραχυς, rough.) *Trachelos.* The windpipe. The trachea is a cartilaginous and membraneous canal, through which the air passes into the lungs. Its upper part, which is called the larynx, is composed of five cartilages. The uppermost and smallest of these cartilages is placed over the glottis or mouth of the larynx, and is called epiglottis, as closing the passage to the lungs in the act of swallowing. The sides of the larynx are composed of the two arytenoid cartilages, which are of a very complex figure, not easy to be described. The anterior and larger part of the larynx is made up of two cartilages, one of which is called *thyroides* or *scutiformis,* from its being shaped like a buckler; and the other *cricoides* or *annularis,* from its resembling a ring. Both these cartilages may be felt immediately under the skin, at the fore-part of the thorax; and the thyroides, by its convexity, forms an eminence called the pomum adami, which is usually more considerable in the male than in the female subject.

All these cartilages are united to each other by means of very elastic ligamentous fibres; and are enabled, by the assistance of their several muscles, to dilate or contract the passage of the larynx, and to perform that

variety of motion which seems to point out the larynx as the principal organ of the voice; for when the air passes through a wound in the trachea, it produces little or no sound.

These cartilages are moistened by a mucus, which seems to be secreted by minute glands situated near them. The upper part of the trachea, and the cricoid and thyroid cartilages, are in some measure covered anteriorly by a considerable body, which is supposed to be of a glandular structure, and from its situation is called the thyroid gland, though its excretory duct has not yet been discovered, or its real use ascertained. The glottis is entirely covered by a very fine membrane, which is moistened by a constant supply of a watery fluid. From the larynx the canal begins to take the name of trachea, or aspera arteria, and extends from thence as far down as the fourth or fifth vertebræ of the back, where it divides into two branches, which are the right and left bronchial tube. Each of these bronchia ramifies through the substance of that lobe of the lungs, to which it is distributed by an infinite number of branches, which are formed of cartilages, separated from each other like those of the trachea, by an intervening membraneous and ligamentary substance. Each of these cartilages is of an annular figure; and as they become gradually less and less in their diameter, the lower ones are in some measure received into those above them, when the lungs, after being inflated, gradually collapse by the air being pushed out from them in expiration. As the branches of the bronchia become more minute, their cartilages become more and more annular and membraneous, till at length they become perfectly membraneous, and at last become invisible. The trachea is furnished with fleshy or muscular fibres, some of which pass through its whole extent longitudinally, while the others are carried round it in a circular direction, so that, by the contraction or relaxation of these fibres, it is enabled to shorten or lengthen itself, and likewise to dilate or contract the diameter of its passage. The trachea and its branches, in all their ramifications, are furnished with a great number of small glands, which are lodged in their cellular substance, and discharge a mucous fluid on the inner surface of these tubes.

The cartilages of the trachea, by keeping it constantly open, afford a free passage to the air which we are obliged to be incessantly respiring; and its membraneous part, by being capable of contraction or dilatation, enables us to receive and expel the air in a greater or less quantity, and with more or less velocity, as may be required in singing and declamation. This membraneous structure of the trachea posteriorly seems likewise to assist in the descent of the food, by preventing that impediment to its passage down the œsophagus which might be expected if the cartilages were complete rings. The trachea receives its arteries from the carotid and subclavian arteries, and its veins pass into the jugulars. Its nerves arise from the recurrent branch of the eighth pair, and from the cervical plexus.

TRACHELA'GRA. (*a, æ.* f.; from τραχηλος, the throat, and αγρα, a seizure.) The gout in the neck.

TRACHE'LIUM. (*um, ii.* n.; from τραχηλος, the throat: so called from its efficacy in diseases of the throat.) The herb throat-wort, *Campanula trachelium;* now forgotten.

TRACHE'LO. (From τραχηλος, the neck.) Names compounded of this word belong to muscles, &c. which are attached to the neck; as *trachelo-mastoideus.*

TRACHELOCE'LE. (*e, es.* f.; from τραχεια, the windpipe, and κηλη, a tumour.) A tumour upon the trachea, or bronchocele. See *Bronchocele.*

Trachelo-mastoideus. A muscle situated on the neck, which assists the complexus, but pulls the head more to one side. It is the *complexus minor seu mastoideus lateralis,* of Winslow. It arises from the transverse processes of the five inferior cervical vertebræ, where it is connected with the transversalis cervicis, and of the three superior dorsal, and it is inserted into the middle of the posterior part of the mastoid process.

TRACHELO'PHYMA. (*a, atis.* n.; from τραχηλος, the throat, and φυμα, a tumour.) A swelling of the bronchial gland.

TRACHE'LOS. (From τραχυς, rough: because of the rough cartilages.) The windpipe. See *Trachea.*

TRACHEOTOMY. (*Tracheotomia, æ.* f.; from τραχεια, the trachea, and τεμνω, to cut.) See *Bronchotomy.*

TRACHI'TIS. (*is, idis.* f.; from τραχεια, the windpipe, and ιτις, the terminal, which denotes inflammation.) Inflammation of the trachea. See *Croup.*

TRACHO'MA. (*a, atis.* n.; from τραχυς, rough.) An asperity in the internal superficies of the eyelid. The effects are a violent ophthalmia, and a severe pain, as often as the eyelid moves. It may be produced from sand falling between the eye and the eyelid of persons travelling, blown by a high wind: this happens chiefly in sandy situations, and may be prevented by spectacles for the purpose, or by guarding against the flights of sand by covering the eyes. It also arises from caruncles, or fleshy warts, growing in the internal superficies of the eyelid, and by hard pustules in the internal superficies of the eyelids.

TRACHYTE. A rock of igneous origin, principally composed of felspar. It has generally a porphyritic structure.

TRAGACANTH. See *Astragalus.*

TRAGACA'NTHA. (*a, æ.* f.; from τραγος, a goat, and ακανθα, a thorn: so called from its pods resembling the goat's beard.) See *Astragalus tragacantha.*

TRA'GICUS. A proper muscle of the ear, which pulls the point of the tragus a little forward.

TRA'GIUM. (*um, ii.* n.; from τραγος, a goat, so named from its filthy smell.) 1. The name of a genus of plants. Class, *Pentandria;* Order, *Digynia.*

2. The bastard dittany, or *Dictamnus albus.*

TRAGO'CERUS. (From τραγος, a goat, and κερας, a horn: so named from the supposed resemblance of its leaves to the horn of a goat.) The aloe plant.

TRAGOPO'GON. (*on, onis.* m.; from τραγος, a goat, and πωγων, a beard: so called because its downy seed, while enclosed in the calyx, resembles a goat's beard.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia;* Order, *Polygamia.*

2. The pharmacopœial name of the goat's beard. See *Tragopogon pratense.*

TRAGOPOGON PRATENSE. The common goat's beard. The young stems of this plant are eaten like asparagus, and are a pleasant and wholesome food. The root is also excellent, and was formerly used medicinally as a diuretic.

TRAGOPY'RUM. (*um, i.* n.; from τραγος, goat, and πυρον, wheat: so named from its beard.) Buck-wheat, the *Polygonum fagopyrum* of Linnæus.

TRAGO'RCHIS. (*is, is.* m.; from τραγος, a goat, and ορχις, a testicle: so named from the supposed resemblance of its roots to the testicles of a goat.) One or more of the orchis tribe have received this name, from their being supposed to smell like the goat.

TRAGORI'GANUM. (*um, i.* n.; from τραγος, a goat, and οριγανον, marjoram: so called because goats are fond of it.) Applied formerly to several species of origanum, because it was supposed goats were fond of them.

TRAGOSELI'NUM. (*um, i.* n.; from τραγος, a goat, and σελινον, parsley: named from its hairy coat like the beard of a goat.) The burnet saxifrage. See *Pimpinella saxifraga.*

TRA'GUS. (*us, i.* m. Τραγος, a goat: so called from its having numerous little hairs, or from its being hairy like the goat.) 1. In *Anatomy,* a small cartilaginous eminence of the auricular or external ear, placed anteriorly, and connected to the anterior extremity of the helix. It is beset with numerous little hairs, defending, in some measure, the entrance of the external auditory passage.

2. In *Botany,* this name has been variously applied, by Dioscorides, to meal or flour, and to a maritime shrub.

TRAILING. See *Procumbens.*

TRA'LLIAN, ALEXANDER, a learned and ingenious physician, who was born at Tralles, in Lydia, and flourished at Rome under the emperor Justinian, about the middle of the sixth century, and particularly introduced the liberal use of the preparations of iron.

TRA'MIS. Τραμις. The line which divides the scrotum, and runs on to the anus. See *Raphe.*

TRANCE. See *Catalepsis.*

TRANSFUSION. (*Transfusio, onis.* f.; from *transfundo,* to pour from one vessel into another.) The transmission of blood from one living animal to another by means of a canula. "Harvey was thirty years before he could get his discovery admitted, though the most evident proofs of it were every where perceptible; but as soon as the circulation was acknowledged, people's minds were seized with a sort of delirium: it was thought that the means of curing all diseases was found, and even of rendering man immortal. The cause of all our evils was attributed to the blood: in order to cure them, nothing more was necessary but to remove the bad blood, and to replace it by pure blood, drawn from a sound animal.

The first attempts were made upon animals, and they had complete success. A dog having lost a great part of its blood, received, by transfusion, that of a sheep, and it became well. Another dog, old and deaf, regained, by this means, the use of hearing, and seemed to recover its youth. A horse of twenty-six years having received in his veins the blood of four lambs, he recovered his strength.

Transfusion was soon attempted upon man. Denys and Emerez, the one a physician, the other a surgeon of Paris, were the first who ventured to try it. They introduced into the veins of a young man, an idiot, the blood of a calf, in greater quantity than that which had been drawn from them, and he appeared to recover his reason. A leprous person, and a quartan ague, were also cured by this means; and several other transfusions were made upon healthy persons without any disagreeable result.

However, some sad events happened to calm the general enthusiasm caused by these repeated successes. The young idiot we mentioned fell into a state of madness a short time after the experiment. He was submitted a second time to the transfusion; and he was immediately seized with a *Hæmaturia,* and died in a state of sleepiness and torpor. A young prince of the blood royal was also the victim of it. The parliament of Paris prohibited transfusion. A short time after, G. Riva having, in Italy, performed the transfusion upon two individuals, who died of it, the Pope prohibited it also.

From this period, transfusion has been regarded as useless, and even dangerous.

TRANSPARENCY. Diaphaneity. A quality in certain bodies by which they give passage to the rays of light. It is opposed to opacity: hence *cornea transparens,* and *cornea opaca.*

TRANSPIRATION. (*Transpiratio, onis.* f.; from *trans,* through, and *spiro,* to breathe.) See *Perspiration.*

TRANSUDATION. *Transudatio.* The passing through the cells or pores of any thing. The term should be distinguished from perspiration, which implies a function by which the perspired fluid is secreted from the blood, whereas by transudation the blood or other fluid merely passes or oozes through unaltered.

TRANSVERSA'LIS. Transverse. Applied very generally in the several departments of nature, especially in *Anatomy* to muscles, vessels, &c. which have a transverse direction.

Transversalis abdominis. A muscle situated on the anterior part of the abdomen: so named from its direction. It arises internally or posteriorly from the cartilages of the seven lower ribs, being there connected with the intercostals and diaphragm; also from the transverse process of the last vertebra of the back, from those of the four upper vertebræ of the loins, from the inner edge of the crista ilii, and from part of Poupart's ligament; and it is inserted into the inferior bone of the sternum, and almost all the length of the linea alba. Its use is to support and compress the abdominal viscera.

Transversalis anticus primus. See *Rectus capitis lateralis.*

Transversalis cervicis. See *Longissimus dorsi.*

Transversalis colli. A muscle, situated on the posterior part of the neck, which turns the neck obliquely backwards, and a little to one side.

Transversalis dorsi. See *Multifidus spinæ.*

Transversalis major colli. See *Longissimus dorsi.*

Transversalis pedis. A muscle of the foot, which it contracts, by bringing the great toe and the two outermost toes nearer each other.

Transverse suture. *Sutura transversalis.* This suture runs across the face, and sinks down into the orbits, joining the bones of the skull to the bones of the face; but with so many irregularities and interruptions, that it can scarcely be recognised as a suture.

Transverso-spinales. See *Multifidus spinæ.*

TRANSVE'RSUS. Transverse: placed across.

Transversus auris. A muscle of the external ear, which draws the upper part of the concha towards the helix.

Transversus perinæi. A muscle of the organs of generation, which sustains and keeps the perinæum in its proper place.

Transversus perinæi alter. *Prostaticus inferior*, of Winslow. A small muscle occasionally found accompanying the former.

TRAP. (From the Swedish word *trappa*, a stair.) It is applied, in *Geology*, to rocks principally characterised by the presence of hornblende and black iron clay.

TRA'PA. (*a, æ.* f.; a term given by Linnæus, whose idea is certainly taken from the warlike instrument called caltrop, the tribulus of the ancients, which consisted of four iron radiated spikes, so placed that one of them must always stand upwards, in order to wound the feet of the passengers. Such is the figure of the singular fruit of this genus; hence named by Tournefort *Tribuloides*. *Calcitrapa*, an old botanical term of similar meaning to *tribulus*, is compounded, perhaps, of *calco*, to tread or kick, and τρεπω, to turn; because the caltrops are continually kicked over if they fail of their intended mischief: here we have the immediate origin of *trapa*.) The name of a genus of plants. Class, *Tetrandria*; Order, *Monogynia*.

Trapa natans. The systematic name of the plant which affords the *nux aquatica*. *Tribulus aquaticus*. Caltrops. The fruit is of a quadrangular and somewhat oval shape, including a nut of a sweet farinaceous flavour, somewhat like that of the chestnut, which is apt to constipate the bowels, and produce disease: however, it is said to be nutritious and demulcent, and to be useful in diarrhœas from abraded bowels, and against calculus. Likewise a poultice of these nuts is said to be efficacious in resolving hard and indolent tumours.

TRAPEZIFORM. *Trapeziformis.* Of the shape of a trapezium.

TRAPE'ZIUM. (*um, ii.* n.; so called from its shape.) The first bone of the second row of the carpus.

TRAPE'ZIUS. (*us, ii.* m.; from τραπεζιος, the name of the quadrilateral or four-square geometrical figure: so named from its shape.) *Cucullaris.* A muscle situated immediately under the integuments of the posterior part of the neck and back. It arises by a thick, round, and short tendon from the lower part of a protuberance in the middle of the occipital bone backwards, and from the rough line that is extended from thence towards the mastoid process of the os temporis, and by a thin membraneous tendon, which covers part of the complexus and splenius. It then runs downwards along the nape of the neck, and rises tendinous from the spinous processes of the two lowermost vertebræ of the neck, and from the spinous processes of all the vertebræ of the back, being inseparably united to its fellow, the whole length of its origin, by tendinous fibres, which, in the nape of the neck, form what is called *ligamentum colli*, or the cervical ligament. It is inserted fleshy into the broad and posterior half of the clavicle, tendinous and fleshy into one half of the acromion, and into almost all the spine of the scapula.

This muscle serves to move the scapula in different directions. Its upper descending fibres pull it obliquely upwards; its middle transverse ones pull it directly backwards; its inferior fibres, which ascend obliquely upwards, draw it obliquely downwards and backwards.

The upper part of the muscle acts upon the neck and head, the latter of which it draws backwards, and turns upon its axis. It likewise concurs with other muscles in counteracting the flexion of the head forwards.

TRAPEZOI'DES OS. (From τραπεζιος, the trapezium, and ειδος, resemblance.) The second bone of the second row of the carpus.

TRAUMATIC. (*Traumaticus*; from τραυμα, a wound.) Any thing relating to a wound.

TRAVELLER'S JOY. See *Clematis.*

TREACLE. See *Saccharum officinale.*

Treacle, mustard. See *Thlaspi.*

Treacle, Venice. See *Mithridatum.*

Tree liver-wort. See *Lichen olivarius.*

TREFOIL. See *Trifolium.*

Trefoil, acacia. The *Spartium spinosum* of Linnæus.

Trefoil, marsh. See *Menyanthes.*

Trefoil, water. See *Menyanthes trifoliata.*

TREME'LLA. (*a, æ.* f.; from *tremo,* to tremble or quake: and so called because of its gelatinous, tender, and tremulous substance.) The name of a genus of plants, of the Class, *Cryptogamia;* Order, *Algæ.*

Tremella nostoc. *Nostoc commune.* An indigenous greenish jelly, eatable.

TREMOLITE. A subspecies of straight-edged augite. There are three kinds, the asbestous, common, and glassy.

TRE'MOR. (*or, oris.* m.) An involuntary trembling.

TREPAN. *Trephine.* An instrument used by surgeons to remove a portion of bone from the skull.

TREPHINE. See *Trepan.*

TREW, Christopher James, was born at Lauffen, in Franconia, in 1695. He published some splendid works on anatomy and botany.

TRIA'NDRIA. (*a, æ.* f.; from τρεις, three, and ανηρ, a man.) 1. The name of the third class in the sexual arrangement of Linnæus's system. It embraces hermaphrodite plants which have three distinct stamens. It has three orders,—Monogynia, Digynia, and Trigynia.

2. The name of a few orders of the Linnæan system; as the first of the Monadelphia, the third of the Gynandria, the third of the Monœcia, and the third of Diœcia.

TRIANGULA'RIS. Triangular: a term very generally used in the different departments of science, to parts of animals, vegetables, minerals, &c., from their form. See *Caulis, Folium,* &c.

TRI'BULUS. (*us, i.* m. Τριβολος; from τριβω, to tear or injure: an instrument of war to be thrown in the way to annoy the enemy's horse: hence the name of an herb from its resemblance to this instrument.) 1. The name of a genus of plants. Class, *Decandria;* Order, *Monogynia.*

2. See *Trapa natans.*

Tribulus aquaticus. See *Trapa.*

TRI'CA. (*a, æ.* f.; from θριξ, τριχος, a hair: because they seem composed of a horse-hair rolled, or partly folded, into a little round black head.) A term applied by Dr. Acharius to the black filaments, resembling a curled horse-hair, in the *Gyrophora* and *Umbilicaria* of Hoffmann.

TRICAUDA'LIS. (From *tres,* three, and *cauda,* a tail.) Having three tails.

TRI'CEPS. (*eps, ipitis.,* sc. *musculus;* from *tres,* three, and *caput,* a head.) Three-headed.

Triceps adductor femoris. Under this appellation are comprehended three distinct muscles. See *Adductor brevis, longus,* and *magnus femoris.*

Triceps auris. See *Retrahentes auris.*

Triceps extensor cubiti. This muscle occupies all the posterior part of the os humeri, and is described as two distinct muscles by Douglas, and as three by Winslow. The upper part of its long head is covered by the deltoides: the rest of the muscle is situated immediately under the integuments.

It arises, as its name indicates, by three heads. The first, or long head, (the long head of the *biceps externus,* of Douglas; *anconeus major,* of Winslow, as it is called,) springs, by a flat tendon of an inch in breadth, from the anterior extremity of the inferior costa of the scapula, near its neck, and below the origin of the teres minor. The second head, (the short head of the *biceps externus,* of Douglas; *anconeus externus,* of Winslow,) arises by an acute, tendinous, and fleshy beginning from the upper and outer part of the os humeri, at the bottom of its great tuberosity. The third head, (*brachialis externus,* of Douglas; *anconeus internus,* of Winslow,) which is the shortest of the three, originates by an acute fleshy beginning, from the back part of the os humeri, behind the flat tendon of the latissimus dorsi. These three portions unite about the middle of the arm, so as to form one thick and powerful muscle, which adheres to the os humeri to within an inch of the elbow, where it begins to form a broad tendon, which, after adhering to the capsular ligament of the elbow, is inserted into the upper and outer part of the olecranon, and sends off a great number of fibres, which help to form the fascia on the outer part of the fore-arm. The use of this muscle is to extend the fore-arm.

TRI'CHIA. (*a, æ.* f.; from θριξ, a hair.) A disease of the hair. See *Trichoma.*

TRICHI'ASIS. (From θριξ, a hair.) 1. A disease of the eye-lashes, in which they are turned in towards the bulb of the eye.

2. A disease of the hair. See *Plica.*

TRICHI'SMUS. (*us, i.* m.; from θριξ, hair.) A species of fracture which appears like a hair, and is almost imperceptible.

TRICHOCE'PHALUS. (*us, i.* m.; from τριχος, hair, and κεφαλη, the head.) The hair-headed worm. See *Vermes.*

Trichocephalus dispar. See *Vermes.*

TRICHO'MA. (*a, atis.* n.; from τριχες, the hair.) The plaited hair. See *Plica.*

TRICHOMANES. (*es, is.* m.; from τριχες, hair, and μανος, thin, lax: so called because it resembles fine hair.) The trivial name of a plant. See *Asplenium trichomanes.*

TRICHO'SIS. (Τριχωσις, *pilare malum;* from θριξ, a hair.) Under this name Good makes a genus, which embraces most of the diseases of the hair.

TRICHOTOMOUS. *Trichotomus.* Divided by threes.

TRICHU'RIS. (*is, idis.* f.; from θριξ, a hair.) The long hair-worm. See *Vermes.*

Tricoccæ. The name of an order in Linnæus's Fragments of a Natural Method, consisting of those which have a triangular capsule with three seeds.

TRICOCCUS. (From τρεις, three, and κοκκος, a grain.) Three-seeded.

TRICUSPID. (*Tricuspis, tricuspidatus;* from *tres,* three, and *cuspis,* a point: so called from their being three-pointed.) Three-pointed.

Tricuspid valve. The name of the valve in the right ventricle. See *Heart.*

TRICUSPIDA'TUS. See *Tricuspid.*

TRIFIDUS. (From *tres,* three, and *findo,* to cut.) Three-clefted.

TRIFO'LIUM. (*um, ii.* n.; from *tres,* three, and *folium,* a leaf: so called because it has three leaves on each stalk.) The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.* Trefoil.

Trifolium acetosum. See *Oxalis.*

Trifolium aquaticum. See *Menyanthes.*

Trifolium arvense. The hare's-foot trefoil: not now used.

Trifolium aureum. The *Anemone hepatica* of Linnæus.

Trifolium caballinum. See *Trifolium melilotus officinalis.*

Trifolium cæruleum. Sweet trefoil.

Trifolium falcatum. See *Hieracium.*

Trifolium fibrinum. See *Menyanthes.*

Trifolium hepaticum. See *Anemone.*

Trifolium melilotus officinalis. The systematic name of the officinal melilot; called in the shops *Melilotus,* and formerly *Lotus sylvestris, Seratula campana, Trifolium caballinum, Corona regia,* and *Trifolium odoratum.* This plant has been said to be resolvent, emollient, anodyne, and to participate of the virtues of chamomile. Its taste is unpleasant, subacrid, subsaline, but not bitter; when fresh it has scarcely any smell; in drying it acquires a pretty strong one of the aromatic kind, but not agreeable. The principal use of melilot has been in clysters, fomentations, and other external applications.

Trifolium odoratum. See *Trifolium melilotus officinalis.*

Trifolium paludosum. See *Menyanthes.*

TRIGE'MINI. (*Trigeminus;* from *tres,* three, and *geminus,* double: three-fold.) *Nervi innominati.* The fifth pair of nerves, which arise from the crura of the cerebellum, and are divided within the cavity of the cranium into three branches, viz. the *orbital, superior,* and *inferior maxillary.* The orbital branch is divided into the frontal, lachrymal, and nasal nerves; the superior maxillary into the spheno-palatine, posterior alveolar, and infra-orbital nerves; and the inferior maxillary into two branches, the internal lingual, and one more properly called the inferior maxillary.

TRIGONE'LLA. (*a, æ.* f.; a diminutive of *trigona,* three-sided, alluding to its little triangular flower.) The name of a genus of plants. Class, *Diadelphia;* Order, *Decandria.*

Trigonella fœnum græcum. The systematic name of the fœnugreek; called also, *Fœnum græcum, Buceras,* and *Ægoceras.* *Trigonella—leguminibus sessilibus strictis erectiusculis subfalcatis acuminatis, caule erecto,* of Linnæus. A native of Montpellier. The seeds are brought to us from the southern parts of France and Germany: they have a strong disagreeable smell, and an unctuous farinaceous taste, accompanied with a slight bitterness. They are esteemed as assisting the formation of pus, in inflammatory tumours; and the meal, with that intention, is made into a poultice with milk.

TRIGO'NUS. (From τρεις, tree, and γωνια, an angle.) Trigonal, or three-cornered.

TRIGY'NIA. (*a, æ.* f.; from τρεις, three, and γυνη, a female.) The name of an order in many of Linnæus's classes of the sexual system of plants, distinguished by the flowers having three pistils.

Trihilatæ. The name of a class of plants in Linnæus's Fragments of a Natural Method, consisting of plants the seeds of which have the scar well marked; the style has three stigmas.

TRIHILA'TUS. (From *tres,* three, and *hilum,* the scar or external mark on the seed.) Having three *hila* or scars.

TRILOBA'TUS. See *Trilobus.*

TRILO'BUS. *Trilobatus.* Trilobate: three-lobed. Applied to parts of animals and plants which are so shaped.

TRILOCULAR. *Trilocularis.* Three-celled.

TRINE'RVIS. Three-nerved. Three-ribbed; as applied to leaves, &c.

Trinita'tis herba. See *Anemone.*

TRINITY-HERB. See *Anemone.*

TRIPA'RTITUS. Tripartite: divided into three. Applied to parts of animals and vegetables.

Tripa'strum apellidis. *Tripastrum Archimedis.* A surgical instrument for extending fractured limbs: so named because it resembled a machine invented by Apellides or Archimedes, for launching of ships, and because it was worked with three cords.

TRIPHANE. See *Spodumene.*

TRIPHY'LLUS. (From τρεις, three, and φυλλον, a leaf.) Triphyllous: three-leaved.

TRIPINNATE. (*Tripinnatus;* from τρεις, three, and πιννα, a wing.) Three-winged. *Triplicato-pinnatus,* is when the lateral ribs of a doubly-winged leaf have them selves other leafstalks with winged leaves.

TRIPLINE'RVIS. Triply-ribbed: applied to a leaf which has a pair of large ribs branching off from a main one above the base, which is the case in every species of sun flower, and the *Blakea triplinervis.*

TRIPLO'PIA. (*a, æ.* f.; from τρεις, three, and οπτομαι, to see.) *Visus triplicatus.* See *Diplopia.*

TRIPOLI. Rottenstone. A greyish yellow-coloured mineral, used for polishing.

Trique'tra ossicula. *Ossicula Wormiana.*

The triangular-shaped bones, which are found mostly in the course of the lambdoidal suture of the skull.

TRIQUE'TRUM. (*um, i.* n.) A triangle.

TRIQUE'TRUS. (From *tres.*) Three-sided. Applied to some parts of animals, plants, &c.; as bones, stems, flowerstalks, leaves, seeds, &c.

TRI'SMUS. (*us, i.* m.; from τριζω, to gnash.) Locked jaw. Spastic rigidity of the under jaw. There are two species:—1. *Trismus nascentium,* attacking infants during the two first weeks from their birth. 2. *Trismus traumaticus,* attacking persons of all ages, and arising from cold or a wound. See *Tetanus.*

TRISSA'GO. (*o, inis.* f.; *quasi tristago;* from *tristis,* sad: because it dispels sadness.) See *Teucrium chamædrys.*

Trissago palustris. See *Teucrium.*

TRITÆO'PHYA. (*a, æ.* f.; from τριταιος, tertian, and φυω, importing a like nature or original.) *Tritæus.* A fever much of a nature with a tertian, and taking its rise from it.

Tritæophya causus. The fever called *causus* by Hippocrates.

TRITÆ'US. See *Tritæophya.*

TRITERNA'TUS. *Triplicato-ternatus.* The term given to a leaf when the divisions of a triple leafstalk are again subdivided into threes, and there are three leaflets at the end of each subdivision.

TRI'TICUM. (*um, i.* n.; from *tero,* to thresh from the husk.) The name of a genus of plants. Class, *Triandria;* Order, *Digynia.* See *Wheat.*

Triticum repens. *Gramen caninum. Gramen Dioscoridis. Gramen repens. Loliaceum radice repente.* Dog's-grass. Couch-grass. A very common grass, the roots of which are agreeably sweet, and possess aperient properties. The expressed juice is recommended to be given largely.

TRITO'RIUM. (From *tritus,* beat small.) 1. A mortar.)

2. A glass for separating the oil from the water in distilling.

TRITURATION. (*Trituratio, onis.* f.; from *tero,* to rub or grind.) *Tritura. Tritus.* The act of reducing a solid body into a subtile powder; as woods, barks, &c. It is performed mostly by the rotatory motion of a pestle in metallic, glass, or wedgewood mortars.

TRIVIAL. Trivial name means the same as the *specific:* it is that which is added to the generic name for the more ready discrimination of the species of the same genus: thus, in *Plantago,* the name of a genus, the trivial names are, *major, lanceolata, coronopus,* &c.

TROCAR. (Corrupted from *un trois quart,* French, *a three quarters;* from the three sides with which the point is made.) The name of an instrument used in tapping for the dropsy.

TROCHA'NTER. (*er, ri.* m.; from τρεχω, to run: because the muscles inserted into them perform the office of running.) The name of two processes of the thigh-bone, which are distinguished into the greater and lesser. See *Femur.*

TROCHI'SCUS. (*us, i.* m.; diminutive of τροχος, a wheel.) A troch or round tablet. Troches and lozenges are composed of powders made up with glutinous substances into little cakes, and afterwards dried. This form is principally used for the more commodious exhibition of certain medicines, by fitting them to dissolve slowly in the mouth, so as to pass by degrees into the stomach; and hence these preparations have generally a considerable portion of sugar or other materials grateful to the palate. Some powders have likewise been reduced into troches, with a view to their preparation, though possibly for no very good reasons: for the moistening them, and afterwards drying them in the air, must on this account be of greater injury than any advantage accruing from this form can counterbalance.

General rules for making troches:—

1. If the mass proves so glutinous as to stick to the fingers in making up, the hands may be anointed with any sweet or aromatic oil; or else sprinkled with starch, or liquorice powder, or with flour.

2. In order to thoroughly dry the troches, put them on an inverted sieve, in a shady airy place, and frequently turn them.

3. Troches are to be kept in glass vessels, or in earthen ones well glazed.

TRO'CHLEA. (*a, æ.* f. Τροχλεα, a pully; from τρεχω, to run.) A kind of cartilaginous pully, through which the tendon of one of the muscles of the eye passes.

TROCHLEA'RIS. See *Obliquus superior oculi.*

TROCHLEA'TOR. A nerve: so called because it is inserted into the musculus trochlearis of the eye. See *Pathetic nerve.*

Trochleatores. See *Pathetic nerve.*

TROCHOI'DES. (From τροχος, a wheel, and ειδος, resemblance.) *Axea commissura.* A species of moveable connection of bones, in which one bone rotates upon another; as the first cervical vertebra upon the odontoid process of the second.

TRO'NA. The African name for the native carbonate of soda found near Fezzan.

TRONCHIN, Theodore, was born at Geneva, in 1709. He published a treatise on the Colica Pictonum, in 1757, and contributed several articles to the Encyclopædia, and to the Memoirs of the Academy of Surgery; and to an edition of the works of Baillou he gave a Preface on the State of Medicine.

TROPÆ'OLUM. (*um, i.* n.; a diminutive of *tropæum,* or τρωπαιον, a warlike trophy. This fanciful but elegant name was chosen by Linnæus for this singular and striking genus, because he conceived the shield-like leaves and the brilliant flowers, shaped like golden helmets, pierced through and through, and stained with blood, might well justify such an allusion.) The name of a genus of plants. Class, *Octandria;* Order, *Monogynia.*

TROPÆOLUM MAJUS. The systematic name of the Indian cress. Greater Indian cress or Nasturtium. *Nasturtium indicum. Acriviola. Flos sanguineus monardi. Nasturtium peruvianum. Cardaminum minus.* This plant is a native of Peru: it was first brought to France in 1684, and there called *Le grande capucine.* In its recent state this plant, and more especially its flowers, have a smell and taste resembling those of water-cress; and the leaves, on being bruised in a mortar, emit a pungent odour, somewhat like that of horse-radish. By distillation with water they impregnate the fluid in a considerable degree with the smell and flavour of the plant. Hence the antiscorbutic character of the nasturtium seems to be well founded, at least as far as we are able to judge from its sensible qualities: therefore, in all those cases where the warm and antiscorbutic vegetables are recommended, this plant may be occasionally adopted as a pleasant and effectual variety. Patients, to whom the nauseous taste of scurvy-grass is intolerable, may find a grateful substitute in the nasturtium. The flowers are frequently used in salads, and the capsules are by many highly esteemed as a pickle. The flowers, in the warm summer months, about the time of sunset, have been observed to emit sparks like those of the electrical kind.

TROPHIS AMERICANA. Red-fruited bucephalon. The fruit of the plant is a rough red berry, which is eaten in Jamaica, though not very pleasant.

Trough, pneumatic. See *Gas.*

Trowel-shaped. See *Deltoides.*

TRUE. *Verus.* Formerly applied to designate diseases, when they were really what the name implied, and in opposition to those which only simulated them: hence *peripneumonia vera* and *notha.*

TRUFFLE. See *Lycoperdon tuber.*

Truffle, Piedmont. See *Lycoperdon tuber.*

TRUNCA'TUS. Truncate: lopped; appearing as if cut off with a pair of scissors. A truncate leaf is one which has the extremity cut off, as it were, by a transverse line; as in *Liriodendrum tulipifera,* and the petals of *Hura crepitans.*

TRU'NCUS. (*us, i.* m.) The trunk.

I. In *Anatomy,* applied to the body strictly so called. It is divided into the *thorax,* or chest, the *abdomen,* or belly, and the *pelvis.*

II. In *Botany,* that part of a plant which emerges from the root, and sustains all other parts. The genera of trunks are,—

1. *Truncus:* applied to trees and shrubs which are thick and woody.

2. *Caulis:* the stem of herbs.

3. *Calmus:* the stem of grasses.

4. *Stipes:* the trunk of funguses, ferns, and palms.

5. *Scapus:* which is not a trunk, but a flower-stalk, emerging from the root.

TU'BA. (*a, æ.* f.; from *tubus,* any hollow vessel.) A tube. 1. In *Anatomy,* applied to a canal in soft parts; as the Eustachian tube, Fallopian tube, &c.

2. In *Botany,* the inferior part of a monopetalous corol. It is the cylindrical part which is enclosed in the calyx of the primrose. See *Corolla.*

3. In *Surgery,* applied to hollow instruments.

TUBA EUSTACHIANA. (So called because it was first described by Eustachius.) *Tuba Aristotelica. Aquæducus. Aquæ ductus Fallopii. Meatus siccus. Palatinus ductus. Ductus auris palatinus.* The auditory tube. The Eustachian tube arises in each ear from the anterior extremity of the tympanum by means of a bony semi-canal; runs forwards and inwards, at the same time becoming gradually smaller; and, after perforating the petrous portion of the temporal bone, terminates in a passage, partly cartilaginous and partly membraneous, narrow at the beginning, but becoming gradually larger, and ending in a pouch behind the soft palate. It is through this orifice that the pituitary membrane of the nose enters the tympanum. It is always open, and affords a free passage for the air into the tympanum: hence persons hear better with their mouth open.

TUBA FALLOPIANA. (So called because it was first described by Fallopius.) The Fallopian tube. The uterine tube. A canal included in two laminæ of the peritonæum, which arises at each side of the fundus of the uterus, passes transversely, and ends with its extremity turned downwards at the ovarium. Its use is to grasp the ovum, and convey the prolific vapour to it, and to conduct the fertilised ovum into the cavity of the uterus.

TUBE. See *Tuba.*

TU'BER. (*er, eris.* n.; from *tumeo,* to swell.) An old name for an excrescence.

1. In *Anatomy,* applied to some parts which are rounded; as *tuber annulare,* &c.

2. In *Surgery,* a knot or swelling in any part.

3. In *Botany,* applied to a kind of round turgid root, as a turnip: hence these are called tuberose roots.

4. The name of a genus of plants in the Linnæan system. Class, *Cryptogamia;* Order, *Fungi.*

TUBER ALBUM. See *Lycoperdon.*

TUBER CIBARUM. See *Lycoperdon tuber.*

TUBER GRISEUM. See *Lycoperdon.*

TUBER MOSCHATUM. See *Lycoperdon.*

TUBER RUFUM. See *Lycoperdon.*

TUBERCLE. (*Tuberculum, i.* n.; diminutive of *tuber.*) A tubercle. 1. In *Anatomy,* applied to several elevations, and in *Morbid Anatomy,* to a diseased structure, which consists of a solid roundish substance; as tubercles of the lungs, liver, &c.

2. In *Botany,* applied to the hemispherical projections; as the fruit of the *Lichen caninus.*

TUBERCULA. The name of an order in Dr. Willan's Cutaneous Diseases, defined small, hard, superficial tumours, circumscribed and permanent, or suppurating partially. It comprehends nine genera; viz.

phyma, verruca, molluscum, virtiligo, acne, sycosis, lupus, elephantiasis, and *framboesia.*

Tubercula quadrigemina. *Corpora quadrigemina. Eminentiæ quadrigeminæ. Natulæ. Nates cerebri.* Four white oval tubercles of the brain, two of which are situated on each side, over the posterior orifice of the third ventricle and the aqueduct of Sylvius. The ancients called them nates and testes, from their supposed resemblance.

TUBERCULAR. *Tuberculatus.* Tuberculate: tubercled; having small warts or tubercles.

Tuberculum annulare. The commencement of the medulla oblongata.

Tuberculum loweri. An eminence in the right auricle of the heart where the two venæ cavæ meet: so called from Lower, who first described it.

TUBEROSE. *Tuberosus.* Tuberous: knobbed. Applied to parts of plants. The root so called is of many kinds. The most genuine consists of fleshy knobs, various in form, connected by common stalks or fibres; as the potato and Jerusalem artichoke.

TUBULAR. *Tubularis.* Tube-like.

TUBULA'TUS. See *Tubulous.*

Tu'buli lactiferi. The ducts or tubes in the nipple, through which the milk passes.

TUBULOUS. *Tubulosus.* Tubular: a leaf is so called which is hollow within, as that of the common onion.

The florets of a compound flower are called *tubulosi,* tubular or cylindrical, to distinguish them from such as are ligulate, or riband-like.

TU'BULUS. A small tube or duct.

TUFT. See *Capitulum,* and *Cyma.*

TULP, Nicholas, was born at Amsterdam, in 1593. His three books of Medical Observations have been several times reprinted, and contain many valuable physiological remarks. He is said to have been amongst the first who observed the lacteal vessels.

TUMITE. See *Thummerstone.*

TUMOUR. (*Tumor, oris.* m.; from *tumeo,* to swell.) A swelling, or morbid enlargement of any part.

TUNBRIDGE. Tunbridge Wells is a populous village in the county of Kent, which contains many chalybeate springs, all of which resemble each other very closely in their chemical properties. Two of these are chiefly used, which yield about a gallon in a minute, and therefore afford an abundant supply for the numerous invalids who yearly resort thither. The analysis of Tunbridge spring proves it to be a very pure water, as to the quantity of solid matter; and the saline contents (the iron excepted) are such as may be found in almost any water that is used as common drink. It is only as a chalybeate, and in the quantity of carbonic acid, that it differs from common water. Of this acid it contains one twenty-second of its bulk. The general operation of this chalybeate water is o increase the power of the secretory system in a gradual, uniform manner, and to impart tone and strength to all the functions: hence it is asserted to be of eminent service in irregular digestion; flatulency; in the incipient stages of those chronic disorders which are attended with great debility; in chlorosis; and numerous other complaints incident to the female sex. The prescribed method of using the Tunbridge water, observes Dr. Saunders, is judicious. The whole of the quantity daily used is taken at about two or three intervals, beginning at eight o'clock in the morning, and finishing about noon. The dose at each time varies from about one to three quarters of a pint, according to the age, sex, and general constitution of the patient, and especially the duration of the course; for it is found that these waters lose much of their effect by long habit.

TUNGSTATE. *Tungstas.* A salt formed by the combination of the tungstic acid with salifiable bases; as *tungstate of lime,* &c.

TUNGSTEN. (*Tungstenum, i.* n.; a Swedish word, importing a ponderous stone.) A metal never found but in combination, and by no means common. It exists in the ore now called *tungstate of lime,* which is exceedingly scarce. The same metallic acid is likewise found united to iron and manganese: it then forms the ore called wolfram, or *tungstate of iron and manganese.*

TUNGSTIC. *Tungsticus.* Appertaining to tungsten.

Tungstic acid. *Acidum tungsticum.* This acid is found in the tungstate of lime, and in wolfram, or the tungstate of iron and manganese. It is tasteless, and does not affect vegetable colours. The tungstates of the alkalies and magnesia are soluble and crystallisable; the other earthy ones are insoluble, as well as those of the metallic oxides.

Tungstous acid. What has been thus called appears to be an oxide of tungsten.

TUNIC. (*Tunica, æ.* f.; *à tuendo corpore,* because it defends the body.) A membrane or covering; as the coats of the eye, &c.

Tunic of a seed. See *Arillus.*

Tunica aciniformis. See *Iris.*

Tunica albuginea oculi. See *Adnata tunica.*

Tunica albuginea testis. See *Albuginea testis.*

Tunica arachnoidea. See *Arachnoid.*

Tunica cellulosa ruyschii. The second coat of the intestines.

Tunica choroidea. See *Choroid.*

Tunica conjunctiva. See *Conjunctive.*

Tunica cornea. See *Cornea.*

Tunica filamentosa. The false or spongy chorion. See *Chorion.*

Tunica retina. See *Retina.*

Tunica vaginalis testis. See *Testis.*

Tunica villosa. The villous, or inner folding coat of the intestines.

TUNICA'TUS. Coated.

Turbeth, mineral. See *Hydrargyrum vitriolatum.*

Turbeth root. See *Convolvulus turpethum.*

TURBINATE. (*Turbinatus*; from *turbino*, to sharpen at the top, shaped like a sugar-loaf.) Shaped like a sugar-loaf.

TURBINATED BONES. The superior spongy portion of the ethmoid bone, and the inferior spongy bones, are so called by some writers. See *Spongiosa ossa*.

TURBINA'TUM. The pineal gland.

TURBINA'TUS. Turbinate, or sugar-leaf form. Applied to the fig, &c.

Turbith. A cathartic eastern bark; a species of cicely.

TURBOT. See *Pleuronectes maximus*.

TURGID. *Turgidus*. Swollen; turgid.

TURKEY. See *Meleagris gallipova*.

Turkeystone. See *Whetslate*.

TURIO. (*o, onis*. m.; from *tyro*.) A young unexpanded shoot, as that of the asparagus in the state it is gathered for eating.

TURMERIC. See *Curcuma*.

TURNIP. See *Brassica rapa*.

Turnip, French. See *Brassica rapa*.

TURNSOLE. See *Heliotropium*.

TURPENTINE. *Terebinthina*. There are many kinds of turpentine. Those employed medicinally are,

1. The Chian or Cyprus turpentine. See *Pistacia terebinthus*.

2. The common turpentine. See *Terebinthina communis*.

3. The Venice turpentine. See *Pinus larix*.

All these have been considered as hot, stimulating corroborants and detergents,—qualities which they possess in common. They stimulate the primæ viæ, and prove laxative; when carried into the blood vessels they excite the whole system, and thus prove serviceable in chronic rheumatism and paralysis. Turpentine readily passes off by urine, which it imbues with a peculiar odour; also by perspiration, and by exhalation from the lungs; and to these respective effects are ascribed the virtues it possesses in gravelly complaints, scurvy, and pulmonic disorders. Turpentine is much used in gleets and fluor albus, and in general with much success. The essential oil, in which the virtues of turpentine reside, is not only preferred for external use, as a rubefacient, but also internally as a diuretic and styptic; the latter of which qualities it possesses in a very high degree. Formerly turpentine was much used as a digestive application to ulcers, &c.; but in the modern practice of surgery it is almost wholly exploded.

Turpeth mineral. See *Hydrargyrus vitriolatus*.

TURPE'THUM. (*um, i*. n.; from *Turpeth*, Indian turbeth.) See *Convolvulus turpethum*.

TURPETHUM MINERALE. See *Hydrargyrus vitriolatus*.

TURQUOIS. Calaite. A much esteemed ornamental stone brought from Persia, of a smalt blue and apple-green colour.

TURU'NDA. (*a, æ*. f.; *à terendo*, from its being rolled up.) A tent, or suppository.

TUSSILA'GO. (*o, inis*. f.; from *tussis*, a cough: because it relieves coughs.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Polygamia superflua*.

2. The pharmacopœial name of the coltsfoot. See *Tussilago farfara*.

TUSSILAGO FARFARA. The systematic name of the *Bechium*. *Bechion*. *Calceum*, *equinum Chamæleuce*. *Filius antepatrem*. *Farfarella*. *Farfara*. *Tussilago vulgaris*. *Farfara bechium*. *Ungula caballina*. Coltsfoot. *Tussilago farfara—scapo unifloro imbricato, foliis subcordatis angulatis denticulatis*. The sensible qualities of this plant are very inconsiderable: it has a rough mucilaginous taste, but no remarkable smell. The leaves have always been esteemed as possessing demulcent and pectoral virtues; and hence they have been exhibited in pulmonary consumptions, coughs, asthmas, and catarrhal affections. It is used as tea, or given in the way of infusion with liquorice-root or honey. Fuller thought well of it in the cure of scrofula, which induced Dr. Cullen to try it. He gave the expressed juice and the decoction in large quantities, which induced the scrofulous sores, he tells us, to heal. It has fallen into disuse.

TUSSILAGO PETASITES. The systematic name of the butter-bur. *Petasites*. Pestilent-wort. The roots of this plant are recommended as aperient and alexipharmic, and promise, though now forgotten, to be of considerable activity. They have a strong smell, and a bitterish acrid taste, of the aromatic kind, but not agreeable.

TU'SSIS. (*is, is*. f.; from the Hebrew word for sneezing.) A cough. See *Cough*.

TUSSIS CONVULSIVA. See *Pertussis*.

TUSSIS FERINA. See *Pertussis*.

TUTENAG. 1. A name for zinc.

2. A metallic compound brought from China.

TU'TIA. (*a, æ*. f.; Persian.) *Pompholyx*. *Cadmia*. *Cadmia factitia*. *Cadmia fornacum*. Tutty. A grey oxide of zinc. It is generally formed by fusing brass or copper, mixed with blende, when it is incrusted in the chimneys of the furnace.

TUTIA PRÆPARATA. Mixed with any common cerate, or diffused in distilled water, it was formerly in common use to apply to the eye, in debilitated states of the conjunctive membrane.

TUTSAN. (A corruption of the French *tout-sain*, which means all-heal.) See *Hypericum androsæmum*.

TUTTY. See *Tutia*.

TWINING. See *Volubilis*.

TWINFORK. See *Bigeminus*.

TWO-EDGED. See *Anceps*.

TWO-ROWED. See *Distichus*.

TYLO'SIS. (From τυλος, a callus.) *Tyloma*. An induration of the margin of the eyelids.

TYMPANI MEMBRANA. See *Membrana tympani*.

TYMPANI'TES. (*es, æ*. m.; from τυμπανον, a drum: so called because the belly

is distended with wind, and sounds like a drum when struck.) Tympany. Drum-belly. An elastic distension of the abdomen, which sounds like a drum when struck, with costiveness and atrophy, but no fluctuation. Species: — 1. *Tympanites intestinalis*, a lodgment of wind in the intestines, known by the discharge of wind giving relief.

2. *Tympanites abdominalis*, when the wind is in the cavity of the abdomen.

The intestinal species of tympanites is seldom an idiopathic disease, but mostly dependent on some other—as indigestion, colic, &c.; in which case it is removed by those remedies which are proper against dyspepsia, colic, &c. There is, however, a species of intestinal tympanites which is idiopathic, and that is when the arteries of the stomach and intestines secrete a gaseous fluid. This now and then occurs, and to a great extent, so as to inflate the abdomen to an enormous size. Warm and, as they are called, carminative medicines are to be exhibited with purgatives, as aloes, rhubarb, and the like, unless the bowels are purged; and, in this case, astringents are to be combined with the carminatives: spirituous, camphorated, and other cordials are calculated to give tone to the bowels, the loss of which mostly exists in intestinal flatulency.

The tympanites abdominalis is a very rare disease indeed: in it the gas is collected within the cavity of the peritonæum. When it exists, it mostly supervenes other diseases, and is then called *meteorismus*. Ulcerated bowels, strangulated hernia, gangrene of the intestines, produce it, when the parietes of the bowels burst. It may also be caused by abscesses bursting into the abdomen, and by gangrene of any of its viscera. Tapping the belly has been resorted to, but without effecting a cure. The disease is generally fatal.

TY'MPANUM. (*um*, *i*. n. Τυμπανον, a drum.) The drum or barrel of the ear; the hollow part of the ear in which are lodged the bones of the ear. It begins behind the membrane of the tympanum, which terminates the external auditory passage, and is surrounded by the petrous portion of the temporal bone. It terminates at the cochlea of the labyrinth, and has opening into it four foramina, viz. the orifices of the Eustachian tube and mastoid sinus, the fenestra ovalis, and fenestra rotunda. It contains the four ossicula auditus.

TY'PHA. (*a*, *æ*. f. Τυφη of the ancient Greeks; from τιφος, a bog or marsh: because it grows in marshy places.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Triandria*. The cat's-tail, or reed-mace,

Typha aromatica. See *Acorus calamus*.

Typha latifolia. The broad-leaved cat's-tail, or reed-mace. The young shoots, cut before they reach the surface of the water, eat like asparagus when boiled, and are equally nourishing.

TYPHOMA'NIA. (*a*, *æ*. f.; from τυφω, to burn, and μανια, delirium.) A complication of frensy and lethargy with fever. See *Lethargus*.

TY'PHUS. (*us*, *i*. m.; from τυφω, to smoulder, or to burn and smoke without vent: a term applied to this genus, in opposition to a cauma or inflammatory fever, because it burns, not in open violence as a cauma does, but with a sort of concealed and smothered flame.) A genus of continued fever, characterised by the ordinary symptoms of fever, with debility in the nervous and vascular systems, and a tendency in the fluids to putrefaction.

Any of the ordinary causes of fever may give rise to typhus; for the typhoid form is often dependent upon the state of the constitution on which the cause is acting, as evincing a great deficiency of sensorial power: and hence cold, mental agitation, excess of muscular labour, and intemperance, which, in strong and sanguineous habits, might generate an inflammatory fever, will often in a debilitated and nervous constitution, and especially when the debility depends primarily upon the state of the nervous system, give a typhous complexion to the disease from the first. But the most common cause by far is contagion, or a febrile miasm, issuing from a decomposition of human effluvium, under the influence of the ordinary auxiliaries of a close and stagnant atmosphere, still farther corrupted by a load of foreign exhalations from dirt or filth of any kind, and of that degree of warmth and moisture which must always exist where society exsits, and especially where it exists in too crowded a state. When the febrile miasm thus formed, or in any other way, and also, as just mentioned, any of the remote causes of fever, act on the system of those whose vital power is in a depressed state from any cause, whether a want of cheerful warmth, cheerful passions, good food, or cheerful and regular habits, typhus is far more likely to take place than any other form of fever: but when the miasm produced by a decomposition of effluvium from the living body exists in co-operation with these, it is almost impossible for an individual to escape; for the contagion thus generated has a specific power—a power beyond all other febrile causes whatever—of lowering still farther the vital energy as soon as it impresses the system, and thus of confirming any previous tendency to this fever. The effluvium that is given off from the living body under a typhus, whether produced in this or in any other way, is loaded with contagion, or *typhus-poison*, and the secretions are all alike contaminated, in most cases, with it; and hence contagion is often absorbed from a puncture, cut, or abrasion of the skin, in dissecting those who have died under typhus, which is sure to produce its specific influence. A typhus fever is therefore highly infectious, and its cause is increased and diffused the more the fever exists; and in this respect it differs essentially from the causes of all other, except exanthematous fevers: for though the causes of other fevers derange the system which they act on, they do

not give that system a power of forming new materials for fresh miasm. The extent to which typhus contagion will spread in a vitiated atmosphere, is very great indeed; and the mortality in certain epidemics has been very considerable. In a very pure state of the atmosphere the materials of this contagion become dissolved or decomposed, but they are known to adhere with great tenacity to bodies of certain descriptions, as woollen, linen cloths, and whatever is filthy or unclean. A want of proper cleanliness is of itself a frequent cause of typhus: hence it prevails in hospitals, gaols, camps, and on board of ships, especially when such places are much crowded, and the strictest attention is not paid to due cleanliness and free ventilation.

As typhus fever originates from different causes, and all these causes are modified in their action by collateral circumstances, it follows that it must be accompanied by very different symptoms, and appear under very different degrees of severity. There are but two species of typhus, — the *typhus mitior*, or mild form; and the *typhus gravior*, or malignant form. But of these there are many varieties: thus, when the nervous system is so affected as to produce many nervous symptoms, in addition to those which characterise the genus, it constitutes the nervous fever, or *typhus nervosus*. See *Nervous fever*. So when purpuraceous spots appear, when the disease exists in camps, gaols, and hospitals, or any particular place, and when there is an obvious tendency in the fluids to putrefaction, &c. the disease has been described with its leading features, as *typhus castrensis, nosocomialis, putridus, petechialis*, &c.

On the first coming on of the disease, the person is seized with languor, dejection of spirits, amazing depression and loss of muscular strength, universal weariness and soreness, pains in the head, back, and extremities, and rigors; the eyes appear full, heavy, yellowish, and often a little inflamed; the temporal arteries throb; the tongue is covered with a brownish coloured mucus, which soon becomes dry and parched; the proper taste is lost; the respiration is commonly laborious, and interrupted with deep sighing; the breath is offensive and hot; the body costive; the urine very natural, or pale; the pulse is frequent, small and hard, and fluttering, a trifling circumstance causing it to become very rapid, fluttering, and unequal. There is sometimes a great load, feeling of heat, and oppression of the stomach, and not uncommonly bilious vomitings, when the disease is called *typhus biliosus*. As the disease advances, the pulse increases in frequency, but is in many cases not above the healthy standard, and in many cases below it, not being more than forty or sixty in the minute. Great debility is now present, and great heat and dryness of the skin; oppression of the heart, with anxiety, sighing, and moaning; the thirst is mostly moderate, and the tongue, gums, teeth, mouth, and lips are covered with a brown or blackish tenaceous fur; the speech becomes inarticulate, scarcely intelligible; the patient consequently mutters, and is mostly very delirious. The fever continuing to increase still more in violence, symptoms of putrefaction show themselves: the breath becomes highly offensive; the urine deposits a black and fœtid sediment; the stools are dark, offensive, and pass off insensibly; hæmorrhages issue from the gums, nostrils, mouth, and other parts of the body; purpuræ, or livid spots, appear on the surface; the pulse intermits and sinks; the extremities grow cold; hiccoughs ensue; and death at last closes the tragic scene.

When typhus does not terminate fatally, it generally begins, in temperate and cold climates, to diminish about the fourteenth day, or beginning of the third week, and goes off gradually without any evident crisis: it is not uncommon, however, for sleep and perspiration to announce the favourable change. In warm climates, the fever seldom lasts so long, but mostly terminates in five or eight days.

Our opinion as to the event is to be formed by the degree of violence of the symptoms, particularly from the strength of the heart's action, the state of the nervous power, the tendency in the fluids to putrefaction, and the state of the primæ viæ; bearing in mind that recoveries have taken place under the most unpromising appearances, and that, in many epidemics of this disease, some have fallen victims to it without any apparent malignancy of the symptoms. An abatement of febrile heat and thirst; a gentle moisture diffused equally over the whole surface of the body; loose bilious stools; deposition of lateritious sediment in the urine; more strength in the pulse; and the absence of stupor and delirium, are always to be regarded as favourable. On the contrary, fœtid smells from the body, pectoral eruptions, dark, highly offensive, and dysenteric evacuations from the bowels; involuntary discharges by urine and stool; hæmorrhages, hiccough, continued delirium and stupor, denote the almost certain dissolution of the patient.

The appearances perceived on dissection are very varied: occasionally an inflamed condition of the membranes of the brain, but more commonly an effusion of a serous fluid between the tunica arachnoides and the pia mater. The mucous membrane of the stomach and intestinal tube, and often the muscular and peritoneal coats, present here and there spots of various sizes, which have an inflamed or subgangrenous or purpuraceous appearance.

In the very commencement of a typhus, the disease may be cut off by the affusion of cold water, an opiate, cordial diaphoretic, and sometimes by an emetic. On the way and the circumstances under which cold water is to be used, we shall soon give our observations and the article *Affusion* may also be consulted. The confectio opii of the London Pharmacopœia is to be given in the doses of half a drachm, every six hours, for three times; and

this has been known to quiet many, drooping from long marches, and exhausted by fatigue, and who have presented every appearance of an approaching typhus, from which many, under similar circumstances, have not escaped. The compound spirit of sulphuric æther, with camphire, acts very favourably with those whose nervous system seems to be in a more agitated state. Where nausea is present, and there is reason, from a bilious diathesis or other circumstance, to think the stomach contains indigested matters, or bilious saburra, the emetic is to be preferred. Blood-letting has its advocates; and if there be any cases in which this practice is justifiable, it is with the unimpaired constitutions of subjects not advanced in years; but it is generally condemned as improper in any stage of malignant typhus, and indeed whatever tends to weaken the frame must be carefully abstained from; and hence severe evacuations, by bleeding or purging, are among the foremost objects of prohibition.

The bowels ought to be moved by a gentle aperient, in order that no acrimonious material may be lodged there; but beyond this we ought not to proceed, as we shall add to the debility without obtaining any correspondent advantage. The grateful acids of tamarinds, cream of tartar, or prunes are preferable, if found sufficiently powerful; but if not, they should be combined with rhubarb or senna.

In the progress of typhus, congestion sometimes takes place in the larger and more important organs, as the head, the lungs, or the liver. If in the first, there will be a sense of oppression in the brain, most commonly combined with stupor, or low muttering delirium; if in the second, a laborious weight on the chest, and a difficulty of respiration; if in the third, the bowels will usually be found costive, the motions pale and argillaceous, and sometimes the skin and the urine chlorotic, or of a greenish-sallow, from a regurgitation of bile, morbidly secreted, into the sanguineous system. Hence the fever will be aggravated from local irritation, and the affected organ may become inflamed. Under such circumstances many bleed: but it may be asked,— Is the general rule in this case to be departed from? is blood to be taken from the system? and, if so, is it to be drawn locally or generally? and to what amount?

We have here only a choice of difficulties. Nothing is more dangerous in any fever than its affecting one part more hazardous in itself, provided the hazard be less than that of the disease: and hence, in this case, bleeding is had recourse to. If there be reason to believe that the overloaded organ is without inflammation, no good will result from taking away blood. On the conviction that inflammation has commenced, and especially if the organ affected be large and important, many employ the lancet. There is a great risk in this practice; and cold spirituous lotions and blisters should be preferred. But there are pathologists, and of considerable authority, who recommend bleeding, and even full bleeding, not only when there is sanguineous congestion, but in almost every instance of the disease, as the first step to be pursued.

Typhus is, by Dr. Clutterbuck, regarded, like every other kind of fever, as the result of an inflammation of the brain; and blood-letting is here grounded upon the principle of attacking the cerebral inflammation. The visceral and other local congestions and inflammations that so often occur, are, by Dr. Armstrong, regarded as precursive and generative of the sensorial debility, while the disease itself is no more derived from the brain than from any other organ. And blood-letting, under this view of the subject, is recommended as the means of preventing debility, instead of adding to it. The practice is by no means new, though ordinarily supposed to be of recent origin: for it has alternately lived and died away, been revived and again sunk into disrepute, for considerably upwards of three centuries; and its advocates have, in various times, been as numerous and as confident, and have maintained as warm a contest, as we are called upon to witness in the present day.

Judging of the expediency of blood-letting, when enforced as a general rule in typhus, the sum of medical opinion upon a trial of three centuries is against it. The practice has occasionally started into popularity, but it has never been able to establish itself. It should never be forgotten, however, that the expediency of bleeding must depend, not only on the diathesis of the individual, but very considerably on the state of the atmosphere. This remark should be enforced very strongly on the attention of practitioners, as it is derived from experience, and is of more importance than it may at first perhaps appear to be. As inflammatory fever has sometimes a tendency, from peculiarity of constitution or accidental circumstances, to run rapidly into typhus; typhus, in like manner, occasionally meets with incidents that suddenly reverse its character, and incline it to an inflammatory type. A very stimulant plan of treatment has sometimes done this; but far more frequently a sudden change in the atmosphere, from hot, hazy, and relaxing weather, with scarcely a breath of air stirring abroad, to a dry, cool, and refreshing east or north-east breeze.

There is another remedy of very extensive use in the cure of typhus, far less disputable, and which is founded altogether upon the indication of equalising, supporting, and restoring the sensorial power: and that is, the free application of cold water, and especially externally. This valuable medicament has been employed in some form or other almost immemorially. Dr. Wright, of Jamaica, lately revived the practice; but it is chiefly to the judgment and experience, the writings and recommendation, of Dr. Currie of Liverpool, that cold water, as an external application, is indebted for the high and deserved degree of popularity it again possesses, and especially in typhus.

It is now equally used in the form of sponging, ablution, and affusion. All these are of essential use; yet the most sudden and decisive benefit has been observed to result from affusion; for which purpose the patient is to be supported on a stool in a low wide tub, and to have a small bucket of water, containing about two gallons, poured briskly on his head, and repeated four or five times in the course of the twenty-four hours, when the surface of the body is hot and without perspiration. In many cases this plan alone has proved successful, and the fever has been cut short in a day or two from its commencement. But the method is too violent and exhausting to be employed after the first three or four days of attack; beyond which it will generally be most useful to restrain ourselves to epithems about or all over the head, the hair being removed for this purpose, or sponging the body generally; and if the sensorial debility be extreme, we should prefer tepid to cold water, or mix with the cold water a little brandy or other spirit. When this method succeeds, the usual salutary effects are, a considerable diminution in the number of the pulse, diminution of heat and headache, natural sleep, and a breathing perspiration.

The internal remedies against this disease are nervous tonics; and those in use among the Boerhaavians were the serpentaria and contrayerva, on account of their systematic objection to the bark. The tonic power of these, however, is but feeble: by their stimulant property, they sometimes prove diaphoretic: but even as cardiacs their place is better supplied by other medicines; and, in proportion as the bark has established itself, they have gradually fallen into disrepute. Yet even this last seems to be following the same track in the opinion of some practitioners of the present day, who have withdrawn all confidence in it, and undertake to affirm that it has uniformly done more mischief than good. But this is strangely to set aside the wisdom of former times, and to misconstrue the train of phænomena before them. Bark, like every other medicine, is necessarily injurious when injudiciously made use of; but there are few, if any, medicines of more importance, even in typhus, when there is a fit opportunity for employing it. Where the stomach is irritable, and will not retain it, or so feeble in its secernent power as not to digest it, and particularly where there is a tendency to local accumulations, it ought, unquestionably, to be avoided, till these symptoms are subdued by other means. But where there are no such objections it cannot be begun too soon, though it should not be pressed in such large doses as in the more rapid course of yellow fever. And where the bark cannot be made to sit easy on the stomach, its place may be well supplied with columba, either in powder or infusion.

If the skin be greatly heated and dry, either of these medicines may be combined with a solution of the acetate of ammonia; and if the prostration of strength be considerable, we may employ camphire, or wine, in conjunction with tonics. Camphire is a highly valuable medicine on the present occasion, and cannot well be given too soon: it calms the low delirium, produces a genial glow on the surface, and seems to act as a steady, permanent cordial.

Acids of all kinds, and acidulous drinks, are of great benefit in typhus. They allay the heat, tranquillise the restlessness, support the strength, and oppose the tendency to putrescency. The muriatic was preferred by many, but the sulphuric appears to be equally efficacious, and is much pleasanter, and the nitro-muriatic acid is preferable to all.

The best cordial is wine, and it must be given in proportion as the living power flags. We must be cautious, however, in first administering it; for its very stimulus produces exhaustion, and consequently increased torpitude: and we should invariably recollect, that when we have once commenced with its use, we can never leave it off; and should hence begin with such doses only as may be safely persevered in, or even increased, if necessary.

Under the influence of Dr. Brown's name, both wine and spirits were lately given in enormous quantities; and it is possible that in a few instances the practice may have been successful: but the risk is great and empirical. Blisters, judiciously interposed, will be found, in many instances, a useful auxiliary, and especially where the head is much affected.

Yeast, as an antiseptic, was strongly recommended to be taken into the stomach by many practitioners about twenty or thirty years ago, and numerous cases were published of the wonderful cures which it performed. Of late it seems to have fallen into an unmerited neglect: it is a simple remedy, easily procured, and worth a more general trial.

During the entire course of the fever, from the time the bowels have been sufficiently evacuated, the patient may be allowed animal broths and jellies in alternation with the farinacea: he should be lightly covered with bed-clothes; his chamber should be freed from all unnecessary furniture; his sheets and body-linen be frequently changed, and be instantly taken out of the room; as should also the egestions of every kind.

Above all things the chamber should be freely ventilated, which is infinitely the best way of purifying the air, and dissolving the febrile miasm as it issues from the body: but where the rooms are small, or may not admit of sufficient ventilation, or the patients are numerous, fumigation with chlorine gas should not be neglected.

Typhus carcerum. The gaol fever.

Typhus castrensis. The camp fever.

Typhus gravior. The most malignant species of typhus. See *Typhus*.

Typhus icterodes. The yellow fever. See *Remittent fever*.

Typhus mitior. The low fever.

Typhus nervosus. The nervous fever.

TYPHUS PETECHIALIS. Typhus with purple spots.

TYRI'ASIS. Τυριασις. An obsolete term for a species of leprosy, in which the skin may be easily withdrawn from the flesh.

TYRO'SIS. (From τυροω, to coagulate.) A disorder of the stomach from milk curdled in it.

U.

ULCER. (*Ulcus, eris.* n.; from ελκος, a sore.) A purulent solution of continuity of the soft parts of an animal body. Ulcers may arise from a variety of causes, as all those which produce inflammation, from wounds, specific irritations of the absorbents, from scurvy, cancer, the venereal or scrofulous virus, &c. The proximate or immediate cause is an increased action of the absorbents, and a specific action of the arteries, by which a fluid is separated from the blood upon the ulcerated surface. They are variously denominated: the following is the most frequent division: —

1. The *simple ulcer*, which takes place generally from a superficial wound.

2. The *sinuous*, that runs under the integuments, and the orifice of which is narrow, but not callous.

3. The *fistulous ulcer*, or *fistula*, a deep ulcer with a narrow and callous orifice.

4. The *fungous ulcer*, the surface of which is covered with fungous flesh.

5. The *gangrenous*, which is livid, fœtid, and gangrenous.

6. The *scorbutic*, which depends on a scorbutic acrimony.

7. The *venereal*, arising from the venereal disease.

8. The *cancerous ulcer*, or open cancer. See *Cancer*.

9. The *carious ulcer*, depending upon a carious bone.

10. The *inveterate ulcer*, which is of long continuance, and resists the ordinary applications.

11. The *scrofulous ulcer*, known by its having arisen from indolent tumours, its discharging a viscid, glairy matter, and its indolent nature.

ULCERA SERPENTIA ORIS. See *Aphtha*.

Ulcerated sore throat. See *Cynanche*.

ULLA. The common diminutive *ulla* or *illa* is, according to Dr. Good, most probably derived from the Greek, υλη, ule or ile, *materia, materies*, of the matter, make, or nature of; thus, *papula* or *papilla*, of the matter or nature of *pappus*; *lupula*, of the matter or nature of *lupus*; *pustula*, of the matter or nature of *pus*: and so of many others.

ULMA'RIA. (*a, æ.* f.; from *ulmus*, the elm: so named because it has leaves like the elm.) See *Spiræa ulmaria*.

ULMIN. A peculiar vegetable principle. It exuded spontaneously from the trunk of a species of elm, which Klaproth conjectures to be the *Ulmus nigra*, and was sent to him from Palermo in 1802. In its external characters it resembles gum. It was solid, hard, of a black colour, and had considerable lustre. Its powder was brown. It dissolved readily in the mouth, and was insipid.

U'LMUS. (*us, i.* f.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Digynia*.

2. The pharmacopœial name of the common elm. See *Ulmus campestris*.

ULMUS CAMPESTRIS. The systematic name of the common elm. *Ulmus—foliis duplicato-serratis, basis inæqualibus*, of Linnæus. The inner tough bark of this tree, which is directed for use by the pharmacopœias, has no remarkable smell, but a bitterish taste, and abounds with a slimy juice, which has been recommended in nephritic cases, and externally as a useful application to burns. It is also highly recommended in some cutaneous affections allied to herpes and lepra. It is mostly exhibited in the form of decoction, by boiling four ounces in four pints of water to two pints; of which from four to eight ounces are given two or three times a day.

U'LNA. (*a, æ.* f.; from ωλενη, the ulna, or cubit.) *Cubitus*. The larger bone of the fore-arm. It is smaller and shorter than the os humeri, and becomes gradually smaller as it descends to the wrist. We may divide it into its upper and lower extremities, and its body, or middle part. At its upper extremity are two considerable processes, of which the posterior one and largest is named *olecranon*, and the smaller and interior one the *coronoid* process. Between these two processes, the extremity of the bone is formed into a deep articulating cavity, which, from its semicircular shape, is called the *greater sigmoid cavity*, to distinguish it from another, which has been named the *lesser sigmoid cavity*. The *olecranon*, called also the *anconoid* process, begins by a considerable tuberosity, which is rough, and serves for the insertion of muscles, and terminates in a kind of hook, the concave surface of which moves upon the pully of the os humeri. This process forms the point of the elbow. The *coronoid process* is sharper at its extremity than the olecranon, but is much smaller, and does not reach so high. In bending the arm, it is re-

ceived into the fossa at the fore part of the pully. At the external side of the coronoid process is the lesser sigmoid cavity, which is a small, semilunar, articulating surface, lined with cartilage, on which the round head of the radius plays. At the fore part of the coronoid process we observe a small tuberosity, into which the tendon of the brachialis internus is inserted. The greater sigmoid cavity, the situation of which we just now mentioned, is divided into four surfaces by a prominent line, which is intersected by a small sinuosity that serves for the lodgment of mucilaginous glands. The whole of this cavity is covered with cartilage. The body, or middle part of the ulna, is of a prismatic or triangular shape, so as to afford three surfaces and as many angles. The external and internal surfaces are flat and broad, especially the external one, and are separated by a sharp angle, which, from its situation, may be termed the internal angle. This internal angle, which is turned towards the radius, serves for the attachment of the ligament that connects the two bones, and which is, therefore, called the *interosseous* ligament. The posterior surface is convex, and corresponds with the olecranon. The borders or angles, which separate it from the other two surfaces, are somewhat rounded. At about a third of the length of this bone from the top, in its fore part, we observe a channel for the passage of vessels. The lower extremity is smaller as it descends, nearly cylindrical, and slightly curved forwards and outwards. Just before it terminates, it contracts, so as to form a neck to the small head with which it ends. On the outside of this little head, answering to the olecranon, a small process, called the *styloid* process, stands out, from which a strong ligament is stretched to the wrist. The head has a rounded articulating surface on its internal side, which is covered with cartilage, and received into a semi-lunar cavity formed at the lower end of the radius. Between it and the os cuneiforme a moveable cartilage is interposed, which is continued from the cartilage that covers the lower end of the radius, and its connected by ligamentous fibres to the styloid process of the ulna. The ulna is articulated above with the lower end of the os humeri. This articulation is of the species called ginglymus: it is articulated also both above and below to the radius, and to the carpus at its lowest extremity. Its chief use seems to be to support and regulate the motions of the radius. In children, both extremities of this bone are first cartilaginous, and afterwards epiphyses, before they are completely united to the rest of the bone.

ULNAR. (*Ulnaris;* from *ulna*, the bone so named.) Belonging to the ulna.

Ulnar artery. See *Cubital artery.*

Ulnar nerve. See *Cubital nerve.*

Ulna'ris externus. See *Extensor carpi ulnaris.*

Ulnaris internus. See *Flexor carpi ulnaris.*

ULTRAMARINE. See *Lapis lazuli.*

ULVA. (*a, æ.* f.; from *uligo*, moisture, ooziness.) The name of a genus in the Linnæan system of plants. Class, *Cryptogamia;* Order, *Algæ.* Laver.

Ulva lactuca. *Lichen marinus.* Oyster-green laver. It is refrigerant and nutritive, and was probably first used in an anti-scrofulous diet, but is now introduced as a luxury.

Ulva umbilicalis. Shield laver. This is said to be eatable and nourishing when well baked.

U'MBEL. See *Umbella.*

UMBE'LLA. (*a, æ.* f.; a little shade or umbrella.) An umbel; the rundle of some authors. A species of inflorescence, in which several flower-stalks, nearly equal in length, spread from one common centre, their summits forming a level, convex, or even globose surface; more rarely a concave one, as hemlock, carrot, cow-parsnip, &c.

From the *insertion* of the umbel, it is distinguished into *pedunculate* and *sessile.* The former implies that the flower-stalks come from one; and the latter, that the stalklets come, not from a common peduncle, but from the stem or branch of the plant; as in *Sium nodiflorum*, and *Prunus avium.*

From the *division* of the umbel, it is,—

1. *Simple*, when single-flowered; as in *Allium ursinum.*

2. *Compound*, when each ray or stalk bears an *umbellula*, or partial umbel; as in the *Anethum fœniculum.*

The *umbella involucrata* is supplied with involucra.

UMBELLIFEROUS. Plants are so called which have umbels.

UMBELLU'LA. A partial or little umbel. The flower-stalks, or spokes, which compose an umbel, are often divided at the top into several smaller ones; and these smaller sets of flowers are called umbellules. See *Umbella.*

UMBELLULE. See *Umbellula.*

UMBER. An ore of iron.

UMBILICAL. (*Umbilicalis;* from *umbilicus*, the navel.) Of or belonging to the navel.

Umbilical cord. *Funis umbilicalis. Funiculus umbilicalis.* The navel-string. A cord-like substance, of an intestinal form, about half a yard in length, that proceeds from the navel of the fœtus to the centre of the placenta. It is composed of a cutaneous sheath, cellular substance, one umbilical vein, and two umbilical arteries: the former conveys the blood to the child from the placenta, and the latter return it from the child to the placenta.

Umbilical hernia. See *Hernia umbilicalis.*

Umbilical region. *Regio umbilicalis.* The part of the abdominal parietes about two inches all round the navel.

UMBILICA'TUS. Having a cavity or dimple resembling a navel.

UMBI'LICUS. The navel.

Umbilicus marinus. *Cotyledon marina.*

Androsace. Acetabulum marinum. Androsace Matthioli. Fungus petræus marinus. A submarine production, found on rocks and the shells of fishes, about the coast of Montpellier, &c. It is said to be, in the form of powder, a useful anthelmintic and diuretic.

UMBO. (The top of a buckler.) The knob or more prominent part in the centre of the hat or pilus of the fungus tribe.

Unceola elastica. This plant affords a juice which becomes an elastic gum. See *Caoutchouc.*

UNCIFORM. (*Unciformis*; from *uncus*, a hook, and *forma*, a likeness.) Hook-like: applied to bones, &c.

Unciform bone. The last bone of the second row of the carpus, or wrist: so named from its hook-like process, which projects towards the palm of the hand, and gives origin to the great ligament by which the tendons of the wrist are bound down.

UNCINA'TUS. (From *uncus*, a hook.) Uncinate, or hooked at the end: applied to the stigma of the *Lantana.*

UNDERSTANDING. *Intellectus.* See *Ideology.*

UNDULA'TUS. Undulated: waved. Applied to a leaf when the disk near the margin is waved obtusely up and down, as in *Reseda lutea.*

Unedo papyracea. See *Arbutus.*

UNEQUAL. *Inequalis.* Applied to leaves, stems, corols, &c. when rugged, not even or smooth.

UNGUE'NTUM. (*um, i.* n.; from *ungo*, to anoint.) An ointment. The usual consistence of ointments is about that of butter. The following are among the best formulæ:—

Unguentum apostolorum. *Dodeca pharmicum.* The apostles' ointment: so called because it has twelve ingredients in it exclusive of the oil and vinegar. Not used.

Unguentum cantharidis. *Unguentum lyttæ.* Ointment of the blistering-fly. Take of the blistering-fly, rubbed to a very fine powder, two ounces; distilled water, eight fluid ounces; resin cerate, eight ounces. Boil the water with the blistering-fly to one half, and strain: mix the cerate with the liquor, and then let it evaporate to the proper consistence. This is sometimes used to keep a blister open; but the savine cerate is to be preferred.

Unguentum cetacei. Ointment of spermaceti; formerly called *linimentum album*, and latterly, *unguentum spermaceti.* Take of spermaceti, six drachms; white wax, two drachms; olive oil, three fluid ounces. Having melted them together over a slow fire, constantly stir the mixture until it gets cold. A simple emollient ointment.

Unguentum cicutæ. Hemlock ointment. Take of the fresh leaves of hemlock, and prepared hog's lard, of each four ounces. The hemlock is to be bruised in a marble mortar, after which the lard is to be added, and the two ingredients thoroughly incorporated by beating. They are then to be gently melted over the fire; and after being strained through a cloth, and the fibrous parts of the hemlock well pressed, the ointment is to be stirred till quite cold. To cancerous or scrofulous sores this ointment may be applied with a prospect of success

Unguentum elemi compositum. Compound ointment of elemi; formerly called *linimentum arcæi*, and *unguentum è gummi elemi.* Take of elemi, a pound; common turpentine, ten ounces; prepared suet, two pounds; olive oil two fluid ounces: melt the elemi with the suet, then remove it from the fire, and immediately mix in the turpentine and oil; then strain the mixture through a linen cloth. Indolent ulcers, chilblains, chronic ulcers after burns, and indolent tumours are often removed by this ointment.

Unguentum hydrargyri fortius. Strong mercurial ointment; formerly called *unguentum cœruleum fortius.* Take of purified mercury, two pounds; prepared lard, twenty-three ounces; prepared suet, an ounce: first rub the mercury with the suet and a little of the lard, until the globules disappear; then add the remainder of the lard, and mix. In very general use for mercurial frictions. It may be employed in almost all cases where mercury is indicated.

Unguentum hydrargyri mitius. Mild mercurial ointment; formerly called *unguentum cœruleum mitius.* Take of strong mercurial ointment, a pound; prepared lard, two pounds: mix. Weaker than the former.

Unguentum hydrargyri nitratis. *Unguentum hydrargyri nitrati.* Ointment of nitrate of mercury. Take of purified mercury, an ounce; nitric acid, eleven fluid drachms; prepared lard, six ounces; olive oil, four fluid ounces: first dissolve the mercury in the acid; then, while the liquor is hot, mix it with the lard and oil melted together. A stimulating and detergent ointment. Tinea capitis, psorophthalmia, indolent tumours on the margin of the eyelid, and ulcers in the urethra, are cured by its application.

Unguentum hydrargyri nitratis mitius. Weaker only than the former.

Unguentum hydrargyri nitrico-oxidi. Ointment of nitric oxide of mercury. Take of nitric oxide of mercury, an ounce; white wax, two ounces; prepared lard, six ounces: having melted together the wax and lard, add thereto the nitric oxide of mercury in very fine powder, and mix. A most excellent stimulating and escharotic ointment.

Unguentum hydrargyri præcipitati albi. Ointment of white precipitate of mercury; formerly called *unguentum è mercurio præcipitato albo;* and latterly, *unguentum calcis hydrargyri albæ.* Take of white precipitate of mercury, a drachm; prepared lard, an ounce and half: having melted the lard over a slow fire, add the precipitated mercury, and mix. A useful ointment to destroy vermin in the head, and to assist in the removal of scald-head, venereal ulcers of children, and cutaneous eruptions.

Unguentum lyttæ. See *Unguentum cantharidis.*

Unguentum ophthalmicum. Ophthalmic ointment of Janin. Take of prepared hog's lard, half an ounce; prepared tutty, Armenian bole, of each two drachms; white precipitate one drachm: mix. This celebrated ointment, may be used for the same diseases of the eye and eyelid as the ung. hydrarg. nitratis. It must be at first weakened with about twice its quantity of hog's lard.

Unguentum picis aridæ. See *Unguentum resinæ nigræ.*

Unguentum picis liquidæ. Tar ointment; formerly called *unguentum picis*, and *unguentum è pice.* Take of tar, prepared suet, of each a pound: melt them together, and strain the mixture through a linen cloth. This is applicable to cases of tinea capitis, and some eruptive complaints; also to some kinds of irritable sores.

Unguentum resinæ flavæ. Yellow basilicon is in general use as a stimulant and detersive; it is an elegant and useful form of applying the resin.

Unguentum resinæ nigræ. *Unguentum picis aridæ.* Pitch ointment; formerly called *unguentum basilicum nigrum*, vel *tetrapharmacum.* Take of pitch, yellow wax, yellow resin, of each nine ounces; olive oil, a pint: melt them together, and strain the mixture through a linen cloth. This is useful for the same purposes as the tar ointment.

Unguentum sambuci. Elder ointment; formerly called *unguentum sambucinum.* Take of elder flowers, two pounds; prepared lard, two pounds: boil the elder flowers in the lard until they become crisp; then strain the ointment through a linen cloth. A cooling and emollient preparation.

Unguentum sulphuris. Sulphur ointment; formerly called *unguentum è sulphure.* Take of sublimed sulphur, three ounces; prepared lard, half a pound: mix. The most effectual preparation to destroy the itch. It is also serviceable in the cure of other cutaneous eruptions.

Unguentum sulphuris compositum. Compound sulphur ointment. Take of sublimed sulphur, half a pound; white hellebore root, powdered, two ounces; nitrate of potash, a drachm; soft soap, half a pound; prepared lard, a pound and a half: mix. This preparation is now introduced into the London Pharmacopœia, as a more efficacious remedy for itch than common sulphur ointment. In the army, where it is generally used, the sulphur vivum, or native admixture of sulphur with various heterogeneous matters, is used instead of sublimed sulphur.

Unguentum veratri. White hellebore ointment; formerly called *unguentum hellebori albi.* Take of white hellebore-root, powdered, two ounces; prepared lard, eight ounces; oil of lemons, twenty minims: mix.

Unguentum zinci. Zinc ointment. Take of the oxide of zinc, an ounce; prepared lard, six ounces: mix. A very useful application to chronic ophthalmia and relaxed ulcers.

U'NGUIS. (*is, is.* m.; from ονυξ, a hook.)

1. In *Anatomy*, the nail. The nails are horny laminæ situated at the extremities of the fingers and toes; composed of coagulated albumen, and a little phosphate of lime. The lachrymal bone is named *os unguis*, from its resemblance to a nail of the finger.

2. In *Surgery*, an abscess or collection of pus between the lamellæ of the cornea transparens of the eye: so called from its resemblance to the lunated portion of the nail of the finger.

3. In *Botany*, the claw: applied to the thin part of the petal of a polypetalous corolla.

U'ngula caballina. See *Tussilago.*

UNGULA'TUS. Hoof-shaped.

UNI'CUS. Single.

UNIFLO'RUS. Bearing one flower.

UNIFORM. See *Æqualis.*

UNILATERAL. *Unilateralis.* On one side only.

UNILOCULAR. *Unilocularis.* One-celled.

U'NIO. (*Unio*, pl. *uniones*; from *unus*, one: so called because there is never more than one found in the same shell; or according to others, many being found in one shell, not any one of them is like the other.) The pearl. See *Margarita.*

UNITED. See *Connatus.*

UNIVALVE. One-valved.

UPRIGHT. See *Erectus.*

U'RACHUS. (*us, i.* m.; from ουρον, urine, and εχω, to contain.) *Urinaculum.* The ligamentous cord that arises from the basis of the urinary bladder, which it runs along, and terminates in the umbilical cord. In the fœtuses of brute animals, which the ancients mostly dissected, it is a hollow tube, and conveys the urine to the allantoid membrane.

Ura'gium. (From ουραγος, the hinder part of an army.) The apex or extreme point of the heart.

URANGLIMMER. Green mica. Chalcolite. An ore of uranium.

Urani'scus. (From ουρανος, the firmament: so called from its arch.) The palate.

URANITE. See *Uranium.*

URA'NIUM. (*um, ii.* n.) Uranite. This metal was discovered by Klaproth in the year 1789. It exists combined with sulphur, and a portion of iron, lead, and silex, in the mineral termed *pechblende*, or *oxide of uranium.* Combined with carbonic acid it forms the *chalcolite*, or *green mica*; and mixed with oxide of iron, it constitutes the *uranitic ochre.* It is always found in the state of an oxide, with a greater or smaller portion of iron, or mineralised with sulphur and copper. The ores of uranium are of a blackish colour, inclining to a dark iron grey, and of a moderate splendour: they are of a close texture, and when broken present a somewhat uneven, and, in the smallest particles, a conchoidal surface. They are found in the mines of Saxony.

Properties of Uranium.—Uranium exhibits a mass of small metallic globules, agglutinated together. Its colour is a deep grey on the

outside, in the inside it is a pale brown. It is very porous, and is so soft that it may be scraped with a knife. It has but little lustre. Its specific gravity is between eight and nine. It is more difficult to be fused than even manganese. When intensely heated with phosphate of soda and ammonia, or glacial phosphoric acid, it fuses with them into a grass-green glass. With soda or borax it melts only into a grey, opake, scoriaceous bead. It is soluble in sulphuric, nitric, and muriatic acids. It combines with sulphur and phosphorus, and alloys with mercury. It has not yet been combined with other combustible bodies. It decomposes the nitric acid, and becomes converted into a yellow oxide. The action of uranium alone upon water, &c. is still unknown, probably on account of its extreme scarcity.

Method of obtaining Uranium.— In order to obtain uranium, the *pechblende* is first freed from sulphur by heat, and cleared from the adhering impurities as carefully as possible. It is then digested to nitric acid: the metallic matter that it contains is thus completely dissolved, while part of the sulphur remains undissolved, and part of it is dissipated under the form of sulphuretted hydrogene gas. The solution is then precipitated by a carbonated alkali. The precipitate has a lemon-yellow colour when it is pure. This yellow carbonate is made into a paste with oil, and exposed to a violent heat, bedded in a crucible well lined with charcoal.

Klaproth obtained a metallic globule 28 grains in weight, by forming a ball of 50 grains of the yellow carbonate with a little wax, and by exposing this ball in a crucible lined with charcoal to a heat equal to 170° of Wedgwood's pyrometer. Richter obtained in a single experiment 100 grains of this metal, which seemed to be free from all admixture. There are probably two oxides of uranium, the *protoxide*, which is a greyish black, and the *peroxide*, which is yellow.

URANOCHRE. An ore of uranium.

URATE. *Uras.* A compound of uric or lithic acid with a salifiable basis.

URCE'OLA. (*a, æ.* f.; from *urceolus*, a small pitcher: so named from its uses in scouring glazed vessels.) The *Parietaria officinalis* of Linnæus.

URCEOLA'TUS. Urceolate or pitcher-shaped: swelling or bellying out like a common jug.

U'REA. (*a, æ.* f.; from *urina.*) A constituent of urine. The best process for preparing it is to evaporate urine to the consistence of syrup, taking care to regulate the heat towards the end of the evaporation; to add very gradually to the syrup its volume of nitric acid; to stir the mixture, and immerse it in a bath of iced water; to harden the crystals of the acidulous nitrate of urea which precipitate; to wash these crystals with ice-cold water, to drain them, and press them between the folds of blotting paper. When the adhering heterogeneous matter is thus separated, redissolve the crystals in water, and add to them a sufficient quantity of carbonate of potash to neutralise the nitric acid. Then evaporate the new liquor at a gentle heat, almost to dryness, and treat the residuum with a very pure alkohol, which dissolves only the urea. On concentrating the alkoholic solution, the urea crystallises.

The preceding is Thénard's process, which Dr. Prout has improved. He separates the nitrate of potash by crystallisation, makes the liquid urea into a paste with animal charcoal, digests this with cold water, filters, concentrates, then dissolves the new colourless urea in alkohol, and lastly crystalllises.

Urea crystallises in four-sided prisms, which are transparent and colourless, with a slight pearly lustre. It has a peculiar, but not urinous odour; it does not affect litmus or turmeric papers; it undergoes no change from the atmosphere, except a slight deliquescence in very damp weather. In a strong heat it melts, and is partly decomposed and partly sublimed without change. The specific gravity of the crystals is about 1·35. It is very soluble in water. Alkohol, at the temperature of the atmosphere, dissolves about 20 per cent.; and, when boiling, considerably more than its own weight, from which the urea separates, on cooling, in its crystalline form. The fixed alkalies and alkaline earths decompose it. It unites with most of the metallic oxides, and forms crystalline compounds with the nitric and oxalic acids.

Urea has been recently analysed by Dr. Prout and Berard. The following are its constituents: —

	PER CENT.	PER CENT.	PER ATOM.
Hydrogene,	10·80	6·66	2 = 2·5
Carbon,	19·40	19·99	1 = 7·5
Oxygene,	26·40	26·66	1 = 10·0
Azote,	43·40	46·66	1 = 17·5
	100·00	100·00	37·5

Uric, or lithic acid, is a substance quite distinct from urea in its composition. This fact, according to Dr. Prout, explains why an excess of urea generally accompanies the phosphoric diathesis, and not the lithic. He has several times seen urea as abundant in the urine of a person where the phosphoric diathesis prevailed, as to crystallise spontaneously on the addition of nitric acid, without being concentrated by evaporation.

As urea and uric acid, says Berard, are the most azotised of all animal substances, the secretion of urine appears to have for its object the separation of the excess of azote from the blood, as respiration separates from it the excess of carbon. "The relation," says Dr. Prout, "which exists between urea and sugar, seems to explain, in a satisfactory manner, the phænomena of diabetes, which may be considered as a depraved secretion of sugar. The weight of the atom of sugar is just half that of the weight of the atom of urea; the absolute quantity of hydrogene in a given weight of both, is equal; while the absolute quantities of carbon and oxygene in

a given weight of sugar, are precisely twice those of urea."

The constituents of these two bodies and lithic acid, are thus expressed by that ingenious philosopher: —

Elements.	Urea.			Sugar.			Lithic acid.		
	No.	Per Atom.	Per Cent.	No.	Per Atom.	Per Cent.	No.	Per Atom.	Per Cent.
Hydrogene .	2	2·5	6·66	1	1·25	6·66	1	1·25	2·85
Carbon . .	1	7·5	19·99	1	7·50	39·99	2	15·00	34·28
Oxygene . .	1	10·0	26·66	1	10·00	53·33	1	10·00	22·85
Azote . .	1	17·5	46·6				1	17·50	40·00
	5	37·5	100·00	3	18·75	100·00	5	43·75	100·00

The above compounds appear to be formed by the union of more simple compounds: as sugar, of carbon and water; urea, of carburetted hydrogene and nitrous oxide; lithic acid, of cyanogene and water, &c.: whence it is inferred, that their artificial formation falls within the limits of chemical operations.

URE'DO. (From *uro*, to burn.) An itching or burning sensation of the skin, which accompanies many diseases. The nettle-rash is also so called.

URET. The compounds of simple inflammable bodies with each other, and with metals, are commonly designated by this word; as sulph*uret* of phosphorus; carb*uret* of iron, &c. The terms *bisulphuret*, *bisulphate*, &c. applied to compounds, imply that they contain twice the quantity of sulphur, sulphuric acid, &c. existing in the respective sulphuret, sulphate, &c.

URE'TER. (*er*, *eris*. m.; from *ουρον*, urine.) The membraneous canal which conveys the urine from the kidney to the urinary bladder. At its superior part it is considerably the largest, occupying the greatest portion of the pelvis of the kidney; it then contracts to the size of a goose-quill, and descends over the psoas magnus muscle and large crural vessels into the pelvis, in which it perforates the urinary bladder very obliquely. Its internal surface is lubricated with mucus to defend it from the irritation of the urine in passing.

URETERI'TIS. (*is*, *idis*. f.; from *ουρητηρ*, the ureter.) Inflammation of the ureter. Its symptoms and treatment are the same as those of inflammation of the kidney and urinary bladder.

URE'THRA. (*a*, *æ*. f.; from *ουρον*, the urine: because it is the canal through which the urine passes.) A membraneous canal running from the neck of the bladder, through the inferior part of the penis, to the extremity of the glans penis, in which it opens by a longitudinal orifice, called *meatus urinarius*. In this course, it first passes through the prostate gland, which portion is distinguished by the name of the *prostatical urethra*; it then becomes much dilated, and is known by the name of the *bulbous part*, in which is situated a cutaneous eminence, called the *caput gallinaginis*, or *verumontanum*, around which are ten or twelve orifices of the excretory ducts of the prostate gland, and two of the spermatic vessels. The remaining part of the urethra contains a number of triangular mouths, which are the *lacunæ*, or openings of the excretory ducts of the mucous glands of the urethra.

URETHRI'TIS. (*is*, *idis*. f.; from *ουρηθρα*, the urethra.) An inflammation in the urethra. Inflammation may take place on this membrane, as on other mucous membranes, and from the same causes; but it is, however, generally excited by calculous and gouty complaints, and most commonly by the venereal poison, which gives rise to the

Urethritis venerea. This is the proper term we have for that form of the venereal disease which consists of a discharge or running of a depraved or vitiated mucus from the urethra of men, and the vagina and urethra of women. Many names have been given to it by nosologists. Dr. Cullen arranges it in his genus gonorrhœa, under the trivial name of *impura, maligna, syphilitica*; but it is not a flow or emission of semen, and therefore should not be called a gonorrhœa. Dr. Good and Dr. Swediaur call it blennorrhœa; but this term is equally applicable to a discharge of mucus from any other part. The venereal poison, which is the exciting cause of it, produces a specific inflammation of the membrane it acts on, whether it be the urethra, the vagina, or the nose, or the eye. Inflammation, therefore, is the disease; and the proper term for it is *urethritis venerea*, when the urethra is the seat of it, and *elytritis venerea*, when the vagina.

In Germany, the disorder is named *tripper*, from dripping; and in French, *chaudpisse*, from the heat and scalding in making water.

No certain rule can be laid down with regard to the time that a clap will take before it makes its appearance, after infection has been conveyed. With some persons it will show itself in the course of three or four days; whilst, with others, there will not be the least appearance of it before the expiration of some weeks. It most usually is perceptible, however, in the space of from six to fourteen days,

and, in a male, begins with an uneasiness about the parts of generation, such as an itching in the glans penis, and a soreness and tingling sensation along the whole course of the urethra; soon after which, the person perceives an appearance of whitish matter at its orifice, and also some degree of pungency upon making water.

In the course of a few days, the discharge of matter will increase considerably; will assume, most probably, a greenish or yellowish hue; and will become thinner, and lose its adhesiveness: the parts will also be occupied with some degree of redness and inflammation, in consequence of which the glans will put on the appearance of a ripe cherry; the stream of urine will be smaller than usual, owing to the canal being made narrower by the inflamed state of its internal membrane; and a considerable degree of pain and scalding heat will be experienced on every attempt to make water. Sometimes, though rarely, the poison acts on the mucous membrane behind and all around the glans penis, and a similar discharge of vitiated mucus takes place to that which escapes from the urethra.

Where the inflammation prevails in a very high degree, it prevents the extension of the urethra, on the taking place of any erection, so that the penis is, at that time, curved downwards, with great pain, which is much increased if attempted to be raised towards the belly, and the stimulus occasions it often to be erected, particularly when the patient is warm in bed, and so deprives him of sleep, producing, in some cases, an involuntary emission of semen. This is called a *chordee.*

In consequence of the inflammation, it sometimes happens that, at the time of making water, owing to the rupture of some small blood-vessel, a slight hæmorrhage ensues, and a small quantity of blood is voided. In consequence of inflammation, the prepuce likewise becomes often so swelled at the end that it cannot be drawn back, which symptom is called a *phimosis;* or that, being drawn behind the glans, it cannot be returned, which is known by the name of *paraphimosis.* Now and then, from the same cause, little hard swellings arise on the lower surface of the penis, along the course of the urethra, and these perhaps suppurate and form into fistulous sores.

The adjacent parts sympathising with those already affected, the bladder becomes irritable and incapable of retaining the urine for any length of time, which gives the patient a frequent inclination to make water, and he feels an uneasiness about the scrotum, perinæum, and fundament. Moreover, the glans of the groins grow indurated and enlarged, or perhaps the testicles become swelled and inflamed, in consequence of which he experiences excruciating pains, extending from the seat of the complaint up into the small of the back: he gets hot and restless, and a small symptomatic fever arises.

Where the parts are not occupied by much inflammation, few or none of the last-mentioned symptoms will arise, and only a discharge with a slight heat or scalding in making water will prevail.

If a disease be neither irritated by any irregularity of the patient, nor prolonged by the want of timely and proper assistance, then, in the course of about a fortnight or three weeks, the discharge, from having been thin and discoloured at first, will become thick, white, and of a ropy consistence; and, from having gradually begun to diminish in quantity, will at last cease entirely, together with every inflammatory symptom whatever: whereas, on the contrary, if the patient has led a life of intemperance and sensuality, has partaken freely of the bottle and high-seasoned meats, and has, at the same time, neglected to pursue the necessary means, it may then continue for many weeks or months; and, on going off, may leave a weakness or gleet behind it, besides being accompanied with the risk of giving rise, at some distant period, to a constitutional affection, especially if there has been a neglect of proper cleanliness; for where venereal matter has been suffered to lodge between the prepuce and glans penis for any time, so as to have occasioned either excoriation or ulceration, there will always be danger of its having been absorbed.

Another risk, arising from the long continuance of a clap, especially if it has been attended with inflammatory symptoms, or has been of frequent recurrence, is the taking place of one or more strictures in the urethra. These are sure to occasion a considerable degree of difficulty, as well as pain, in making water, and, instead of its being discharged in a free and uninterrupted stream, it splits into two, or perhaps is voided drop by drop. Such affections become, from neglect, of a most serious and dangerous nature, as they not unfrequently block up the urethra, so as to induce a total suppression of urine.

Where the disease has been of long standing, warty excrescences are likewise apt to arise about the parts of generation, owing to the matter falling and lodging thereon; and they not unfrequently prove both numerous and troublesome.

Having noticed every symptom which usually attends this disease in the male, it will only be necessary to observe, that the same heat and soreness in making water, and the same discharge of discoloured mucus, together with a slight pain in walking, and an uneasiness in sitting, take place in females as in the former; but as the parts in women which are most apt to be affected by the venereal poison are less complex in their nature and fewer in number than in men, so of course the former are not liable to many of the symptoms which the latter are; and, from the urinary canal being much shorter and of a more simple form in them than in men, they are seldom, if ever, incommoded by the taking place of strictures.

With women it, indeed, often happens, that

all the symptoms of the disease are so very slight, that they experience no other inconvenience than the discharge, except perhaps immediately after menstruation, at which period it is no uncommon occurrence for them to perceive some degree of aggravation in the symptoms.

Women of a relaxed habit, and such as have had frequent miscarriages, are apt to be afflicted with a disease known by the name of fluor albus, which it is often difficult to distinguish from a clap, as the matter discharged in both is, in many cases, of the same colour and consistence. The surest way of forming a just conclusion, in instances of this nature, will be to draw it from an accurate investigation, both of the symptoms which are present, and those which have preceded the discharge; as, likewise, from the concurring circumstances, such as the character and mode of life of the person, and the probability there may be of her having had venereal infection conveyed to her by any connection in which she may be engaged.

It was once generally supposed, that the discharge depended always upon ulcers in the urethra, producing a discharge of purulent matter; and such ulcers do, indeed, occur in consequence of a high degree of inflammation and suppuration: but many dissections of persons, who have died whilst labouring under a clap, have clearly shown that the disease exists without any ulceration in the urethra, so that the discharge which appears is usually a vitiated mucus, thrown out from the mucous follicles of the urethra. On opening this canal, in recent cases, it usually appears red and inflamed: its mucous glands are somewhat enlarged, and its cavity is filled with matter to within a small distance from its extremity. Where the disease has been of long continuance, its surface all along, even to the bladder, is generally found pale and relaxed, without any erosion.

The cure of this disease is, in the present day, very simple; for the poison appears to have lost very much of its virulence, by passing from one constitution to another, which it evinced on its first detection. Rest, diluent drinks, and an antiphlogistic regimen, will often effect a cure alone; but it may be expedited by cooling laxatives and topical applications.

The remedies employed are of two kinds, and very opposite characters,—stimulant and sedative. Both also are used generally and locally: with a view of taking off the irritation directly, by exciting a new action; or indirectly, by rendering the parts affected torpid to the existing action, and thus allowing it to die away of its own accord. Many of these remedies indeed, as well the local as the general, were at one time supposed to be natural antidotes, and to cure by a specific power,—an idea, however, which has been long banished from the minds of most practitioners.

The general sedatives that have hitherto been principally employed, are opium, conium, hyosciamus, papaver, nitrate of potash, oily emulsions, and mucilages. The first has often succeeded, but with considerable and very unnecessary inconvenience to the constitution: the others are not much to be depended on. They may have co-operated with a rigidly reducent diet, but have seldom answered alone. Employed locally, some of them, and particularly opium, have proved far more beneficial. The best form of this last is that of an injection. Practitioners usually direct it mixed with some oil or mucilage, both of which have a greater chance of acting as demulcents, and sheathing or inviscating the acrimonious corpuscles in this case, than in the irritable surface of the lungs in catarrh and asthma when given by the lungs. Two drachms of powder of gum acacia, five grains of powdered opium, and half a pint of distilled water, form a good injection: also, six fluid drachms of almond oil, half an ounce of powdered gum acacia, ten grains of powdered opium, and seven fluid ounces of distilled water, made into an emulsion: also, ten grains of powdered opium, and half a pint of decoction of marshmallows, or decoction of barley. The quantity of opium, and of the mucilaginous material, may be increased or diminished according to circumstances; and it is necessary, in the preparation of all these, to dissolve the opium first in the water, which should be distilled, or the purest soft water that can be obtained; then to filter or strain it through the finest gauze or lint before the mucilage is added. The chill should be taken off before the injection is used. The compound powder of ipecacuanha, the pilula opii, the extractum conii, the extractum hyosciami, and extractum papaveris, are the best forms of sedatives for internal use, and the dose must be accommodated to the effect which is required. To that which is selected, it is a good practice to add two or three grains of the pilula hydrargyri at bed-time, which has the beneficial effect of inducing an action under which the mucus is secreted of a less virulent nature, and the inflammation is more speedily removed.

The stimulant process has, however, been found to answer so much more rapidly, and more effectually, that it has almost superseded the use of sedatives in modern practice. Formerly this process was also employed generally; and it was supposed, and in many cases sufficiently ascertained, that by strongly irritating some other part, the morbid excitement of the urethra would subside, and the organ have time to recover its natural action: hence the intestines were daily stimulated by cathartics, as the neutral salts, mercury, and colocynth, which last was at one time regarded as a specific; or terebinthinates, as copaiba, camphire, and turpentine itself.

The stimulating plan is still continued with another remedy, imported from the east. In Bengal and Java, the common remedy is cubebs, the *Piper cubeba* of Linnæus. This

pepper, well pounded, is exhibited in a little water, five or six times a day, in the quantity of a dessert spoonful, or about three drachms, during which time all heating aliments are to be carefully abstained from. The cure, we are told, is entirely completed in two or three days, the heat in making water first ceasing, and the discharge becoming viscid. A slight diarrhœa is sometimes produced, with a flushing in the face, and a sense of heat in the palms of the hands and the soles of the feet. There is no necessity, however, for subjecting the constitution to so severe a discipline: for the stimulant process, and particularly that of astringent stimulants, when employed locally, succeeds ordinarily in a few days without any trouble. These consist chiefly of the metallic salts in solution; as the oxymuriate, the submuriate of mercury, the sulphate and the acetate of zinc, the acetate of lead, the sulphate of copper, and ammoniacal copper.

℞. Liquoris hydrargyri oxymuriatis, f. ℥j.; aquæ distillatæ, f. ℥vij.: misce.

℞. Liquoris oxymuriatis hydrargyri, f. ℥j.; aquæ distillatæ, f. ℥vij.; extracti hyosciami, gr. x.: misce et cola.

℞. Liquoris hydrargyri oxymuriatis, f. ℥j.; pulveris acaciæ, ℥ss.; aquæ distillatæ, f. ℥vij.: misce.

℞. Liquoris hydrargyri oxymuriatis, f. ℥j.; tinctura opii, f. ʒj.; pulveris acaciæ, ℥ss.; aquæ distillatæ, f. ℥vij.: misce.

℞. Liquoris hydrargyri oxymuriatis, f. ℥jss.; aquæ distillatæ, f. ℥vjss.: misce.

℞. Hydrargyri submuriatis, ℈j.; liquoris calcis, f. ℥iij.; aquæ distillatæ, f. ℥iv.: misce.

After these have been mixed and occasionally shook during one hour, pour off the clear liquor from the sediment.

℞. Hydrargyri submuriatis, ℈j.; liquoris calcis, f. ℥iij.; tincturæ opii, f. ʒj.; aquæ distillatæ, f. ℥v.: misce.

℞. Zinci sulphatis, gr. v.; aquæ distillatæ, f. ℥viij; misce.

℞. Zinci sulphatis, gr. x.; aquæ distillatæ, f. ℥viij.: misce.

℞. Zinci acetatis, ℈ss.; aquæ distillatæ, f. ℥viij.: misce.

℞. Plumbi acetatis, gr. iv.; spiritus tenuioris, f. ʒj.; aquæ distillatæ, f. ℥vij.: misce.

The sulphate of copper and the ammoniacal copper require much more caution in their use: they are to be ordered in a very weak solution, which should be tasted before it is used; and if the tongue be sensible of their taste, the solution must be still further diluted, until the taste is scarcely perceptible.

These injections should be applied three times a day, with a proper instrument, and should be retained about a minute. The ill effect of them is a sudden stoppage of the discharge, from which swelled testicle, inflammation of the prostate gland and bladder, occasionally result; but the most frequent of all the sequels of the use of astringent injections, during the organic inflammation of the mucous membrane of the urethra, is stricture, which, though it seldom places the patient's life in any danger, makes a continued inroad on his comfortable feeling, requires the long-continued use of bougies, and the attendance of the surgeon. Where the complaint, however, has been improperly treated with stimulating, and particularly stimulating-astringent injections, or where it has continued too long before application for medical assistance, the whole range of the urethra, or some particular parts of it, are apt to become so irritable as to excite spasmodic contractions, which commonly pass under the name of strictures, without being so in reality; and this irritation sometimes extends to the bladder. The most sensible parts of fibrous structures and canals are their extremities; and hence the portions of the urethra which suffer most from irritation, are the interior membrane of the glans and prostate, particularly the latter, in consequence of its direct connection with the bladder as well as the urethra. On this account, when a patient once labours under *spasmodic contractions*, or strictures, as they are called, from clap, whatever other parts these may exist in, the introduction of a bougie will be almost sure to prove that there is also a constriction at the prostatical portion. Generally speaking, it will be found to originate here, and to occur in other parts of the canal from sympathy. But the case will often be reversed; and while the irritation originates in some other part, or in the bladder, it is by sympathy with these that the prostate itself is affected. Mr. Abernethy has pointed out this double source of spasmodic constriction in the prostate in the clearest manner possible, in his surgical observations on diseases of the urethra; and the remarks he has there offered upon the propriety of employing or withholding the bougie, as an instrument of cure, cannot be too deeply imprinted on every student's mind. It is almost unnecessary to add, that the utmost cleanliness, by frequent washing, should be maintained from the first appearance of the disease.

When urethritis is a secondary disease, or produced by accidents, operations, &c., it requires the same local treatment as inflammation of other mucous membranes; viz. leeches, cold lotions, and aperients. Very mild injections may be used if the inflammation be considerable, but they are often productive of great irritation.

URE'TICUS. (From *ουρον*, urine.) That which promotes a discharge of urine.

U'RIAS. (From *ουρον*, urine.) The urethra.

URIC. *Uricus.* Appertaining to urine.

URIC ACID. See *Lithic acid.*

URINA'CULUM. See *Urachus.*

URI'NÆ ARDOR. See *Dysuria.*

URINA'RIA. (*a*, *æ*. f.; from *urina*, urine: so named from its diuretic qualities.) See *Leontodon taraxacum.*

URINARY. (*Urinarius*; from *urina*, urine.) Appertaining to urine.

URINARY BLADDER. *Vesica urinaria.* The

bladder is a membraneous pouch, capable of dilatation and contraction, situated in the lower part of the abdomen, immediately behind the symphysis pubis, and opposite to the beginning of the rectum. Its figure is nearly that of a short oval. It is broader on the fore and back than on the lateral parts; rounder above than below, when empty; and broader below than above, when full. It is divided into the body, neck, and fundus, or upper part; the neck is a portion of the lower part, which is contracted by a sphincter muscle. This organ is made up of several coats; the upper, posterior, and lateral parts are covered by a reflection of the peritonæum, which is connected by cellular substance to the muscular coat. This is composed of several strata of fibres, the outermost of which are mostly longitudinal, the interior becoming gradually more transverse, connected together by reticular membrane. Under this is the cellular coat, which is nearly of the same structure with the tunica nervosa of the stomach. Winslow describes the internal or villous coat as somewhat granulated and glandular; but this has been disputed by subsequent anatomists. However, a mucous fluid is poured out continually from it, which defends it from the acrimony of the urine. Sometimes the internal surface is found very irregular, and full of rugæ, which appear to be occasioned merely by the strong contraction of the muscular fibres, and may be removed by distending it. The sphincter does not seem to be a distinct muscle, but merely formed by the transverse fibres being closely arranged about the neck. The urine is received from the ureters, which enter the posterior part of the bladder obliquely; and when a certain degree of distension has occurred the muscular fibres are voluntarily exerted to expel it.

URINE. (*Urina, æ.* f. Ουρον; from ουρεω, to rush out.) The saline liquid secreted in the kidneys, and dropping down from them, *guttatim*, through the ureters, into the cavity of the urinary bladder. *The secretory organ* is composed of the arterious vessels of the cortical substance of the kidneys, from which the urine passes through the uriniferous tubuli and renal papillæ, into the renal pelvis, whence it flows, drop by drop, through the ureters into the cavity of the urinary bladder, where it is detained some hours, and at length, when *abundant*, eliminated through the urethra.

Few of the apparatus of secretion are so complicated as that of the urine: it is composed of the two kidneys, of the *ureters*, of the bladder, and the *urethra*; besides the abdominal muscles contribute to the action of these different parts, amongst which the kidneys alone form urine: the others serve in its transportation and expulsion.

Situated in the abdomen, upon the sides of the vertebral column, before the last false ribs and the *quadratus lumborum*, the kidneys are of small volume relatively to the quantity of fluid they secrete. They are generally surrounded with a great deal of fat. Their parenchyma is composed of two substances: the one exterior, vascular, or *cortical*; the other called *tubular*, disposed in a certain number of cones, the base of which corresponds to the surface of the organ, and their summits unite in the membraneous cavity called *pelvis*. Its cones appear formed by a great number of small hollow fibres, which are excretory canals of a particular kind, and which are generally filled with urine.

In respect of its volume, no organ receives so much blood as the kidney. The artery which is directed there is large, short, and proceeds immediately from the aorta: it has easy communication with the veins and the tubulous substance, as may be easily ascertained by means of the most coarse injections, which, being thrown into the renal artery, pass into the veins and into the pelvis, after having filled the cortical substance.

The filaments of the great sympathetic alone are distributed to the kidneys. The *calices*, pelvis, and ureter, form together a canal which commences in the kidneys, where it embraces the top of the mammillary processes, and, placed at the sides of the vertebral column, it goes in the bottom of the pelvis to the bladder, where it terminates. This last organ is an extensible and contractile sac, intended to hold the fluid secreted by the kidneys, and which communicates with the exterior by a canal of considerable length in man, but very short in woman, called *urethra*.

The posterior extremity of the urethra is, only in man, surrounded by the *prostate* gland, which is considered by certain anatomists as a collection of mucous follicles. Two small glands placed before the anus pour a particular fluid into this canal. Two muscles which descend from the pubis towards the rectum, pass upon the sides of the part of the bladder which ends in the urethra, approach one another behind, and form a small arc which surrounds the neck of the bladder, and carries it more or less upwards.

If the pelvis is cut open in a living animal, the urine is seen to pass out slowly by the summits of the excretory cones. This liquid is deposited in the pelvis of the kidney, and then by little and little it enters into the *ureter*, through the whole length of which it passes. It thus arrives at the bladder, into which it penetrates by a constant exudation or dribbling.

A slight compression upon the uriniferous cones makes the urine pass out in considerable quantity; but instead of being limpid, as when it passes out naturally, it is muddy and thick. It appears, then, to be filtered by the hollow fibres of the tubular substance.

Neither the *pelvis* nor the *ureter* being contractile, probably the power which produces the motion of the urine is, on one hand, that by which it is poured into the *pelvis*; and, on the other, the pressure of the abdominal muscles; to which may be added, when we stand upright, the weight of the liquid.

Under the influence of these causes, the urine passes into the bladder, and slowly distends this organ, sometimes to a considerable degree; this accumulation being permitted by the extensibility of different organs.

How does the urine accumulate in the bladder? Why does it not flow immediately by the urethra? and why does it not flow back into the ureter? The answer is easy: for the ureters. These conduits pass a considerable distance into the sides of the bladder. In proportion as the urine distends this organ, it flattens the ureters, and shuts them so much more firmly as it is more abundant. This takes place in the dead body as well as in the living; also, a liquid, or even air, injected into the bladder by the urethra, never enters the ureters. It is, then, by a mechanism analogous to that of certain valves that the urine does not return towards the kidneys.

It is not so easy to explain why the urine does not flow by the urethra. Several causes appear to contribute to this. The sides of this canal, particularly towards the bladder, have a continual tendency to contract, and to lessen the cavity; but this cause alone would be insufficient to resist the efforts of the urine to escape, when the bladder is full. In the dead body, in which the canal contracts nearly in the same manner, it has but a very weak resistance, and does not prevent the passage of the liquid outwards, though the bladder may be very little compressed.

The angle of the bladder with the urethra, when it is strongly distended, may also present an obstacle to the passage of the urine; but the principal cause, most probably, is the contraction of the elevating muscles of the anus, which, either by the disposition to contraction of the muscular fibres, or by their contraction under the influence of the brain, press the urethra upwards, compress its sides with more or less force against each other, and thus shut its posterior orifice.

Excretion of Urine. — As soon as there is a certain quantity of urine in the bladder, we feel an inclination to discharge it. The mechanism of this expulsion deserves particular attention, and has not always been well understood.

If the urine is not always expelled, this ought not to be attributed to the want of contraction in the bladder, for this organ always tends to contract; but, by the influence of the causes that we have noticed, the internal orifice of the urethra resists with a force that the contraction of the bladder cannot surmount. The will produces this expulsion: 1st, By adding the contraction of the abdominal muscles to that of the bladder; 2dly, By relaxing the *levatores ani*, which shut the urethra. The resistance of this canal being once overcome, the contraction of the bladder is sufficient for the complete expulsion of the urine it contained; but the action of the abdominal muscles may be added, and then the urine passes out with much greater force. We may also stop the flowing of the urine all at once, by contracting the levators of the anus.

The contraction of the bladder is not voluntary, though, by acting on the abdominal muscles, and the levators of the anus, we may cause it to contract when we choose.

The urine that remains in the urethra after the bladder is empty, is expelled by the contraction of the muscles of the perinæum, and particularly by that of the *acceleratores urinæ.*

Though the quantity of urine is very copious, and though it contains several proximate principles which are not found in the blood, and consequently a chemical action takes place in the kidneys, the secretion of the urine is nevertheless very rapid.

The physical properties of urine are subject to great variations. If rhubarb or madder has been used it becomes of a deep yellow, or blood-red; if one has breathed an air charged with vapours of oil or turpentine, or if a little rosin has been swallowed, it takes a violet colour. The disagreeable odour that it takes by the use of asparagus is well known.

Its chemical composition is not less variable. The more use that is made of watery beverages, the more considerable the total quantity and proportion of water becomes. If one drinks little, the contrary happens.

The uric acid becomes more abundant when the regimen is very substantial, and the exercise trifling. This acid diminishes, and may even disappear altogether, by the constant and exclusive use of unazotised food, such as sugar, gum, butter, oil, &c. Certain salts, carried into the stomach, even in small quantity, are found in a short time in the urine.

The extreme rapidity with which this translation takes place, has made it be supposed there is a direct communication between the stomach and the bladder. Even now there are considerable numbers of partisans in favour of this opinion.

It is not yet long since a direct canal from the stomach to the bladder was supposed to exist; but this passage has no existence. Others have supposed, without giving any proof, that the passage took place by the cellular tissue, by the anastomoses of the lymphatic vessels, &c.

Darwin having given to a friend several grains of nitrate of potash, in half an hour he had him bled, and collected his urine. The salt was found in the urine, but not in the blood. Brande made similar observations with prussiate of potash. He concluded from it, that the circulation is not the only means of communication between the stomach and the urinary organs, but without giving any explanation of the existing means. Sir Everard Home is also of this opinion.

Professor Magendie made experiments in order to clear up this important question; and found, 1st, That whenever prussiate of potash is injected into the veins, or absorbed in the intestinal canal, or by a serous membrane, it very soon passes into the bladder, where it is easily recognised amongst the urine. 2dly, That if the quantity of prussiate injected is

considerable, the tests can discover it in the blood; but if the quantity is small, its presence cannot be recognised by the usual means. 3dly, That the same result takes place by mixing the prussiate and blood together in a vessel. 4thly, That the same salt is recognised in all proportions in the urine. It is not extraordinary, then, that Darwin and Brande did not find in the blood the substance that they distinctly perceived in the urine.

With regard to the organs that transport the liquids of the stomach and intestines into the circulating system, it is evident, according to what we have said, in speaking of the chyliferous vessels, and the absorption of the veins, that these liquids are directly absorbed by the veins, and transported by them to the liver and the heart; so that the direction which these liquids follow, in order to reach the veins, is much shorter than is generally admitted, viz. by the lymphatic vessels, the mesenteric glands, and the thoracic duct.—*Magendie.*

The urine of a healthy man is divided in general into,

1. *Crude*, or that which is emitted one or two hours after eating. This is for the most part aqueous, and often vitiated by some kinds of food.

2. *Cocted*, which is eliminated some hours after the digestion of the food, as that which is emitted in the morning after sleeping. This is generally in smaller quantity, thicker, more coloured, more acrid, than at any other time. Of such cocted urine, the *colour* is usually citrine.

The *degree of heat* agrees with that of the blood. Hence in atmospheric air it is warmer, as is perceived if the hand be washed with urine. The *specific gravity* is greater than water; and that emitted in the morning is always heavier than at any other time. The *smell* of fresh urine is not disagreeable. The *taste* is saltish and nauseous. The *consistence* is somewhat thicker than water. The *quantity* depends on that of the liquid drank, its diuretic nature, and the temperature of the air.

Changes of urine in the air.—Preserved in an open vessel, it remains pellucid for some time, and at length there is perceived at the bottom a *nubecula*, or little cloud, consolidated, as it were, from the gluten. This nubecula increases by degrees, occupies all the urine, and renders it opake. The natural smell is changed into a putrid *cadaverous* one; and the surface is now generally covered with a *cuticle*, composed of very minute crystals. At length the urine regains its transparency, and the *colour* is changed from a yellow to a brown; the cadaverous smell passes into an *alkaline*; and a brown, grumous *sediment* falls to the bottom, filled with white particles, deliquescing in the air, and so conglutinated as to form, as it were, little soft calculi.

Thus *two sediments* are distinguishable in the urine: the *one* white and gelatinous, and separated in the beginning; the *other* brown and grumous, deposited by the urine when putrid.

Spontaneous degeneration.—Of all the fluids of the body, the urine first putrefies. In summer, after a few hours, it becomes turbid, and sordidly black; then deposits a copious sediment, and exhales a fœtor like that of putrid cancers, which at length becomes cadaverous. Putrid urine effervesces with acids, and, if distilled, gives off, before water, an urinous volatile spirit.

The properties of healthy urine are,—

1. It reddens paper stained with turnsole and with the juice of raddishes, and therefore contains an acid. This acid has been generally considered as the phosphoric, but Thénard has shown that, in reality, it is the *acetic*.

2. If a solution of ammonia be poured into fresh urine, a white powder precipitates, which has the properties of *phosphate of lime*.

3. If the phosphate of lime precipitated from urine be examined, a little magnesia will be found mixed with it. Fourcroy and Vauquelin have ascertained that this is owing to a little *phosphate of magnesia* which urine contains, and which is decomposed by the alkali employed to precipitate the phosphate of lime.

4. Proust informs us that *carbonic acid* exists in urine, and that its separation occasions the froth which appears during the evaporation of urine.

5. Proust has observed, that urine kept in new casks deposits small crystals, which effloresce in the air, and fall to powder. These crystals possess the properties of the *carbonate of lime*.

6. When fresh urine cools, it often lets fall a brick-coloured precipitate, which Scheele first ascertained to be crystals of *uric acid*. All urine contains this acid, even when no sensible precipitate appears when it cools.

7. During intermitting fevers, and especially during diseases of the liver, a copious sediment of a brick-red colour is deposited from urine. This sediment contains the *rosacic acid* of Proust.

8. If fresh urine be evaporated to the consistence of a syrup, and muriatic acid be then poured into it, a precipitate appears which possesses the properties of *benzoic acid*.

9. When an infusion of tannin is dropped into urine, a white precipitate appears, having the properties of the combination of tannin and *albumen*, or gelatine. Their quantity in healthy urine is very small, often indeed not sensible. Cruickshank found that the precipitate afforded by tannin in healthy urine amounted to 1-240th part of the weight of the urine.

10. If urine be evaporated by a slow fire to the consistence of a thick syrup, it assumes a deep brown colour, and exhales a fœtid ammoniacal odour. When allowed to cool, it concretes into a mass of crystals, composed of all the component parts of urine. If four times its weight of alkohol be poured into this mass at intervals, and a slight heat be

applied, the greatest part is dissolved. The alkohol which has acquired a brown colour is to be decanted off, and distilled in a retort in a sand heat till the mixture has boiled for some time, and acquired the consistence of a syrup. By this time the whole of the alkohol has passed off, and the matter, on cooling, crystallises in quadrangular plates, which intersect each other. This substance is *urea*, which composes 9-20ths of the urine, provided the watery part be excluded. It is this substance which characterises urine, and constitutes it what it is, and to which the greater part of the very singular phænomena of urine are to be ascribed.

11. According to Fourcroy and Vauquelin, the colour of urine depends upon the urea: the greater the proportion of urea the deeper the colour. But Proust has detected a *resinous matter* in urine, similar to the resin of bile, and to this substance he ascribes the colour of urine.

12. If urine be slowly evaporated to the consistence of a syrup, a number of crystals make their appearance on its surface: these possess the properties of the *muriate of soda*.

13. The saline residuum which remains after the separation of urea from crystallised urine by means of alkohol, has been long known by the names of *fusible salt of urine*, and *microcosmic salt*. When these salts are examined, they are found to have the properties of phosphates. The rhomboidal prisms consist of *phosphate of ammonia* united to a little *phosphate of soda*. The rectangular tables, on the contrary, are phosphate of soda united to a small quantity of phosphate of ammonia. Urine, then, contains *phosphate of soda*, and *phosphate of ammonia*.

14. When urine is cautiously evaporated, a few cubic crystals are often deposited among the other salts: these crystals have the properties of *muriate of ammonia*.

15. When urine is boiled in a silver basin, it blackens it; and if the quantity of urine be large, small crusts of sulphuret of silver may be detached. Hence we see that urine contains *sulphur*.

Urine, then, contains the following substances: —

1. Water.	9. Benzoic acid.
2. Acetic acid.	10. Albumen.
3. Phosphate of lime.	11. Urea.
	12. Resin.
4. Phosphate of magnesia.	13. Muriate of soda.
	14. Phosphate of soda.
5. Carbonic acid.	15. Phosphate of ammonia.
6. Carbonate of lime.	16. Muriate of ammonia.
7. Uric acid.	
8. Rosacic acid.	17. Sulphur.

According to Berzelius, healthy human urine is composed of water, 933; urea, 30·10; sulphate of potash, 3·71; sulphate of soda, 3·16; phosphate of soda, 2·94; muriate of soda, 4·45; phosphate of ammonia, 1·65; muriate of ammonia, 1·50; free acetic acid, with lactate of ammonia, animal matter soluble in alkohol, urea adhering to the preceding, altogether 17·14; earthy phosphates with a trace of fluate of lime, 1·0; uric acid, 1; mucus of the bladder, 0·32; silica, 0·03; in 1000·0.

No liquor in the human body, however, is so variable, in respect to *quantity* and *quality*, as the urine; for it varies,

1. *In respect to age.* In the *fœtus* it is inodorous, insipid, and almost aqueous; but as the *infant* grows, it becomes more acrid and fœtid; and in *old age* more particularly so.

2. *In respect to drink.* It is secreted in greater quantity, and of a more pale colour, from cold and copious draughts. It becomes green from an infusion of Chinese tea.

3. *In respect to food.* From eating the heads of asparagus, or olives, it contracts a peculiar smell; from the fruit of the opuntia, it becomes red; and from fasting, turbid.

4. *In respect to medicines.* From the exhibition of rhubarb root it becomes yellow; from cassia pulp, green; and from turpentine it acquires a violet odour.

5. *In respect to the time of the year.* In the winter the urine is more copious and aqueous; but in the summer, from the increased transpiration, it is more sparing, higher coloured, and so acrid that it sometimes occasions strangury. The climate induces the same difference.

6. *In respect of the muscular motion of the body.* It is secreted more sparingly, and concentrated by motion; and is more copiously diluted, and rendered more crude by rest.

7. *In respect of the affections of the mind.* Thus fright makes the urine pale.

Use.—The urine is an excrementitious fluid, like lixivium, by which the human body is not only liberated from the superfluous water, but also from the superfluous salts and animal earth, and is defended from corruption.

Lastly, the vis medicatrix naturæ sometimes eliminates many morbid and acrid substances with the urine; as may be observed in fevers, dropsies, &c.

Urine, retention of. See *Retention.*

Urine, suppression of. See *Ischuria.*

UROCRI'SIA. (*a, æ.* f.; from οὐρον, and κρινω, to judge.) The judgment formed of diseases by the inspection of urine.

URORRHÆ'A. (*a, æ.* f.; from ουρον, the urine, and ρεω, to flow.) A discharge of the urine.

UROSCO'PIA. (*a, æ.* f.; from ουρον, the urine, and σκοπεω, to inspect.) Inspection of urine, that a judgment of diseases may be made from its appearance.

URSI'NA RADIX. The root of the plant called baldmoney. See *Æthusa meum.*

URSINE. *Ursinus.* Of or belonging to the bear.

U'RSUS. (*us, i,* m.) 1. The bear.

2. The name of a genus of animals. Class, *Mammalia;* Order, *Feræ.* It comprehends the several kinds of bears, the badger, and racoon.

URTI'CA. (*a, æ.* f.; *ab urendo:* because it excites an itching and pustules like

those produced by fire.) 1. The name of a genus of plants in the Linnæan system. Class, *Monœcia*; Order, *Tetrandria*. The nettle.

2. The pharmacopœial name of the common nettle. See *Urtica dioica*.

Urtica dioica. The systematic name of the common stinging nettle. This plant is well known, and though generally despised as a noxious weed, has been long used for medical, culinary, and economical purposes. The young shoots in the spring possess diuretic and antiscorbutic properties, and are with these intentions boiled and eaten instead of cabbage greens.

Urtica mortua. See *Lamium album*.

Urtica pilulifera. The systematic name of the pill-bearing nettle. *Urtica Romana*. The seed was formerly given against diseases of the chest, but is now deservedly forgotten. To raise an irritation in paralytic limbs, the fresh plant may be employed, as producing a more permanent sting than the common nettle.

Urtica romana. See *Urtica pilulifera*.

Urtica urens. The systematic name of a lesser nettle than the dioica, and possessing similar virtues.

URTICA'RIA. (*a, æ. f.*; from *urtica*, a nettle.) The nettle-rash; called also, *Febris urticata*, *Uredo*, *Purpura urticata*, and *Scarlatina urtica*. A species of exanthematous fever, known by fever and an eruption on the skin like that produced by the sting of the nettle. The little elevations, called the nettle-rash, often appear instantaneously, especially if the skin be rubbed or scratched, and seldom stay many hours in the same place, and sometimes not many minutes. No part of the body is exempt from them; and where many of them rise together, and continue an hour or two, the parts are often considerably swelled, which particularly happens in the arms, face, and hands. These eruptions will continue to infest the skin, sometimes in one place and sometimes in another, for one or two hours together, two or three times a day, or perhaps for the greatest part of twenty-four hours. In some constitutions they last only a few days, in others many months.

All that is required in the treatment of this disease are gentle aperients, and not keeping the body too warm, but cool and lightly covered. The best application to allay the itching is dilute vinegar, or camphire water and vinegar. The decoction of Virginian snake-root is particularly useful in removing chronic urticaria.

URTICA'TIO. (*o, onis.* f.; from *urtica*, a nettle.) The whipping a paralytic or benumbed limb with nettles, in order to restore its feeling.

URUS. See *Bos taurus*.

U'SNEA. (*a, æ.* f.) See *Lichen saxatilis.*

USQUEBAUGH. (The Irish for *mad water*.) Originally the pure spirit called *whiskey*, which term is obtained from usquebaugh. The usquebaugh of the present day is a strong rich compound spirit, chiefly taken as a dram, and made of cinnamon, coriander, nutmeg, mace, aniseed, citron, thyme, balm, savory, mint, rosemary, Spanish liquorice, sugar candy, raisins, currants, and dates, infused in brandy.

USSAC. A name given by Serapio to the gum ammoniacum of the Greek writers, which does not appear to be the same as that so called by us.

Utera'rius. (From *uterus*, the womb.) A medicine appropriated to diseases of the womb.

UTERINE. *Uterinus*. Appertaining to the womb.

Uterine fury. See *Nymphomania*.

Uterine gestation. See *Gestation, uterine*.

U'TERUS. (*us, i.* m. Υτερα.) *Matrix. Ager naturæ. Hystera. Metra. Utriculus.* The womb. A spongy receptacle resembling a compressed pear, situated in the cavity of the pelvis, above the vagina, and between the urinary bladder and rectum.

The form of the uterus resembles that of an oblong pear flattened, with the depressed sides placed towards the ossa pubis and sacrum; but, in the impregnated state, it becomes more oval, according to the degree of its distension. For the convenience of description, and for some practical purposes, the uterus is distinguished into three parts, — the fundus, the body, and the cervix. The upper part is called the fundus, the lower the cervix; the space between them, the extent of which is undefined, the body. The uterus is about three inches in length, about two in breadth at the fundus, and one at the cervix. Its thickness is different at the fundus and cervix, being at the former usually rather less than half an inch, and at the latter somewhat more; and this thickness is preserved throughout pregnancy, chiefly by the enlargement of the veins and lymphatics, there being a smaller change in the size of the arteries. But there is so great a variety in the size and dimensions of the uterus in different women, independently of the states of virginity, marriage, or pregnancy, as to prevent any very accurate mensuration. The cavity of the uterus corresponds with the external form: that of the cervix leads from the os uteri, where it is very small, in a straight direction, to the fundus, where it is expanded into a triangular form, with two of the angles opposed to the entrance into the Fallopian tubes; and at the place of junction between the cervix and the body of the uterus, the cavity is smaller than it is in any other part. There is a swell or fulness of all the parts towards the cavity, which is sometimes distinguished by a prominent line running longitudinally through its middle. The villous coat of the vagina is reflected over the os uteri, and is continued into the membrane which lines the cavity of the uterus. The internal surface of the uterus is corrugated in a beautiful manner, but the rugæ, or wrinkles, which are longitudinal, lessen as they advance into the uterus, the fundus of which is smooth. In the intervals between the rugæ are small

orifices, like those in the vagina, which discharge a mucus, serving, besides other purposes, that of closing the os uteri very curiously and perfectly during pregnancy. The substance of the uterus, which is very firm, is composed of arteries, veins, lymphatics, nerves, and muscular fibres, curiously interwoven and connected together by cellular membrane. The muscular fibres are of a pale colour, and appear also in their texture somewhat different from muscular fibres in other parts of the body. The arteries of the uterus are the spermatic and hypogastric. The spermatic arteries arise from the anterior part of the aorta, a little below, and sometimes from, the emulgents. They pass over the psoæ muscles behind the peritonæum, enter between the two laminæ or duplicatures of the peritonæum which form the broad ligaments of the uterus, and proceed to the uterus, near the fundus of which they insinuate themselves, giving branches in their passage to the ovaria and Fallopian tubes. The hypogastric arteries are on each side a considerable branch of the internal iliacs. They pass to the sides of the body of the uterus, sending off a number of smaller branches, which dip into its substance. Some branches also are reflected upwards to the fundus uteri, which anastomose with the spermatic arteries, and others are reflected downwards, supplying the vagina. The veins which reconduct the blood from the uterus are very numerous, and their size in the unimpregnated state is proportioned to that of the arteries; but their enlargement during pregnancy is such, that the orifices of some of them, when divided, will admit even of the end of a small finger. The veins anastomose in the manner of the arteries which they accompany out of the uterus, and then, having the same names with the arteries, spermatic and hypogastric, the former proceeds to the vena cava on the right side, and on the left to the emulgent vein; and the latter to the internal iliac.

From the substance and surfaces of the uterus an infinite number of lymphatics arise, which follow the course of the hypogastric and spermatic blood-vessels. The first pass into the gland of the internal iliac plexus, and the other into the glands which are situated near the origin of the spermatic arteries. Of these Nuck first gave a delineation.

The uterus is supplied with nerves from the lower mesocolic plexus, and from two small flat circular ganglions, which are situated behind the rectum. These ganglions are joined by a number of small branches from the third and fourth sacral nerves. The ovaria derive their nerves from the renal plexus. By the great number of nerves, these parts are rendered very irritable; but it is by those branches which the uterus receives from the intercostal, that the intimate consent between it and various other parts is chiefly preserved. The muscular fibres of the uterus have been described in a very different manner by anatomists, some of whom have asserted that its substance was chiefly muscular, with fibres running in transverse, orbicular, or reticulated order, whilst others have contended that there were no muscular fibres whatever in the uterus. In the unimpregnated uterus, when boiled for the purpose of a more perfect examination, the former seems to be a true representation; and when the uterus is distended towards the latter part of pregnancy, these fibres are very thinly scattered; but they may be discovered in a circular direction, at the junction between the body and the cervix of the uterus, and surrounding the entrance of each Fallopian tube in a similar order. Yet it does not seem reasonable to attribute the time of labour to its muscular fibres only, if we are to judge of the power of a muscle by the number of fibres of which it is composed, unless it is presumed that those of the uterus are stronger than in common muscles. With respect to the glands of the uterus, none are discoverable dispersed through its substance upon the inner surface of the cervix: between the rugæ there are lacunæ which secrete mucus, and there are small follicles at the edge of the os uteri. These last are only observable in a state of pregnancy, when they are much enlarged. From the angles at the fundus of the uterus, two processes of an irregular round form originate, called, from the name of the first describer, the *Fallopian tubes*. They are about three inches in length, and, becoming smaller in their progress from the uterus, have an uneven, fringed termination, called the fimbriæ. The canal which passes through these tubes is extremely small at their origin, but it is gradually enlarged, and terminates with a patulous orifice, the diameter of which is about one third of an inch, surrounded by the fimbriæ. It is also lined by a very fine vascular membrane, formed into serpentine plicæ. Through this canal the communication between the uterus and ovaria is preserved. The Fallopian tubes are wrapped in duplicatures of the peritonæum, which are called the broad ligaments of the uterus; but a portion of their extremities, thus folded, hangs loose on each side of the pelvis. From each lateral angle of the uterus, a little before and below the Fallopian tubes, the *round ligaments* arise, which are composed of arteries, veins, lymphatics, nerves, and a fibrous structure. These are connected together by cellular membrane, and the whole is much enlarged during pregnancy. They receive their outward covering from the peritonæum, and pass out of the pelvis through the ring of the external oblique muscle to the groin, where the vessels subdivide into small branches, and terminate at the mons veneris and contiguous parts. From the insertion of these ligaments into the groin, the reason appears why that part generally suffers in all the diseases and affections of the uterus, and why the inguinal glands are in women so often found in a morbid or enlarged state. The duplicatures of the peritonæum, in which the Fallopian tubes and ovaria are involved, are called the *broad ligaments* of the uterus. These

prevent the entanglement of the parts, and are conductors of the vessels and nerves, as the mesentery is of those of the intestines. Both the round and broad ligaments alter their position during pregnancy, appearing to rise lower and more forward than in the unimpregnated state. Their use is supposed to be that of preventing the descent of the uterus, and to regulate its direction when it ascends into the cavity of the abdomen; but whether they answer these purposes may be much doubted. The use of the womb is for menstruation, conception, nutrition of the fœtus, and parturition. The uterus is liable to many diseases, the principal of which are retroversion and its falling down, hydatids, dropsy of the uterus, moles, polypes, ulceration, cancer, &c.

Uterus, inversion of. This is mostly produced by unskilfully and violently pulling away the placenta after delivery, and is only to be remedied by a restoration of the uterus to its proper state before it contracts; without which, perpetual barrenness must necessarily ensue, and the person be subject for life to a difficulty of walking, and other maladies.

Uterus, retroversion of. By the term retroversion, such a change of the position of the uterus is understood, that the fundus is turned backwards and downwards upon its cervix, between the vagina and rectum, and the os uteri is turned forwards to the pubis, and upwards, in proportion to the descent of the fundus, so that, by an examination *per vaginam*, it cannot be felt, or not without difficulty, when the uterus is retroverted. By the same examination there may also be perceived a large round tumour, occupying the inferior part of the cavity of the pelvis, and pressing the vagina towards the pubes. By an examination *per anum*, the same tumour may be felt, pressing the rectum to the hollow of the sacrum; and if both these examinations are made at the same time, we may readily discover that the tumour is confined within the vagina and rectum. Besides the knowledge of the retroversion which may be gained by these examinations, it is found to be accompanied with other very distinguishing symptoms. There is in every case, together with extreme pain, a suppression of urine; and by the continuance of this distension of the bladder, the tumour formed by it in the abdomen often equals in size, and resembles in shape, the uterus in the sixth or seventh months of pregnancy: but it is necessary to observe, that the suppression of urine is frequently absolute only before the retroversion of the uterus, or during the time it is retroverted; for when the retroversion is completed, there is often a discharge of urine, so as to prevent an increase of the distension of the bladder, though not in a sufficient quantity to remove it. There is also an obstinate constipation of the bowels, produced by the pressure of the retroverted uterus upon the rectum, which renders the injection of a clyster very difficult, or even impossible. But it appears that all the painful symptoms are chiefly in consequence of the suppression of urine; for none of those parts which are apt to sympathise in affections or diseases of the uterus are disturbed by its retroversion. The retroversion of the uterus has generally occurred about the third month of pregnancy, and sometimes after delivery it may likewise happen, where the uterus is, from any cause, enlarged to the size it acquires about the third month of pregnancy, but not with such facility as in the pregnant state, because the enlargement is then chiefly at the fundus. If the uterus is but little enlarged, or if it be enlarged beyond a certain time, it cannot well be retroverted: for, in the first case, should the cause of a retroversion exist, the weight at the fundus would be wanting to produce it; and, in the latter, the uterus would be raised above the projection of the sacrum, and supported by the spine.

UTRI'CULUS. (Dim. of *uter*, a bottle: so called from its shape.) 1. The womb.

2. A little bag, bladder, or hollow vesicle. Applied by botanists to a species of capsule, which varies in thickness, never opens by any valve, and falls off with the seed. Sir J. Smith believes it never contains more than one seed, of which it is most commodiously, in botanical language, called an external coat, rather than a capsule. Gærtner applies it to *Chænopodium* and *Clematis:* in the former it seems to be pellicula; in the latter, testa. —*Smith.*

U'VA. (*a, æ.* f.; *quasi uvida*, from its juice.) 1. An unripe grape.

2. A tumour resembling a grape.

Uva cruina. See *Vaccinium.*

Uva passa major. See *Vitis.*

Uva passa minor. See *Vitis.*

Uva ursi. See *Arbutus uva ursi.*

U'VEA. (*a, æ.* f.; from *uva*, an unripe grape: so called because, in beasts, which the ancients chiefly dissected, it is like an unripe grape.) The posterior lamina of the iris. See *Choroid membrane.*

U'VULA. (*a, æ.* f.; dim. of *uva*, a grape.) *Columella. Cion. Gargareon. Columna oris. Gurgulio. Interseptum.* The small conical fleshy substance hanging in the middle of the *velum pendulum palati*, over the root of the tongue. It is composed of the common membrane of the mouth, and a small muscle resembling a worm which arises from the union of the palatine bone, and descends to the tip of the uvula. It was called *Palato-staphilinus*, by Douglas, and *Staphilinus epistaphilinus*, by Winslow. By its contraction, the uvula is raised up.

UVULA'RIA. (*a, æ.* f.; from *uvula:* because it cured diseases of the uvula.) See *Ruscus hypoglossum.*

V.

VA'CCA. The cow. See *Bos taurus.*

VACCINATION. The insertion of the matter to produce the cow-pox. See *Cow-pox.*

VACCI'NIA. See *Cow-pox.*

VACCI'NIUM. (*um, ii.* n.; *quasi baccinium,* from its berry.) The name of a genus of plants in the Linnæan system. Class, *Octandria;* Order, *Monogynia.*

Vaccinium myrtillus. The systematic name of the myrtle-berry. The berries, which are directed in the pharmacopœias by the name of *baccæ myrtillorum,* are the fruit of this plant. Prepared with vinegar they are esteemed as antiscorbutics, and when dry possess astringent virtues.

Vaccinium oxycoccos. The systematic name of the cranberry-plant. *Oxycoccos palustris. Vaccinia palustris. Uva gruina. Vitis idæa palustris.* Moor-berry. Cranberry. These berries are inserted in some pharmacopœias. They are about the size of our haws, and are pleasantly acid and cooling, with which intention they are used medicinally in Sweden. In this country they are mostly preserved and made into tarts.

Vaccinium vitis idæa. The systematic name of the red whortle-berry. *Vitis idæa.* The leaves of this plant, *vaccinium vitis idæa,* of Linnæus, are so astringent as to be used in some places for tanning. They are said to mitigate the pain attendant on calculous diseases when given internally in the form of decoction. The ripe berries abound with a grateful acid juice; and are esteemed in Sweden as aperient, antiseptic, and refrigerant, and often given in putrid diseases.

VAGI'NA. (*a, æ.* f.) *Vagina uteri.* The canal which leads from the external orifice of the female pudendum to the uterus. It is somewhat of a conical form, with the narrowest part downwards, and is described as being five or six inches in length, and about two in diameter. But it would be more proper to say, that it is capable of being extended to those dimensions; for, in its common state, the os uteri is seldom found to be more than three inches from the external orifice, and the vagina is contracted as well as shortened. The vagina is composed of *two coats,* the first or innermost of which is villous, interspersed with many excretory ducts, and contracted into plicæ, or small transverse folds, particularly at the fore and back part; but, by child-bearing, these are lessened or obliterated. The second coat is composed of a firm membrane, in which muscular fibres are not distinctly observable, but which are endowed, to a certain degree, with contractile powers like a muscle. This is surrounded by cellular membrane, which connects it to the neighbouring parts. A portion of the upper and posterior part of the vagina is also covered by the peritonæum. The entrance of the vagina is constricted by muscular fibres originating from the rami of the pubis, which run on each side of the pudendum, surrounding the posterior part, and executing an equivalent office, though they cannot be said to form a true sphincter.

The upper part of the vagina is connected to the circumference of the os uteri, but not in a straight line, so as to render the cavity of the uterus a continuation of that of the vagina: for the latter stretches beyond the former, and, being joined to the cervix, is reflected over the os uteri, which, by this mode of union, is suspended with protuberant lips in the vagina, and permitted to change its position in various ways and directions. When, therefore, these parts are distended and unfolded at the time of labour, they are continued into each other, and there is no part which can be considered as the precise beginning of the uterus or termination of the vagina.

The diseases of the vagina are, first, such an abbreviation and contraction as render it unfit for the uses for which it was designed; secondly, a cohesion of the sides in consequence of preceding ulceration; thirdly, cicatrices after an ulceration of the parts; fourthly, excrescences; fifthly, fluor albus. The abbreviation and contraction of the vagina, which usually accompany each other, are produced by original defective formation, and they are seldom discovered before the time of marriage, the consummation of which they sometimes prevent. The curative means are to relax the parts by the use of emollient applications, and to dilate them to their proper size by sponge or other tents, or, which are more effectual, by bougies gradually enlarged. But the circumstances which attend this disorder are sometimes such as might lead us to form an erroneous opinion of the disease. A case of this kind, which was under Dr. Denman's care, from the strangury, from the heat of the parts, and the profuse and inflammatory discharge, was suspected to proceed from venereal infection; and with that opinion the patient had been put upon a course of medicine composed of quicksilver, for several weeks, without relief. When she applied to the Doctor, he prevailed upon her to submit to an examination, and found the vagina rigid, so much contracted as not to exceed half an inch in diameter, nor more than one inch and a half in length. The repeated, though fruitless attempts which had been made to complete the act of coition had occasioned a considerable inflammation upon the parts, and all the suspicious appearances before mentioned. To remove the inflammation she was bled, took some gentle purgative medi-

cines, used an emollient fomentation, and afterwards some unctuous applications; she was also advised to live separate from her husband for some time. The inflammation being gone, tents of various sizes were introduced into the vagina, by which it was distended, though not very amply. She then returned to her husband, and in a few months became pregnant. Her labour, though slow, was not attended with any extraordinary difficulty. She was delivered of a full-sized child, and afterwards suffered no inconvenience. Another kind of constriction of the external parts sometimes occurs, and which seems to be a mere spasm. By the violence or long continuance of a labour, by the morbid state of the constitution, or by the negligent and improper use of instruments, an inflammation of the external parts, or vagina, is sometimes produced in such a degree as to endanger a mortification. By careful management this consequence is usually prevented: but in some cases, when the constitution of the patient was prone to disease, the external parts have sloughed away; and in others, equal injury has been done to the vagina. But the effect of the inflammation is usually confined to the internal or villous coat, which is sometimes cast off wholly or partially. An ulcerated surface being thus left, when the disposition to heal has taken place, cicatrices have been formed of different kinds, according to the depth and extent of the ulceration, and there being no counteraction to the contractile state of the parts, the dimensions of the vagina become much reduced; or, if the ulceration should not be healed, and the contractibility of the parts continue to operate, the ulcerated surfaces being brought together may cohere, and the canal of the vagina be perfectly closed.

Cicatrices in the vagina very seldom become an impediment to the connection between the sexes: when they do, the same kind of assistance is required as was recommended in the natural contraction or abbreviation of the part: they always give way to the pressure of the head of the child in the time of labour, though in many cases with great difficulty. Sometimes the appearances may mislead the judgment; for the above author was called to a woman in labour who was thought to have become pregnant though the hymen remained unbroken; but, on making very particular enquiry, he discovered that this was her second labour, and that the part, which, from its form and situation, was supposed to be the hymen, with a small aperture, was a cicatrice, or unnatural contraction of the entrance into the vagina, consequent on an ulceration of the part after her former labour. Fungous excrescences, arising from any part of the vagina or uterus, have been distinguished, though not very properly, by the general term polypus. See *Polypus.*

Vagina of nerves. The outer covering of nerves. By some it is said to be a production of the pia mater only, and by others, of the dura mater, because it agrees with it in tenacity, colour, and texture.

Vagina of tendons. A loose membraneous sheath, formed of cellular membrane, investing the tendons, and containing an unctuous juice, which is secreted by the vessels of its internal surface. Ganglions are nothing more than an accumulation of this juice.

VAGINAL. *Vaginalis.* 1. In *Anatomy*, of or belonging to the vagina of females.

2. In *Botany*, a sheath formed by a part of a leaf. It is a distinct thing from what is termed the spatha or sheath, which is a species of calyx. The vagina is very frequent in the grasses.

Vagina'lis tunica. See *Tunica vaginalis testis.*

VA'GINANS. Sheathing: applied to parts of animals and plants; especially to leaves which sheathe the stem, or each other, as in grasses; and to the leafstalk of the *Canna indica*, which surrounds the stem like a sheath; hence *petiolus vaginans.*

VAGINA'TUS. Sheathed.

VA'GITUS. (*us, ûs.* m.; from *vagio*, to cry as an infant or child.) The cry of young children; also the distressing cry of persons under surgical operations.

Va'gum, par. See *Par vagum.*

VA'GUS. Wandering: applied to a pair of nerves, *par vagum*, from their spreading and going to the remotest parts.

VALERIAN. See *Valeriana.*

Valerian, celtic. See *Valeriana celtica.*

Valerian, garden. See *Valeriana major.*

Valerian, great. See *Valeriana major.*

Valerian, lesser. See *Valeriana.*

VALERIA'NA. (*a, æ.* f.; from *Valerius*, who first particularly described it.) 1. The name of a genus of plants in the Linnæan system. Class, *Triandria*; Order, *Monogynia.* Valerian.

2. The pharmacopœial name of the wild valerian. See *Valeriana officinalis.*

Valeriana celtica. The Celtic nard. *Nardus celtica. Spica celtica Dioscoridis.* The root of this plant, a native of the Alps, has been recommended as a stomachic, carminative, and diuretic. At present it is only used in this country in the theriaca and mithridate, though its sensible qualities promise some considerable medicinal powers. It has a moderately strong smell, and a warm, bitterish, subacrid taste.

Valeriana locusta. *Album olus.* Corn salad. This is cultivated in our gardens for an early salad. It is a wholesome esculent plant, gently aperient and antiscorbutic.

Valeriana major. See *Valeriana phu.*

Valeriana minor. See *Valeriana officinalis.*

Valeriana officinalis. The systematic name of the *Valeriana minor*, *Valeriana sylvestris*, and *Leucho lachanum.* Officinal valerian. Wild valerian. *Valeriana—floribus triandris, foliis omnibus pinnatis*, of Linnæus. The root of this plant has been long extolled as an efficacious remedy in epilepsy, which

caused it to be exhibited in a variety of other complaints termed nervous, in which it has been found highly serviceable. It is also in very general use as an antispasmodic, and is exhibited in convulsive hysterical diseases. A simple and volatile tincture are directed in the pharmacopœias.

VALERIANA PHU. The systematic name of the garden valerian. *Valeriana major.* The root of this plant is said to be efficacious in removing rheumatism, especially sciatica; and also inveterate epilepsies.

VALERIANA SYLVESTRIS. See *Valeriana officinalis.*

VA'LLUM. (From *vallus*, a hedge-stake: so called from the regular trench-like disposition of the hairs.) The eye-brows.

VALSALVA, ANTON. MARIA, was born at Imola, in 1666. Among other distinguished pupils of his, Morgagni must be reckoned, whose chief work, *De Sedibus et Causis Morborum*, contains many dissections by Valsalva. The principal of his works is a treatise *De Aure Humanâ;* and after his death, three of his dissertations on anatomical subjects were printed by Morgagni.

VALVE. (*Valva, æ.* f.; from *valveo*, to fold up.) In *Anatomy*, a membraneous elongation in canals which prevents the reflux of humours: applied to the valve of the colon, and to thin and transparent membranes situated within arteries, veins, and absorbents.

Valve of the colon. See *Intestine.*

Valve, semilunar. See *Semilunar valves.*

Valve, tricuspid. See *Tricuspid valves.*

Valve, triglochin. See *Tricuspid valves.*

VA'LVULA. (*a, æ.* f.; from *valva*, a valve, of which it is a diminutive.) A little valve. I. Applied to the valves of the venal and lymphatic system of animals.

II. In *Botany*, applied to several parts: thus, 1. A capsule is composed of valves: the fruit of the *Datura stramonium* has four valves; a siliqua has two valves, as the pea tribe, &c.

2. The petals and calyxes which constitute the flowers of grasses are called valves: in the common meadow-grass, for example, the cup is a dry, chaffy husk, composed of two valves, and the blossom is formed of two others.

3. The mouth of the tube of a blossom is frequently closed by several projecting substances; thus, in the flower of the *Borago officinalis*, the tube is closed by five of the substances called valves.

VALVULA COLI. See *Intestine.*

VALVULA EUSTACHII. A membraneous semilunar valve, which separates the right auricle from the inferior vena cava, first described by Eustachius.

VALVULA MITRALIS. See *Mitral valves.*

VALVULA SEMILUNARIS. See *Semilunar valves.*

VALVULA TRIGLOCHINIS. See *Tricuspid valves.*

VALVULA TULPII. See *Intestine.*

VALVULÆ CONNIVENTES. The semilunar folds formed of the villous coat of the intestinum duodenum and jejunum. Their use appears to be to increase the internal surface of the intestines.

VANE-LIKE. See *Versatilis.*

VANELLOE. See *Epidendrum vanilla.*

VANI'LLA. See *Epidendrum vanilla.*

VAPORA'RIUM. (From *vapor*, vapour.) A vapour-bath.

VAPRE'CULÆ. The name of an order of plants in Linnæus's Fragments of a Natural Method, consisting of such as are, and have a monophyllous calyx, like a coloured corolla.

Varec. The French name for kelp.

VA'RIA. (From *varius*, changeable.) The small-pox; also, small red pimples in the face.

VARICE'LLA. (Diminutive of *variola*, the small-pox.) The chicken-pox; called also, the *water-pox*. The eruption in this disease consists of vesicles scattered over the body: they are mostly smooth and transparent, lentil-shaped, or irregularly circular, flattened at the top; the fluid at first pellucid, then whitish, afterwards straw-coloured; and this kind is called the *chicken-pox*. Sometimes the vesicles are pointed, and the fluid clear throughout the disease; and this is termed the *swine-pox*. In other cases, the vesicles are very large and globular, and the fluid, at first whey-coloured, is afterwards yellow; this form is denominated the *Hives*. In these several forms the eruption, though very generally distinct, is confluent; and when so, there is considerable fever and derangement of the system, which is not the case when the eruption is distinct and few. About the third or fourth day the vesicles burst, and concrete into puckered scabs, which fall off, and leave no cicatrices or marks.

The eruption of varicella does not come out all nearly together, but one crop after another for several days.

Several of the varieties of this disease are sometimes intermixed, and the fluid, about three days after the eruption, occasionally becomes thickish, as well as yellowish, in the first and third variety, and possesses a purulent appearance; whence, in various instances, they have been mistaken for the small-pox. The eruptive fever in varicella is sometimes considerable, which has also led many to favour the opinion of its being small-pox. Varicella is now ascertained to originate from a specific contagion; and the characters by which it is sufficiently distinguished from small-pox are, that its fluid, except in a few anomalous cases, is limpid throughout; and that, as early as the third or fourth day from the eruption, it concretes into crusts, which are thrown off without indenting the cutis: while, in small-pox, the fluid consists of pus as soon as formed, and does not concrete into crusts till the eleventh day, and often much later. Like the small-pox, it does not attack the same person a second time, excepting in a few anomalous constitutions.

This disease merely requires that the bowels

be kept open, and that mild antiphlogistic or saline medicines be administered if there be fever.

VARICOCE'LE. (*e, es.* f.; from *varix*, a distended vein, and κηλη, a tumour.) A swelling of the veins of the scrotum, or spermatic cord: hence it is divided into the *scrotal varicocele*, which is known by the appearance of livid and tumid veins on the scrotum; and *varicocele of the spermatic cord*, known by feeling hard vermiform vessels in the course of the spermatic cord. Varicocele mostly arises from excessive walking, running, jumping, wearing of trusses, and the like, producing at first a slight uneasiness in the part, which, if not remedied, continues advancing towards the loins.

VARIEGA'TUS. Variegated: applied to an intermixture of colours; as in the leaves of some plants, *Mentha rotundifolia*, &c.

VARIETY. *Varietas.* In *Botany*, applied to such individual plants as differ in some circumstances from others of the same species, but not differing so essentially or so permanently as to induce us to reckon them as distinct species.

VARI'OLA. (*a, æ.* f.; from *varius*, changing colour: because it disfigures the skin.) The small-pox. A disease distinguished by synocha, eruption of red pimples on the third day, which on the eighth contain pus, and afterwards drying, fall off in crusts. It is of a very contagious nature, supposed to have been introduced into Europe from Arabia, and in which there arises a fever, that is succeeded by a number of little inflammations in the skin, which proceed to suppuration, the matter formed thereby being capable of producing the disorder in another person. It makes its attack on people of all ages, but the young of both sexes are more liable to it than those who are much advanced in life; and it may prevail at all seasons of the year, but is most prevalent in the spring and summer.

The small-pox is distinguished into the distinct and confluent; implying that, in the former, the eruptions are perfectly separate from each other; and that, in the latter, they run much into one another.

Both species are produced either by breathing air impregnated with the effluvia arising from the bodies of those who labour under the disease, or by the introduction of a small quantity of the variolous matter into the habit by inoculation; and it is probable that the difference of the small-pox is not owing to any difference in the contagion, but depends on the state of the person to whom it is applied, or on certain circumstances concurring with the application of it.

A variety of opinions have been entertained respecting the effect of the variolous infection on the fœtus in utero; a sufficient number of instances, however, have been recorded to ascertain that the disease may be communicated from the mother to the child. In some cases, the body of the child at its birth has been covered with pustules, and the nature of the disease has been most satisfactorily ascertained by inoculating with matter taken from the pustules. In other cases, there has been no appearance of the disease at the birth, but an eruption and other symptoms of the disease have appeared so early, as to ascertain that the infection must have been received previously to the removal of the child from the uterus.

Four different states, or stages, are to be observed in the small-pox: first, the febrile; second, the eruptive; third, the maturative; and, fourth, that of the declination or scabbing. When the disease has arisen naturally, and is of the distinct kind, the eruption is commonly preceded by a redness in the eyes, soreness in the throat, pains in the head, back, and loins, weariness and faintness, alternate fits of chilliness and heat, thirst, nausea, inclination to vomit, and a quick pulse.

In some instances these symptoms prevail in a high degree, and in others they are very moderate and trifling. In very young children, startings and convulsions are apt to take place a short time previous to the appearance of the eruption, always giving great alarm to those not conversant with the frequency of the occurrence.

About the third or fourth day from the first seizure,. the eruption shows itself in little red spots on the face, neck, and breast, and these continue to increase in number and size for three or four days longer; at the end of which time they are to be observed dispersed over several parts of the body.

If the pustules are not very numerous, the febrile symptoms will generally go off on the appearance of the eruption, or then will become very moderate. It sometimes happens, that a number of little spots, of an erysipelatous nature, are interspersed amongst the pustules; but these generally go in again, as soon as the suppuration commences, which is usually about the fifth or sixth day, at which period a small vesicle, containing an almost colourless fluid, may be observed upon the top of each pimple. Should the pustules be perfectly distinct and separate from each other, the suppuration will probably be completed about the eighth or ninth day, and they will then be filled with a thick yellow matter; but should they run much into each other, it will not be completed till some days later.

When the pustules are very thick and numerous on the face, it is apt, about this time, to become much swelled, and the eyelids to be closed up; previous to which there usually arises a hoarseness, and difficulty of swallowing, accompanied with a considerable discharge of viscid saliva. About the eleventh day, the swelling of the face usually subsides, together with the affection of the fauces, and is succeeded by the same in the hands and feet, after which the pustules break and discharge their contents; and then becoming dry, they fall in crusts, leaving the skin which they covered of a brown red colour, which appearance continues for many days. In those cases

where the pustules are large, and are late in becoming dry and falling off, they are very apt to leave pits behind them; but where they are small, suppurate quickly, and are few in number, they neither leave any marks behind them, nor do they occasion much affection of the system.

In the confluent small-pox, the fever which precedes the eruption is much more violent than in the distinct, being attended usually with great anxiety, heat, thirst, nausea, vomiting, and a frequent and contracted pulse, and often with coma or delirium. In infants, convulsive fits are apt to occur, which either prove fatal before any eruption appears, or they usher in a malignant species of the disease.

The eruption usually makes its appearance about the third day, being frequently preceded or attended with a rosy efflorescence, similar to what takes place in the measles; but the fever, although it suffers some slight remission on the coming out of the eruption, does not go off as in the distinct kind; on the contrary, it becomes increased after the fifth or sixth day, and continues considerable throughout the remainder of the disease.

As the eruption advances, the face, being thickly beset with pustules, becomes very much swelled, the eyelids are closed up, so as to deprive the patient of sight, and a gentle salivation ensues, which, towards the eleventh day, is so viscid as to be spit up with great difficulty. In children, a diarrhœa usually attends this stage of the disease instead of a salivation, which is to be met with only in adults. The vesicles on the top of the pimples are to be perceived sooner in the confluent small-pox than in the distinct; but they never rise to an eminence, being usually flattened in; neither do they arrive to proper suppuration, as the fluid contained in them, instead of becoming yellow, turns to a brown colour.

About the tenth or eleventh day the swelling of the face usually subsides, and then the hands and feet begin to puff up and swell, and about the same time the vesicles break, and pour out a liquor that forms into brown or black crusts, which, upon falling off, leave deep pits behind them that continue for life; and where the pustules have run much into each other, they then disfigure and scar the face very considerably.

Sometimes it happens that a putrescency of the fluids takes place at an early period of the disease, and shows itself in livid spots, interspersed among the pustules, and by a discharge of blood by urine, stool, and from various parts of the body.

In the confluent small-pox, the fever, which, perhaps, had suffered some slight remission from the time the eruption made its appearance to that of maturation, is often renewed with considerable violence at this last-mentioned period, which is what is called the secondary fever; and this is the most dangerous state of the disease. It has been observed, even amongst the vulgar, that the small-pox is apt to appear immediately before or after the prevalence of the measles. Another curious observation has been made relating to the symptoms of these complaints; namely, that if, while a patient labours under the small-pox, he is seized with the measles, the course of the former is retarded till the eruption of the measles is finished. The measles appear, for instance, on the second day of the eruption of small-pox; the progress of this ceases till the measles terminate by desquamation, and then it goes on in the usual way. Several cases are, however, recorded in the Medical and Physical Journal, as likewise in the third volume of the Medical Commentaries, in which a concurrence of the small-pox and measles took place without the progress of the former being retarded. The distinct small-pox is not attended with danger, except when it attacks pregnant women, or approaches nearly in its nature to that of the confluent; but this last is always accompanied with considerable risk, the degree of which is ever in proportion to the violence and permanence of the fever, the number of pustules on the face, and the disposition to putrescency which prevails.

When there is a great tendency this way, the disease usually proves fatal between the eighth and eleventh day, but, in some cases, death is protracted till the fourteenth or sixteenth. The confluent small-pox, although it may not prove immediately mortal, is very apt to induce various morbid affections.

Both kinds of small-pox leave behind them a predisposition to inflammatory complaints, particularly to ophthalmia and visceral inflammations, but more especially of the thorax; and they do not unfrequently excite scrofula into action which might otherwise have lain dormant in the system.

The regular swelling of the hands and feet upon that of the face subsiding, and its continuance for the due time, may be regarded in a favourable light.

The dissections which have been made of confluent small-pox, have never discovered any pustules internally on the viscera. From them it also appears that variolous pustules never attack the cavities of the body, except those to which the air has free access; as the nose, mouth, trachea, the larger branches of the bronchia, and the outermost part of the meatus auditorius. In cases of prolapsus ani, they likewise frequently attack that part of the gut which is exposed to the air. They have usually shown the same morbid appearances inwardly as are met with in putrid fever, where the disease has been of the malignant kind. Where the febrile symptoms have run high, and the head has been much affected with coma or delirium, the vessels of the brain appear, on removing the cranium and dura mater, more turgid, and filled with a darker coloured blood than usual, and a greater quantity of serous fluid is found, particularly towards the base of the brain. Under similar circumstances, the lungs have often a

darker appearance, and their moisture is more copious than usual. When no inflammatory affection has supervened, they are most usually sound.

The treatment of small-pox will differ materially according to the species of the disease. In the distinct, ushered in by synochal pyrexia, it may be occasionally proper, in persons of a middle age, good constitution, and plethoric habit, to begin by taking away a moderate quantity of blood; the exhibition of an emetic will be generally advisable, provided there be no material tenderness of the stomach; the bowels must then be cleared, antimonial and other diaphoretics employed, and the antiphlogistic regimen strictly enforced. It is particularly useful in this disease during the eruptive fever to expose the patient freely to cold air, as taught by the celebrated Sydenham; and even the cold affusion may be proper, where there is much heat and redness of the skin, unless the lungs be weak. After the eruption has come out, the symptoms are usually so much mitigated that little medical interference is necessary. But the confluent small-pox requires more management: after evacuating the primæ viæ, and employing other means to moderate the fever in the beginning, the several remedies adapted to support the strength and counteract the septic tendency must be resorted to, as the disease advances, such as have been enumerated under typhus. The chief points of difference are, that bark may be more freely given to promote the process of suppuration, and opium to relieve the irritation in the skin: when the eruption has come out, it will be generally proper to direct a full dose of this remedy every night, to procure rest, using proper precautions to obviate its confining the bowels, or determining to the head. Where alarming convulsions occur also, opium is the medicine chiefly to be relied upon, taking care subsequently to remove any source of irritation from the primæ viæ. Sometimes the tepid bath may be useful under these circumstances, and favour the appearance of the eruption, where the skin is pale and cold, the pulse weak, &c. Where, at a more advanced period, the pustules flatten, and alarming symptoms follow, the most powerful cordial and antispasmodic remedies must be tried, as the confectio opii, æther, wine, &c. For the relief of the brain, and other important part particularly affected, local means may be used, as in typhus. To prevent the eyes being injured, a cooling lotion may be applied, and blisters behind the ears, or even leeches to the temples.

Variola vaccina. See *Cow-pox*.

Va'rius. (From *varus*, unequal: so called from the irregularity of its shape.) The cuboid bone was formerly called os varium, from its irregular shape.

VA'RIX. (*ix, icis.* m.; from *varus*, i. e. *obtortus.*) A dilatation of a vein. A disease, known by a soft tumour on a vein which does not pulsate. Varicose veins mostly become serpentine, and often form a plexus of knots, especially in the groins and scrotum. This disease is relieved by cold applications, pressure from bandages, and by ligature.

VAROLI, Costanzo, was born at Bologna, in 1542; a premature death cut him off in 1573. He was particularly distinguished in the Anatomy of the Brain, which he described in his Work *De Nervis Opticis*, &c.; and among the parts discovered, or more accurately demonstrated by him, was that formed by the union of the crura cerebir and cerebelli, which has been since called the pons Varoli, and which gives origin to several nerves. After his death was published, *De Resolutione Corporis Humani*, an anatomical compendium, chiefly according to the ancients, but with several new observations.

VARUS. See *Acne*.

Varus punctatus. The maggot pimple, so common in the skin of the face, especially of young persons.

VAS. (*Vas, vasis.* n.; from *vasum*: hence in the plural, *vasa, orum.*; *à vescendo*, because they convey drink.) A vessel: applied to arteries, veins, ducts, &c.

Vas deferens. A duct which arises from the epididymis, and passes through the inguinal ring in the spermatic cord into the cavity of the pelvis, and terminates in the vesicula seminalis. Its use is to convey the semen secreted in the testicle, and brought to it by the epididymis, into the vesicula seminalis.

Va'sa brevia. The arteries which come from the spleen, and run along the large arch of the stomach to the diaphragm.

Vasa vorticosa. The contorted vessels of the choroid membrane of the eye.

VA'STUS. (So called from its size.) A name given only to some muscles.

Vastus externus. A large, thick, and fleshy muscle, situated on the outer side of the thigh: it arises, by a broad thick tendon, from the lower and anterior part of the great trochanter, and upper part of the linea aspera; it likewise adheres, by fleshy fibres, to the whole outer edge of that rough line. Its fibres descend obliquely forwards, and after it has run four or five inches downwards, we find it adhering to the anterior surface and outer side of the cruræus, with which it continues to be connected to the lower part of the thigh, where we see it terminating in a broad tendon, which is inserted into the upper part of the patella laterally, and it sends off an aponeurosis that adheres to the head of the tibia, and is continued down the leg.

Vastus internus. This muscle, which is less considerable than the vastus externus, is situated at the inner side of the thigh, being separated from the preceding by the rectus.

It arises tendinous and fleshy from between the fore-part of the os femoris and the root of the lesser trochanter, below the insertion of the psoas magnus, and the iliacus internus; and from all the inner side of the linea aspera. Like the vastus externus it is connected with

the cruræus, but it continues longer fleshy than that muscle. A little above the knee we see its outer edge uniting with the inner edge of the rectus, after which it is inserted tendinous into the upper part and inner side of the patella, sending off an aponeurosis which adheres to the upper part of the tibia.

VAULTED. See *Forniciformis.*

VEGETABLE. *Vegetabilis.* A substance endowed with life, partly or wholly fixed within the earth, and which derives its nourishment from vessels on the outer surface of its roots. Vegetables form one of the three great divisions of nature. The most obvious difference between vegetables and animals is, that the latter are, in general, capable of conveying themselves from place to place; whereas vegetables, being fixed in the same place, absorb, by means of their roots and leaves, such support as is within their reach.

The nutrition or support of plants appears to require water, earth, light, and air. Various experiments have been instituted to show that water is the only aliment which the root draws from the earth. Van Helmont planted a willow, weighing fifty pounds, in a certain quantity of earth covered with sheet-lead; he watered it for five years with distilled water; and at the end of that time the tree weighed one hundred and sixty-nine pounds three ounces, and the earth in which it had vegetated was found to have suffered a loss of no more than three ounces. Boyle repeated the same experiment upon a plant, which at the end of two years weighed fourteen pounds more, without the earth in which it had vegetated having lost any perceptible portion of its weight.

Duhamel and Bonnet supported plants with moss, and fed them with mere water: they observed, that the vegetation was of the most vigorous kind; and the naturalist of Geneva observes, that the flowers were more odoriferous, and the fruit of a higher flavour. Care was taken to change the supports before they could suffer any alteration. Tillet has likewise raised plants, more especially of the gramineous kind, in a similar manner, with this difference only, that his supports were pounded glass, or quartz in powder. Hales has observed, that a plant, which weighed three pounds, gained three ounces after a heavy dew. Do we not every day observe hyacinths and other bulbous plants, as well as gramineous plants, raised in saucers or bottles containing mere water? And Braconnot has lately found mustard-seed to germinate, grow, and produce plants, that came to maturity, flowered, and ripened their seed, in litharge, flowers of sulphur, and very small unglazed shot. The last appeared least favourable to the growth of the plants, apparently because their roots could not penetrate between it so easily.

All plants do not demand the same quantity of water; and Nature has varied the organs of the several individuals conformably to the necessity of their being supplied with this food. Plants which transpire little, such as the mosses and the lichens, have no need of a considerable quantity of this fluid; and accordingly they are fixed upon dry rocks, and have scarcely any roots; but plants which require a larger quantity have roots which extend to a great distance, and absorb humidity throughout their whole surface.

The leaves of plants have likewise the property of absorbing water, and of extracting from the atmosphere the same principle which the root draws from the earth. But plants which live in the water, and as it were swim in the element which serves them for food, have no need of roots; they receive the fluid at all their pores; and we accordingly find that the fucus, the ulva, &c. have no roots whatever.

The dung which is mixed with earths, and decomposed, not only affords the alimentary principles we have spoken of, but likewise favours the growth of the plant by that constant and steady heat which its ulterior decomposition produces. Thus it is that Fabroni affirms his having observed the developement of leaves and flowers in that part of a tree only which was in the vicinity of a heap of dung.

From the preceding circumstances it appears, that the influence of the earth in vegetation is almost totally confined to the conveyance of water, and probably the elastic products from putrefying substances, to the plant.

Vegetables cannot live without air. From the experiments of Priestley, Ingenhousz, and Sennebier, it is ascertained, that plants absorb the azotic part of the atmosphere; and this principle appears to be the cause of the fertility which arises from the use of putrefying matters in the form of manure. The carbonic acid is likewise absorbed by vegetables, when its quantity is small. If in large quantity, it is fatal to them.

Chaptal has observed, that carbonic acid predominates in the fungus, and other subterraneous plants. But, by causing these vegetables, together with the body upon which they were fixed, to pass, by imperceptible gradations, from an almost absolute darkness, into the light, the acid very nearly disappeared; the vegetable fibres being proportionally increased, at the same time that the resin and colouring principles were developed, which he ascribes to the oxygene of the same acid. Sennebier has observed, that the plants which he watered with water impregnated with carbonic acid transpired an extraordinary quantity of oxygene, which likewise indicates a decomposition of the acid.

Light is almost absolutely necessary to plants. In the dark they grow pale, languish, and die. The tendency of plants toward the light is remarkably seen in such vegetation as is effected in a chamber or place where the light is admitted on one side; for the plant never fails to grow in that direction. Whether the matter of light be condensed into the sub-

stance of plants, or whether it act merely as a stimulus or agent, without which the other requisite chemical processes cannot be effected, is uncertain.

It is ascertained, that the processes in plants serve, like those in animals, to produce a more equable temperature, which is for the most part above that of the atmosphere. Dr. Hunter, quoted by Chaptal, observed, by keeping a thermometer plunged in a hole made in a sound tree, that it constantly indicated a temperature several degrees above that of the atmosphere, when it was below the fifty-sixth division of Fahrenheit; whereas the vegetable heat, in hotter weather, was always several degrees below that of the atmosphere. The same philosopher has likewise observed, that the sap which, out of the tree, would freeze at 32°, did not freeze in the tree unless the cold were augmented 15° more.

The vegetable heat may increase or diminish by several causes, of the nature of disease; and it may even become perceptible to the touch in very cold weather, according to Buffon.

The principles of which vegetables are composed, if we pursue their analysis as far as our means have hitherto allowed, are chiefly carbon, hydrogene, and oxygene. Nitrogene is a constituent principal of several, but for the most part in small quantity. Potash, soda, lime, magnesia, silex, alumina, sulphur, phosphorus, iron, manganese, and muriatic acid, have likewise been reckoned in the number; but some of these occur only occasionally, and chiefly in very small quantities; and are scarcely more entitled to be considered as belonging to them than gold, or some other substances, that have been occasionally procured from their decomposition.

The following are the principal products of vegetation: —

1. Sugar.	24. Caoutchouc.
2. Sarcocol.	25. Gum resins.
3. Asparagin.	26. Cotton.
4. Gum.	27. Suber.
5. Ulmin.	28. Wood.
6. Inulin.	29. Emetine.
7. Starch.	30. Fungine.
8. Indigo.	31. Hematine.
9. Gluten.	32. Nicotine.
10. Albumen.	33. Pollenine.
11. Fibrin.	34. Aconite.
12. Gelatine.	35. Atropia.
13. Bitter principle.	36. Brucia.
14. Extractive.	37. Cicuta.
15. Tannin.	38. Datura.
16. Fixed oil.	39. Delphia.
17. Wax.	40. Hyosciama.
18. Volatile oil.	41. Morphia.
19. Camphire.	42. Picotroxia.
20. Birdlime.	43. Strychnia.
21. Resins.	44. Veratria.
22. Guaiacum.	45. The vegetable acids.
23. Balsam.	

VEIL. See *Calyptra*.

VEIN. (*Vena*, *æ*. f.) A long membraneous canal, which continually becomes wider, does not pulsate, and returns the blood from the arteries to the heart. All veins originate from the extremities of arteries only, by anastomosis, and terminate in the auricles of the heart; *e. g.* the venæ cavæ in the right, and the pulmonary veins in the left auricle. They are composed, like arteries, of three tunics, or coats, which are much more slender than in the arteries, and are supplied internally with semilunar membranes or folds called valves. Their use is to return the blood to the heart.

The blood is returned from every part of the body, except the lungs, into the right auricle, from three sources: —

1. The *vena cava superior*, which brings it from the head, neck, thorax, and superior extremities.

2. The *vena cava inferior*, from the abdomen and inferior extremities.

3. The *coronary vein* receives it from the coronary arteries of the heart.

1. The *vena cava superior*. This vein terminates in the superior part of the right auricle, into which it evacuates the blood from the *right* and *left subclavian vein*, and the *vena azygos*. The right and left subclavian veins receive the blood from the head and upper extremities, in the following manner: — The veins of the fingers, called *digitals*, receive the blood from the digital arteries, and empty it into,—

The *cephalic of the thumb*, which runs on the back of the hand along the thumb, and evacuates itself into the external radial.

The *salvatella*, which runs along the little finger, unites with the former, and empties its blood into the internal and external cubital veins. At the end of the fore-arm are three veins, called the great cephalic, the basilic, and the median.

The *great cephalic* runs along the superior part of the fore-arm, and receives the blood from the external radial.

The *basilic* ascends on the under side, and receives the blood from the *external* and *internal cubital veins*, and some branches which accompany the brachial artery, called *venæ satellites*.

The *median* is situated in the middle of the fore-arm, and arises from the union of several branches. These three veins all unite above the bend of the arm, and form

The *brachial vein*, which receives all their blood, and is continued into the axilla, where it is called,—

The *axillary vein*. This receives also the blood from the scapula, and superior and inferior parts of the chest, by the *superior* and *inferior thoracic vein*, the *vena muscularis*, and the *scapularis*.

The axillary vein then passes under the clavicle, where it is called the *subclavian*, which unites with the external and internal jugular veins, and the vertebral vein, which brings the blood from the vertebral sinuses; it receives also the blood from the *mediastinal*, *pericardiac*, *diaphragmatic*, *thymic*, *in-*

ternal mammary, and *laryngeal* veins, and then unites with its fellow, to form the vena cava superior, or, as it is sometimes called, *vena cava descendens*.

The blood from the external and internal parts of the head and face is returned, in the following manner, into the external and internal jugulars, which terminate in the subclavians : —

The *frontal, angular, temporal, auricular, sublingual*, and *occipital* veins receive the blood from the parts after which they are named; these all converge to each side of the neck, and form a trunk, called the *external jugular vein*.

The blood from the brain, cerebellum, medulla oblongata, and membranes of these parts, is received into the lateral sinuses, or veins of the dura mater, one of which empties its blood through the foramen lacerum in basii cranii on each side into the *internal jugular*, which descends in the neck by the carotid arteries, receives the blood from the *thyroideal* and *internal maxillary veins*, and empties itself into the subclavians within the thorax.

The vena azygos receives the blood from the *bronchial, superior œsophageal, vertebral*, and *intercostal veins*, and empties it into the superior cava.

2. *Vena cava inferior*. The vena cava inferior is the trunk of all the abdominal veins, and those of the lower extremities, from which parts the blood is returned in the following manner. The veins of the toes, called the *digital veins*, receive the blood from the digital arteries, and form on the back of the foot three branches, one on the great toe, called the *cephalic*, another which runs along the little toe, called the *vena saphena*, and a third on the back of the foot, *vena dorsalis pedis;* and those on the sole of the foot evacuate themselves into the *plantar veins*.

The three veins on the upper part of the foot coming together above the ankle, form the *anterior tibial;* and the plantar veins with a branch from the calf of the leg, called the *sural vein*, from the *posterior tibial;* a branch also ascends in the direction of the fibula, called the *peroneal vein*. These three branches unite before the ham into one branch, the *subpopliteal vein*, which ascends through the ham, carrying all the blood from the foot: it then proceeds upon the anterior part of the thigh, where it is termed the *crural* or *femoral vein*, receives several muscular branches, and passes under Poupart's ligament into the cavity of the pelvis, where it is called the *external iliac*.

The arteries which are distributed about the pelvis evacuate their blood into the *external hæmorrhoidal veins*, the *hypogastric veins*, the *internal pudendal*, the *vena magna ipsius penis*, and *obturatory veins*, all of which unite in the pelvis, and form the *internal iliac vein*.

The external iliac vein receives the blood from the external pudendal veins, and then unites with the internal iliac at the last vertebra of the loins; after which it forms with its fellow the *vena cava inferior*, or *ascendens*, which ascends on the right side of the spine, receiving the blood from the *sacral, lumbar, emulgent, right spermatic veins*, and the *vena cava hepatica;* and having arrived at the diaphragm, it passes through the right foramen, and enters the right auricle of the heart, into which it evacuates all the blood from the abdominal viscera and lower extremities.

Vena cava hepatica. This vein ramifies in the substance of the liver, and brings the blood into the vena cava inferior from the branches of the *vena portæ*, a great vein which carries the blood from the abdominal viscera into the substance of the liver. The trunk of this vein, about the fissure of the liver in which it is situated, is *divided* into the hepatic and abdominal portions. The *abdominal portion* is composed of the *splenic, meseraic*, and *internal hæmorrhoidal veins*. These three venous branches carry all the blood from the stomach, spleen, pancreas, omentum, mesentery, gall-bladder, and the small and large intestines, into the *sinus* of the vena portæ. The *hepatic portion* of the vena portæ enters the substance of the liver, divides into innumerable ramifications, which secrete the bile, and the superfluous blood passes into corresponding branches of the *vena cava hepatica*.

The *action of the veins*. Veins do not pulsate: the blood which they receive from the arteries flows through them very slowly, and is conveyed to the right auricle of the heart, by the contractility of their coats, the pressure of the blood from the arteries, called the *vis à tergo*, the contraction of the muscles, and respiration; and it is prevented from going backwards in the vein by the valves, of which there are a great number.

Veinless leaf. See *Avenius*.

Veiny leaf. See *Venosus*.

Vejuca du guaco. A plant which has the power of curing and preventing the bite of venomous serpents.

Velame'ntum bombycinum. The interior soft membrane of the intestines.

VE'LUM. (*um, i.* n.) A veil.

Velum pendulum palati. *Velum. Velum palatinum*. The soft palate. The soft part of the palate, which forms two arches, affixed laterally to the tongue and pharynx.

Velum pupillæ. See *Membrana pupillaris*.

VE'NA. (*a, æ.* f.; from *venio*, to come: because the blood comes through it.) A vein. See *Vein*.

Vena azygos. See *Azygos vena*.

Vena medinensis. See *Medinensis vena*.

Vena portæ. *Vena portarum*. The great vein, situated at the entrance of the liver, which receives the blood from the abdominal viscera, and carries it into the substance of the liver. It is distinguished into the *hepatic* and *abdominal* portion: the former is ramified through the substance of the liver, and carries the blood destined for the formation of the bile, which is returned by branches to the

trunk of the vena cava; the latter is composed of three branches; viz. the splenic, mesenteric, and internal hæmorrhoidal veins. See *Vein.*

VENÆ LACTEÆ. The lacteal absorbents were so called. See *Lacteals.*

VENÆSECTION. (*Venæsectio, onis.* f.; from *vena*, a vein, and *sicco*, to cut.) The opening of a vein. See *Blood-letting.*

VENE'NUM. (*um, i.* n.; from *veneno*, to poison.) See *Poison.*

VENEREAL. (*Venereus;* from *Venus*, because it belongs to acts of venery.) Of or belonging to the sexual intercourse.

Venereal disease. See *Urethritis venerea*, and *Syphilis.*

Venice turpentine. (Called Venice, because it is supplied by the Venetians.) See *Pinus larynx.*

VENISON. (From *venaison*, French; from *venatio*, hunting.) The flesh of the deer kind, as the buck, the doe, the hart, the hind, &c. Venison that is well fed, and killed at a proper season, is considered not only the most wholesome of that kind of flesh, but also the most delicious. It is more tender than mutton, and much easier of digestion. The fat is a great delicacy, and very much esteemed by the true epicure. See *Cervus.*

The term venison is also applied to the flesh of beasts of game; that is, animals that are caught by way of hunting. Huntsmen have agreed, that every beast of the forest that is food for man, as bears, hares, &c. is venison.

VENO'SUS. Veiny; veined: applied by botanists to a leaf which has the vessels, by which it is nourished, branched, subdivided, and more or less prominent, forming a network over either or both its surfaces; as in *Cratægus, Pyrolus terminalis,* &c.

VE'NTER. A term formerly applied to the larger circumscribed cavities of the body, as the abdomen and thorax.

VENTRICLE. (*Ventriculus;* from *venter.*) A term given by anatomists to the cavities of the brain and heart. See *Cerebrum,* and *Heart.*

VENTRICO'SUS. (From *venter*, the belly.) Ventricose: distended; bellying. Applied, in *Botany*, to the cup of the rose, or the under part of the blossom of the foxglove.

VENTRI'CULUS PULMONARIS. The right ventricle of the heart.

VENTRICULUS SUCCENTURIATUS. That portion of the duodenum which is surrounded by the peritonæum is sometimes so large as to resemble a second stomach, and is so called by some writers.

VENTRILOQUISM. (*Ventriloquismus;* from *venter*, the stomach, and *loquor*, to speak: because the voice seems to come from the stomach.) Gastroloquism. The formation of the voice within the mouth in such a way as to imitate other voices than that which is natural to the person, and so as not to be seen to move the lips. Nothing is more easy to man than to imitate the different sounds he hears: this, in fact, he performs in many circumstances. Many persons imitate perfectly the voice and pronunciation of others; actors, for example. Hunters imitate the different cries of the game, and thus succeed in decoying it into their nets. This faculty of imitating the different sounds has given rise to the art called ventriloquism and gastroloquism. The persons who exercise this art are called ventriloquists, gastroloquists, and eugastrimythists. They have no organisation different from that of other men: they require only to have the organs of voice and speech very perfect, in order that they may readily produce the necessary sounds.

The basis of this art is easily understood. We have found by experience, instinctively, that sounds are changed by many causes; for example, that they become feeble, less distinct, and that their expression changes, according as they are more distant from us: a man who is at the bottom of a well wishes to speak to persons who are at the top; but his voice will not reach their ears until it has received certain modifications, which depend upon the distance and the form of the tube through which it passes.

If a person remark these modifications with care, and endeavour to imitate them, he will produce acoustic illusions, which would be equally deceiving to the ear as the observation of objects through a magnifying glass is to the eye. The error will be complete if he employ those deceptions which are necessary to distract the attention.

These illusions will be numerous in proportion to the talents of the performer; but we must not imagine that a ventriloquist produces vocal sounds, and articulates, differently from other people. His voice is formed in the ordinary manner; only he is capable of modifying, according to his pleasure, the volume, the expression, &c. of it; and with regard to the words that he pronounces without moving his lips, he takes care to choose those into which no labial consonants enter, otherwise he would be obliged to move them. This art is, in certain respects, for the ear what painting is for the eye.

VE'NUS. Copper was formerly so called by the chemists.

VERA'TRIA. (*a, æ.* f.: so called because obtained from veratrum.) Veratrine. A new vegetable alkali, discovered lately by Pelletier and Caventou, in the *veratrum sabatilla*, or cevadilla, the *veratrum album*, or white hellebore, and the *colchicum autumnale*, or meadow-saffron.

The seeds of cevadilla, after being freed from an unctuous and acrid matter by æther, were digested in boiling alkohol. As this infusion cooled, a little wax was deposited; and the liquid being evaporated to an extract, re-dissolved in water, and again concentrated by evaporation, parted with its colouring matter. Acetate of lead was now poured into the solution, and an abundant yellow precipitate fell, leaving the fluid nearly colourless. The

excess of lead was thrown down by sulphuretted hydrogene, and the filtered liquor being concentrated by evaporation, was treated with magnesia, and again filtered. The precipitate, boiled in alkohol, gave a solution, which on evaporation left a pulverulent matter, extremely bitter, and decidedly with alkaline characters. It was at first yellow, but by solution in alkohol, and precipitation by water, was obtained in a fine white powder.

The precipitate by the acetate of lead gave, on examination, gallic acid; and hence it is concluded, that the new alkali existed in the seed as a gallate.

Veratria was found in the other plants above mentioned. It is white, pulverulent, has no odour, but excites violent sneezing. It is very acrid, but not bitter. It produced violent vomiting in very small doses, and, according to some experiments, a few grains may cause death. It is very little soluble in cold water. Boiling water dissolves about $\frac{1}{1000}$ part, and becomes acrid to the taste. It is very soluble in alkohol, and rather less soluble in æther.

VERATRINE. See *Veratria.*

VERA'TRUM. (*um, i.* n.; probably derived from *verè atrum*, truly black: because the root is externally of that colour.) 1. The name of a genus of plants in the Linnæan system. Class, *Polygamia;* Order, *Monœcia.*

2. The pharmacopœial name of white hellebore. See *Veratrum album.*

Veratrum album. White hellebore, or veratrum: called also, *Helleborus albus*, and *Elleborum album.*

Veratrum—racemo supra-decomposito, corollis erectis, of Linnæus. This plant is a native of Italy, Switzerland, Austria, and Russia. Every part of the plant is extremely acrid and poisonous. The dried root has no particular smell, but a durable, nauseous, and bitter taste, burning the mouth and fauces; when powdered, and applied to issues or ulcers, it produces griping and purging; if snuffed up the nose, it proves a violent sternutatory. Gesner made an infusion of half an ounce of this root with two ounces of water: of this he took two drachms, which produced great heat about the scapulæ and in the face and head, as well as the tongue and throat, followed by singultus, which continued till vomiting was excited. Bergius also experienced very distressing symptoms, upon tasting this infusion. The root, taken in large doses, discovers such acrimony, and operates by the stomach and rectum with such violence, that blood is usually discharged; it likewise acts very powerfully upon the nervous system, producing great anxiety, tremors, vertigo, syncope, aphonia, interrupted respiration, sinking of the pulse, convulsions, spasms, and death. Upon opening those who have died of the effects of this poison, the stomach discovered marks of inflammation, with corrosions of its internal coat. The ancients exhibited this active medicine in maniacal cases, and, it is said, with success. The experience of Greding is somewhat similar: out of twenty-eight cases, in which he exhibited the bark of the root collected in the spring, five were cured. In almost every case that he relates, the medicine acted more or less upon all the excretions; vomiting and purging were very generally produced, and the matter thrown off the stomach was constantly mixed with bile; a florid redness frequently appeared on the face, and various cutaneous efflorescences upon the body; and, in some, pleuritic symptoms, with fever, supervened, so as to require bleeding; nor were the more alarming affections of spasms and convulsions unfrequent. Critical evacuations were also very evident; many sweating profusely, in some the urine was considerably increased, in others the saliva and mucous discharges: the uterine obstructions, of long duration, were often removed by its use. Veratrum has likewise been found useful in epilepsy, and other convulsive complaints: but the diseases in which its efficacy seems least equivocal are those of the skin, as itch, and different prurient eruptions, herpes, morbus pediculosus, lepra, scrofula, &c.; and in many of these it has been successfully employed both internally and externally. As a powerful stimulant and irritating medicine, its use has been resorted to in desperate cases only, and even then it ought first to be exhibited in very small doses, as a grain, and in a diluted state, and to be gradually increased, according to the effects, which are generally of an alarming nature. The active ingredient of this plant is an alkali lately detected. See *Veratria.*

Veratrum nigrum. See *Helleborus niger.*

Veratrum sabadilla. Indian caustic barley. Called also, *Cevadilla Hispanorum; Sevadilla; Sabadilla; Hordeum causticum;* and *Canis interfector.* The plant, the seeds of which are thus denominated, is a species of *veratrum:* they are powerfully caustic, and are administered with very great success as a vermifuge. They are also diuretic and emetic. The dose to a child, from two to four years old, is two grains; from hence to eight, five grains; from eight to twelve, ten grains. A new alkali has been detected in the seeds of this plant. See *Veratria.*

VERBA'SCUM. (*um, i.* n.; *quasi barbascum*, from its hairy coat.) 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria;* Order, *Monogynia.*

2. The pharmacopœial name of the yellow and black mullein.

Verbascum blattaria. Moth mullein. This possesses demulcent properties, but is not used in the practice of the present day.

Verbascum nigrum. The systematic name of the black mullein: called also, *Candela regia, Tapsus barbatus, Candelaria*, and *Lanaria.* The *Verbascum nigrum* and *Verbascum thapsus* appear to be ordered indifferently by this name in the pharmacopœias. The flowers, leaves, and roots are used occasionally as mild astringents. The leaves possess a rough-

ish taste, and promise to be of service in diarrhœas and other debilitated states of the intestines.

Verbascum thapsus. The systematic name of the yellow mullein. See *Verbascum nigrum*.

VERBE'NA. (*a, æ.* f. ; *quasi herbena,* a name of distinction for all herbs used in sacred rites.) Vervain. 1. The name of a genus of plants in the Linnæan system. Class, *Decandria;* Order, *Monogynia*.

2. The pharmacopœial name of the vervain. See *Verbena officinalis*.

Verbena fœmina. The hedge mustard is sometimes so called. See *Erysimum alliaria*.

Verbena officinalis. Vervain. The systematic name of *Verbenaca, Peristerium, Hierobotane,* and *Herba sacra.* This plant is destitute of odour, and to the taste manifests but a slight degree of bitterness and astringency. In former times the verbena seems to have been held sacred, and was employed in celebrating the sacrificial rites; and with a view to this, more than the natural power of the plant, it was worn suspended about the neck as an amulet. This practice, thus founded on superstition, was, however, in process of time, adopted in medicine; and, therefore, to obtain its virtues more effectually, the vervain was directed to be bruised before it was appended to the neck; and of its good effects thus used for inveterate headaches, Forestus relates a remarkable instance. In still later times it has been employed in the way of cataplasm, by which we are told the most severe and obstinate cases of cephalalgia have been cured, for which we have the authorities of Etmuller, Hartman, and more especially De Haën. Notwithstanding these testimonies in favour of vervain, it has deservedly fallen into disuse in Britain; nor has the pamphlet of Mr. Morley, written professedly to recommend its use in scrofulous affections, had the effect of restoring its medical character. This gentleman directs the root of vervain to be tied with a yard of white satin riband round the neck, where it is to remain till the patient recovers. He also has recourse to infusions and ointments prepared from the leaves of the plant, and occasionally calls in aid the most active medicines of the Materia Medica.

VERDIGRIS. See *Ærugo*.

VERHEYEN, Philip, was born in 1648, at Vesbronck, in Waes. He acquired great celebrity from a work entitled *Anatomia Corporis Humani,* which passed through many editions, with improvements, and superseded the compendium of Bartholine. He published also a Compendium of Medicine, a Treatise on Fevers, &c.

Verjuice. An acid liquor prepared from grapes or apples that are unfit to be converted into wine or cyder. It is also made from crabs. It is principally used in sauces and ragouts, though it sometimes forms an ingredient in medicinal compositions.

VERMICULA'RIS. (From *vermis,* a worm.) Vermicular: shaped like or having the properties of a worm: applied very generally in natural history.

VERMIFORM. (*Vermiformis;* from *vermis,* a worm, and *forma,* resemblance.) Worm-like.

Vermiform process. *Processus* and *Protuberantia vermiformis.* The substance which unites the two hemispheres of the cerebellum like a ring, forming a process, so called from its resemblance to the contortions of worms.

VERMIFUGE. (*Vermifugus;* from *vermis,* a worm, and *fugo,* to drive away.) See *Anthelmintic*.

VERMILION. See *Cinnabar*.

VE'RMIS. (*is, is,* m.; *à vertendo:* because it twists itself about.) A worm. There are several kinds of animalcules, some of which are worms, and some that do not resemble but are called worms, which infest the human body. Their usual division is into those which inhabit only the intestinal canal, as the ascarides, &c.; those which are introduced by accident from without; and those which are found in other parts, as hydatids, &c.

Of *alvine worms* there are two classes: —

First class. This contains those which are generated and nourished in the human intestinal canal, and which there propagate their species.

Second class comprehends those insects or worms that accidentally enter the human primæ viæ *ab externo,* and which never propagate their species in that canal, but are soon eliminated from the body.

The *first class,* from the variety it affords, may be divided into different orders, genera, and species.

Order I. Round worms.

Genus I. Intestinal ascarides.

Character. Body round, head obtuse, and furnished with three vesicles.

Species 1. *Ascaris lumbricoides.* The long round worm, or lumbricoid ascaris. The *Ascaris* of Rudolphi.

Character. When full grown, a foot in length. Mouth triangular.

2. *Ascaris vermicularis.* The thread or maw-worm. The *Oxyuris* of Rudolphi.

Character. When full grown, half an inch in length, tail terminates in a fine point.

Genus II. Intestinal trichurides.

Character. Body round, tail three times the length of the body, head without vesicles.

Species 1. *Trichuris vulgaris.* The trichuris, or long thread-worm. This worm is the *Trichocephalus dispar* of Rudolphi, whose account of the head and tail are probably the most correct.

Character. The head furnished with a proboscis.

Order II. The flat worms.

Genus I. Intestinal tape-worm.

Character. Body flat and jointed.

Species 1. *Tænia osculis marginalibus.* The long tape-worm. The *Tænia solium* of Rudolphi.

Character. The oscula are situated upon the margin of the joints.

2. *Tænia osculis superficialibus.* The broad tape-worm. The *Bothriocephalus latus* of Rudolphi.

Character. The oscula are placed upon the flattened surface.

These worms were all known to the ancients, the trichuris only excepted, and are mentioned in the works of Hippocrates, Galen, Celsus, Paulus Ægineta, and Pliny.

The second class embraces such as do not belong to the human body, but which are by accident carried there. Of these many have been found.

1. The *Fasciola hepatica,* or fluke, a flat worm like a flounder in miniature, of the size of the nail of the little finger. This worm is very common in the bile-ducts of rotten sheep, and in the alvine canal of many animals. It is very rarely found in man.

2. The *Scarabæus.* Several species of this genus have been found in the external openings of the body of man; as the *meatus auditorius externus,* the alvine canal, the rectum, the vagina, &c.

3. The *Œstrus,* a fly, the ovula of which are deposited under the skin in wounds in fœtid ulcers, and where the larvæ or maggots produce great mischief.

4. The *Gordius,* or horse-hair worm, which inhabits soft stagnant waters, and is taken into the stomach with the water in many parts of Lapland.

5. The *Hirudo,* or leech, which is taken in the same way.

6. The *Musca.* Several of this genus deposit their eggs in the nose, antra of Highmore, and in the rectum: especially the *Musca carnaria,* or flesh-fly; the *M. vomitoria,* or blow-fly; the *M. cibaria,* or pantry-fly; the *M. putris,* or hopper-fly maggot.

The third class comprehends those animalcules which are found in other parts, as the viscera of the head, thorax, &c., and under the skin. These are,

1. The *Acephalocystis,* or animal hydatid. This very singular animal is formed like a bladder, and distended with an aqueous fluid. These animals are sometimes formed in the natural cavities of the body, as the abdomen and ventricles of the brain, but more frequently in the liver, kidney, and lungs, where they produce diseased actions of those viscera. If the vires naturæ medicatrices are not sufficient to effect a cure, the patient mostly falls a sacrifice to their ravages. Dr. Baillie gives the following interesting account of the hydatids, as they are sometimes found in the liver: — "There is no gland in the human body in which hydatids are so frequently found as the liver, except the kidneys, where they are still more common. Hydatids of the liver are usually found in a cyst, which is frequently of considerable size, and is formed of very firm materials, so as to give to the touch almost the feeling of cartilage. This cyst, when cut into, is obviously laminated, and is much thicker in one liver than another. In some livers it is not thicker than a shilling, and in others it is near a quarter of an inch in thickness. The laminæ which compose it are formed of a white matter, and on the inside there is a lining of a pulpy substance, like the coagulable lymph. The cavity of the cyst I have seen, in one instance, subdivided by a partition of this pulpy substance. In a cyst may be found one hydatid, or a greater number of them. They lie loose in the cavity, swimming in a fluid; or some of them are attached to the side of the cyst. They consist of a round bag, which is composed of a white, semi-opake, pulpy matter, and contain a fluid capable of coagulation. Although the common colour of hydatids be white, yet I have occasionally seen some of a light amber colour. The bag of the hydatid consists of two laminæ, and possesses a good deal of contractile power. In one hydatid this coat, or bag, is much thicker and more opake than in another; and even in the same hydatid, different parts of it will often differ in thickness. On the inside of an hydatid smaller ones are sometimes found, which are commonly not larger than the heads of pins, but sometimes they are even larger in their size than a gooseberry. These are attached to the larger hydatid, either at scattered irregular distances, or so as to form small clusters; and they are also found floating loose in the liquor of the larger hydatids. Hydatids of the liver are often found unconnected with each other; but sometimes they have been said to enclose each other in a series, like pill-boxes. The most common situation of hydatids of the liver is in its substance, and enclosed in a cyst; but they are occasionally attached to the outer surface of the liver, hanging from it, and occupying more or less of the general cavity of the abdomen. The origin and real nature of these hydatids are not fully ascertained; it is extremely probable, however, that they are a sort of imperfect animalcules. There is no doubt at all, that the hydatids in the livers of sheep are animalcules: they have been often seen to move when taken out of the liver and put into warm water; and they retain this power of motion for a good many hours after a sheep has been killed. The analogy is great between hydatids in the liver of a sheep and those of the human subject. In both they are contained in strong cysts, and in both they consist of the same white pulpy matter. There is undoubtedly some difference between them in simplicity of organisation; the hydatid in the human liver being a simple uniform bag, and the hydatid in that of a sheep having a neck and mouth appendant to the bag. This difference need be no considerable objection to the opinion above stated. Life may be conceived to be attached to the most simple form of organisation. In proof of this, hydatids have been found in the brains of sheep resembling almost exactly those in the human liver, and which have been seen to move, and therefore are certainly known to

be animalcules. The hydatids of the human liver, indeed, have not, as far as I know, been found to move when taken out of the body and put into warm water: were this to have happened, no uncertainty would remain. It is not difficult to see a good reason why there will hardly occur any proper opportunity of making this experiment. Hydatids are not very often found in the liver, because it is not a very frequent disease there; and the body is allowed to remain for so long a time after death before it is examined, that the hydatids must have lost their living principle, even if there were animalcules, and it appears even more difficult to account for their production, according to the common theory of generation, than for that of intestinal worms. We do not get rid of the difficulty by asserting that the hydatids in the human liver are not living animals, because in sheep they are certainly such, where the difficulty of accounting for their production is precisely the same."

2. The *Cysticercus*, or bladder-tail hydatid. See *Cysticercus.*

3. The *Polycephalus*, or many-headed worm. See *Polycephalus.*

4. The *Echino-coccus.* See *Echino-coccus.*

5. The *Gordius medinensis*, or Guinea worm. See *Dracunculus.*

6. The *Acarus* of the itch. See *Psora.*

The worms which belong to the human body form a part of it, their ovula being always within it, and in a healthy state do not produce any inconvenience; but when, from accidental causes, their ovula are hatched, they become a source of numerous symptoms, and there are few parts of the system which have not been found to sympathise with the bowels and other parts in which these parasitical animalcules have been generated.

Treatment of Intestinal Worms.

Worms often inhabit the human intestines without producing any inconvenience. Ascarides have, in many instances, infested the alvine channel for twenty or thirty years without any serious evil, and, for the greater part of the time, been known only to exist there from their being seen in the expelled fæces. When, however, the canal becomes irritated by them, a number of symptoms arise, both locally and in distant parts, so that they may be arranged into primary and secondary; and the latter are either symptomatic or sympathetic.

1. *Primary symptoms* are those which exist in the part where the worms are, and consequently are local: these occasion griping pains, more particularly about the navel; the presence of worms, eliminated with or without the fæces; fœtid breath; acrid eructations; slimy stools; and inflammation of the bowels.

2. The *secondary symptoms* are, occasional sickness and vomiting, variable and voracious appetite, wasting away of the body, heat and itching about the anus, and a vast number of sympathetic affections; for the most remote parts of the system have been known to afford symptoms from this very frequent source of irritation; the stomach and bowels, when that irritation is caused by worms: there are not merely symptoms, such as headache, vertigo, disturbed dreams, grinding of the teeth during sleep, picking of the nose, tenesmus, paleness of the countenance, dizziness, &c. &c.; but also the formation of a regular disease, verminous colic, a remittent fever, a state that stimulates hydrocephalus, convulsion fits, chorea Sancti Viti, peripneumonia, and even hæmorrhages.

The treatment of verminous symptoms and diseases consists in getting rid of the worms, by destroying them, or driving them from the body, and by strengthening the system generally, particularly the alvine canal. Both these intentions may sometimes be pursued simultaneously. A decided vermifuge process is, however, yet a desideratum in medical practice; because worms lie for the most part so low in the bowels, and are so completely involved in viscid mucus, or other slime, that even oil of turpentine, tobacco infusion, and mercurials, which readily enough destroy them out of the body, seldom go directly home to them, when within it; and because, also, most of the medicines which are likely to produce this effect have a tendency to weaken the stomach and bowels, and thus render them a fitter habitation for worms.

The bowels should always be kept loose, by which the slime in which the worms burrow is continually passing out of the intestines.

If this bed, that so much favours the generation as well as the growth of the worms, does not pass off by mild aperients, more active ones should be given; for it is necessary to remove it as much as possible, in order to give the antihelmintic medicines a better chance of acting upon the worms.

The list of vermifuges is almost innumerable. They may conveniently be divided into two classes:—

1. Those that dislodge and drive away intestinal worms by some mechanical or other external action; as all drastic purges; all oleaginous vermifuges, as oil of olives, beech nuts, castor, and turpentine; sulphur, petroleum; sea salt; tin filings; crude quicksilver; Plenck's grey mucilage of it; the lunar pill of Boerhaave; and the down of the pods of cowhage.

2. Those that destroy them by killing them before they are expelled; as the male fern, hellebore, fœtid hellebore, cavadilla, tansy, savine, rue, dittany, tobacco, worm-seed, the bark of the bulgewater tree, and of the cabbage tree, the spigelias, and Indian scabiosa. Many of these are hardly worth noticing.

The First Class.

The vermifuges which are *simply purgative*, even the most active and drastic, seem to have little other effect than that of clearing away the slime in which most of the worms are enveloped, and thus exposing their naked and tender bodies to the action of other and more direct antihelmintics. Even aloes and colocynth, which unite a bitter principle to a

cathartic power, are now well known to be incapable of poisoning them. They are nevertheless very useful, and especially with children, whose bowels are very much loaded with mucus.

Little or no dependence can be placed on the oily vermifuges, except the *terebinthinate*: these have been found highly serviceable. The vermicular ascarides rarely resist the oil of turpentine, when given in a dose sufficiently large to reach the rectum, or when injected into the rectum, and they have been discharged in great abundance. The best injection are these: —

R. Terebinthinæ venetæ, saponis mollis, singulorum, ℥ss.; aquæ puræ, f. ℥viij.: misce pro enemate.

R. Olei terebinthinæ rectificati, f. ℥j.; decocti avenæ tenuioris, f. ℥viij.: misce pro enemate.

These are for adults; and one or other may be administered every or every other day, with directions to retain them as long as possible.

The rectified oil of turpentine is given, in the dose of from half a drachm to a tea-spoonful, to a child ten years old, and from half an ounce to an ounce to an adult, in any convenient vehicle, as milk, gruel, peppermint, or any distilled water, once or twice a week, according as may be found necessary. Much larger doses have been found necessary, and more frequently repeated, when the stomach and bowels have been accustomed to spirituous liquors. In delicate and weak habits, the above dose will sit uneasy on the stomach, and very much disquiet the system. In most cases it produces a slight vertigo, which soon passes by; and in some it acts like a glass of strong spirit, and produces a state very like to intoxication. These effects require always a diminution of the dose when repeated. There are several other terebinthinate preparations which have been in vogue as vermifuges, and which have been supposed to agree better with some stomachs; as the *Hungarian balsam, oleum templinum*. Less valuable are some empyreumatic oils; as the *petroleum*, and animal oil from horns.

Sulphur, the *sulphureous* Harrogate *waters*. These act in the same way as, but are much less efficacious remedies than, oil of turpentine.

Tin filings. On what the antihelmintic virtues of these depend is yet undetermined: most probably their operation is mechanical. They have been given principally against the tape-worm, but seldom with benefit. The dose is from one scruple to two drachms, or more in syrup.

Crude quicksilver most probably proves a vermifuge in the same way; though its oxides, the grey mucilage of Plenck, and the lunar pill of Boerhaave, have perhaps another peculiar property which kills them.

Cowhage, the *Dolichos pruriens* of Linnæus, is of all those means which act mechanically on worms the most powerful. It is the prickly and pungent down of the pod which is scraped off, and mixed with any syrup. It is a common remedy, and an excellent one, in the West Indies, but seldom administered in this country.

The Second Class.

Almost all the vermifuges of this class possess great pungency and bitterness; and it is the former principle and not the bitterness which is the active part.

The *semen santonici*, or worm seed. These are the produce of the *Artemisia santonica* of Linnæus, and are said to be a very good vermifuge in hot climates: those, however, which are found in our shops do not maintain that character. Of nearly the same efficacy is the *Juniperus sabina*, the *Tanacetum vulgare*, the *Origanum dictamnus*, and *Chenopodium anthelminticum*, now almost forgotten as vermifuges.

Assafœtida was once esteemed a powerful destroyer of worms; and it is probable, that near its native place this juice may be more efficacious than in this country, where its anthelmintic powers are not believed.

Hellebore, helleboraster, and the cavadilla, a species of veratrum, and all drastic purgatives and pungent bitters, and though formerly esteemed, are never thought of in this country as vermifuges.

Tobacco, like the last, is so powerful in its operation as never to be selected.

Gamboge is believed to possess some specific power in addition to its purgative; for it is generally given with calomel and scammony to expel tape-worms.

Besides these, there are some anthelmintics which are supposed to possess a specific power: viz.

The *Areca oleracea*, or true cabbage-tree, and one of the sago-trees. The bark of the shoots of this is made into an infusion, decoction, syrup, and powder. It has a mucilaginous and sweetish taste, and an agreeable smell. In a large dose it vomits and purges violently, but does not remove worms from operating in this way, but in small doses which sit easy upon the stomach; from which it is evident that the anthelmintic power is a specific one.

The *Geoffroya inermis*, the bastard cabbage tree. This is very similar to the former, and is employed in the same way.

The *Aspidium filix mas*, or male fern. This is much esteemed in the cure of tape-worms. Madam Noufer's mode of expelling the tape-worm, which seldom failed, is detailed under the article *Aspidium*.

The *Spigelia anthelmia*, and *Marylandica*, or Indian pinks or worm grasses. These are acrid narcotics, and, though esteemed in their native places, are seldom given in this country.

Mare's milk. This has of late been given in Germany with great success, in expelling tape-worm. The dose is half a pint night and morning. The mare's milk of German horses is more efficacious than that of the mares of Great Britain.

For the treatment of the other worms, consult the several kinds.

Vermis mordicans. *Vermis repens.* A species of herpetic eruption on the skin.

Vermis terrestris. See *Earth-worm.*

VERNA'TIO. (From *ver*, the spring.) This term is applied, like *foliatus,* to the manner in which the leaves are folded or wrapped up, and expand in the spring. See *Germ.*

VERNEY, Guichard-Joseph du, was born in 1648. He published several articles on natural history in the memoirs of the academy of sciences, and wrote an excellent work on the Organ of Hearing: it was translated into various languages. He continued the pursuit of natural history with great ardour, and bequeathed his valuable anatomical preparations to the academy. After his death a treatise on the Diseases of the Bones was published from his manuscripts; and subsequently various other papers, under the title of *Œuvres Anatomique.*

VERO'NICA. 1. The name of a genus of plants in the Linnæan system. Class, *Diandria;* Order, *Monogynia.* Speedwell.

2. The pharmacopœial name of the male veronica. See *Veronica officinalis.*

Veronica beccabunga. The water-pimpernel and brooklime: called also, *Berula, Beccabunga, Anagallis aquatica, Laver germanicum, Veronica aquatica,* and *Cepæa.* The plant which bears these names is the *Veronica — racemis lateralibus, foliis ovatis planis, caule repente,* of Linnæus. It was formerly considered of much use in several diseases, and was applied externally to wounds and ulcers: but if it have any peculiar efficacy, it is to be derived from its antiscorbutic virtue. As a mild refrigerant juice, it is preferred where an acrimonious state of the fluids prevails, indicated by prurient eruptions upon the skin, or in what has been called the hot scurvy. To derive much advantage from it, the juice ought to be taken in large quantities, or the fresh plant eaten as food.

Veronica officinalis. The systematic name of the plant which is called in the pharmacopœias *Veronica mas; Thea germanica; Betonica pauli; Chamædrys spuria. Veronica — spicis lateralibus pedunculatis; foliis oppositis; caule procumbente,* of Linnæus, is not unfrequent on dry barren grounds and heaths, as that of Hampstead, flowering in June and July. This plant was formerly used as a pectoral against coughs and asthmatic affections, but it is now justly forgotten.

VE'RRES. (*es, is.* m.; *à venendo.*) The boar. See *Sus scrofa.*

Verricula'ris tunica. The retina of the eye.

VERRU'CA. (*a, æ.* f.) 1. A wart, or thickening and induration of the cuticle, which is raised up in different forms, mostly the size of a lentil or flat pea.

2. In *Botany,* applied to a small round prominence on the inferior surface of funguses.

VERRUCA'RIA. (*a, æ.* f.; from *verruca,* a wart: because it was supposed to destroy warts.) The *Heliotropium europæum,* or turnsole.

VERRUCO'SUS. Warty: applied to such appearances on vegetables, as on the stem of the *Euonymus verrucosus;* and to the appearance on the gourd seed-vessel, as in the *Cucurbita verrucosa.* See *Pepo.*

VERSATI'LIS. Versatile: vane-like; turning about like a vane or weathercock: applied to the anthers of the *Geranium, Imperatoria,* &c.

VE'RTEBRA. (*a, æ.* f.; from *verto,* to turn.) The spine is a long bony column, which extends from the head to the lower part of the trunk, and is composed of irregular bones, which are called vertebræ.

The spine may be considered as being composed of two irregular pyramids, which are united to each other in that part of the loins where the last of the lumbar vertebræ is united to the os sacrum.

The vertebræ which form the upper and longest pyramid are called true vertebræ; and those which compose the lower pyramid, or the os sacrum and coccyx, are termed false vertebræ, because they do not in every thing resemble the others, and particularly because, in the adult state, they become perfectly immoveable, while the upper ones continue to be capable of motion: for it is upon the bones of the spine that the body turns; and their name has its derivation from the Latin verb *verto,* to turn, as observed above.

The true vertebræ, from their situations with respect to the neck, back, and loins, are divided into three classes,—of cervical, dorsal, and lumbar vertebræ. We will first consider the general structure of all these, and then separately describe their different classes.

In each of the vertebræ, as in other bones, we may remark the body of the bone, its processes and cavities. The body may be compared to part of a cylinder cut off transversely: convex before, and concave behind, where it makes part of the cavity of the spine.

Each vertebra has commonly seven processes. The first of these is the *spinous* process, which is placed at the back part of the vertebra, and gives the name of spine to the whole of this bony canal. Two others are called *transverse* processes, from their situation with respect to the spine, and are placed on each side of the spinous process. The four others, which are called *oblique* processes, are much smaller than the other three. There are two of these on the upper and two on the lower part of each vertebra, rising from near the basis of the transverse processes. They are sometimes called *articular* processes, because they are articulated with each other; that is, the two superior processes of one vertebra are articulated with the two inferior processes of the vertebra above it; and they are called oblique processes, from their situation with respect to the processes with which they are articulated. These oblique processes are articulated to each other by a species of

ginglymus, and each process is covered at its articulation with cartilage.

There is in every vertebra, between its body and apophyses, a foramen, large enough to admit a finger. These foramina correspond with each other through all the vertebræ, and form a long bony conduit, for the lodgment of the spiral marrow.

Besides this great hole, there are four notches on each side of every vertebra, between the oblique processes and the body of the vertebra. Two of these notches are at the upper, and two at the lower part of the bone. Each of the inferior notches, meeting with one of the superior notches of the vertebra below it, forms a foramen; whilst the superior notches do the same with the inferior notches of the vertebra above it. These four foramina form passages for blood-vessels, and for the nerves that pass out of the spine.

The vertebræ are united together by means of a substance, compressible like cork, which forms a kind of partition between the several vertebræ. This intervertebral substance seems, in the fœtus, to approach nearly to the nature of ligaments: in the adult it has a great resemblance to cartilage. When cut horizontally, it appears to consist of concentrical curved fibres: externally it is firmest and hardest; internally it becomes thinner and softer, till at length, in the centre, we find it in the form of a mucous substance, which facilitates the motions of the spine.

Genga, an Italian anatomist, long ago observed, that the change which takes place in these intervertebral cartilages (as they are usually called), in advanced life, occasions the decrease in stature, and the stooping forwards, which are usually to be observed in old people. The cartilages then become shrivelled, and consequently lose, in a great measure, their elasticity. But, besides this gradual effect of old age, these cartilages are subject to a temporary diminution, from the weight of the body in an erect posture; so that people who have been long standing, or who have carried a considerable weight, are found to be shorter than when they have been long in bed. Hence we are taller in the morning than at night. This fact, though seemingly obvious, was not ascertained till of late years. The difference in such cases depends on the age and size of the subject: in tall, young people, it will be nearly an inch; but in older, or shorter persons, it will be less considerable.

Besides the connection of the several vertebræ, by means of these cartilages, there are likewise many strong ligaments, which unite the bones of the spine to each other. Some of these ligaments are external, and others internal. Among the external ligaments, we observe one which is common to all the vertebræ, extending, in a longitudinal direction, from the fore part of the body, or the second vertebra of the neck, over all the other vertebræ, and becoming broader as it descends towards the os sacrum, where it becomes thinner, and gradually disappears. This external longitudinal ligament, if we may so call it, is strengthened by other shorter ligamentous fibres, which pass from one vertebra to another, throughout the whole spine. The internal ligament, the fibres of which, like the external one, are spread in a longitudinal direction, is extended over the back part of the bodies of the vertebræ, where they help to form the cavity of the spine, and reaches from the foramen of the occipital bone to the os sacrum.

We may venture to remark, that all the vertebræ diminish in density and firmness of texture, in proportion as they increase in size; so that the lower vertebræ, though larger, are not so heavy in proportion as those above them. In consequence of this mode of structure, the size of the vertebræ is increased without adding to their weight; and this is an object of no little importance in a part of the body, which, besides flexibility and suppleness, seems to require lightness as one of its essential properties.

In the fœtus, at the ordinary time of birth, each vertebra is found to be composed of three bony pieces, connected by cartilages which afterwards ossify. One of these pieces is the body of the bone; the other two are the posterior and lateral portions, which form the foramen for the medulla spinalis. The oblique processes are at that time complete, and the transverse processes beginning to be formed, but the spinous processes are totally wanting.

The cervical vertebræ are seven in number; their bodies are smaller, and of a firmer texture, than the other bones of the spine. The transverse processes of these vertebræ are short, and forked for the lodgment of muscles; and, at the bottom of each of these processes, there is a foramen, for the passage of the cervical artery and vein. The spinous process of each of these vertebræ is likewise shorter than the other vertebræ, and forked at its extremity; by which means it allows a more convenient insertion to the muscles of the neck. Their oblique processes are more deserving of that name than either those of the dorsal or lumbar vertebræ. The uppermost of these processes are slightly concave, and the lowermost slightly convex. This may suffice for a general description of these vertebræ; but the first, second, and seventh deserve to be spoken of more particularly. The first, which is called *atlas*, from its supporting the head, differs from all the other vertebræ of the spine. It forms a kind of bony ring, which may be divided into its anterior and posterior arches, and its lateral portions. Of these, the anterior arch is the smallest and flattest; at the middle of its convex fore-part we observe a small tubercle, which is here what the body is in the other vertebræ. To this tubercle a ligament is attached, which helps to strengthen the articulation of the spine with the os occipitis. The back part of this anterior portion is concave,

and covered with cartilage, where it receives the odontoid process of the second vertebra. The posterior portion of the vertebra, or, more properly speaking, the posterior arch, is larger than the anterior one. Instead of a spinous process, we observe a rising, or tubercle, larger than that which we have just now described, on the fore-part of the bone. The lateral portions of the vertebra project, so as to form what are called the transverse processes, one on each side, which are longer and larger than the transverse processes of the other vertebræ. They terminate in a roundish tubercle, the end of which has a slight bend downwards. Like the other transverse processes, they are perforated at their basis, for the passage of the cervical artery. But, besides these transverse processes, we observe, both on the superior and inferior surface of these lateral portions of the first vertebra, an articulating surface, covered with cartilage, answering to the oblique processes in the other vertebræ. The uppermost of these are oblong, and slightly concave, and their external edges rise somewhat higher than their internal brims. They receive the condyloid processes of the os occipitis, with which they are articulated by a species of ginglymus. The lowermost articulating surfaces, or the inferior oblique processes, as they are called, are large, concave, and circular, and are formed for receiving the superior oblique processes of the second vertebra; so that the atlas differs from the rest of the cervical vertebræ in receiving the bones, with which it is articulated both above and below. In the fœtus we find this vertebra composed of five, instead of three pieces, as in the other vertebræ. One of these is the anterior arch; the other four are the posterior arch and the sides, each of the latter being composed of two pieces. The transverse process, on each side, remains long in a state of epiphysis with respect to the rest of the bone.

The second vertebra is called *dentatus*, from the process on the upper part of its body, which has been, though perhaps improperly, compared to a tooth. This process, which is the most remarkable part of the vertebra, is of a cylindrical shape, slightly flattened, however, behind and before. Anteriorly it has a convex, smooth, articulating surface, where it is received by the atlas, as we observed in our description of that vertebra. It is by means of this articulation that the rotatory motion of the head is performed; the articulation of the os occipitis with the superior oblique processes of the first vertebra, allowing only a certain degree of motion backwards and forwards, so that when we turn the face either to the right or left, the atlas moves upon this odontoid process of the second vertebra. But as the face cannot turn a quarter of a circle, that is, to the shoulder, upon this vertebra alone, without being liable to injure the medulla spinalis, we find that all the cervical vertebræ concur in this rotatory motion, when it is in any considerable degree; and indeed we see many strong ligamentous fibres arising from the sides of the odontoid process, and passing over the first vertebra, to the os occipitis, which not only strengthen the articulation of these bones with each other, but serve to regulate and limit their motion. It is on this account that the name of *moderators* has sometimes been given to these ligaments. The transverse processes of the vertebra *dentata* are short, inclined downwards, and forked at their extremities. Its spinous process is short and thick. Its superior oblique processes are slightly convex, and somewhat larger than the articulating surfaces of the first vertebra, by which mechanism the motion of that bone upon this second vertebra is performed with greater safety. Its inferior oblique processes have nothing singular in their structure.

The seventh vertebra of the neck differs from the rest chiefly in having its spinous process of a greater length, so that, upon this account, it has been sometimes called *vertebra prominens.*

The dorsal vertebræ, which are twelve in number, are of a middle size, between the cervical and lumbar vertebræ; the upper ones gradually losing their resemblance to those of the neck, and the lower ones coming nearer to those of the loins. The bodies of these vertebræ are more flattened at their sides, more convex before, and more concave behind, than the other bones of the spine. Their upper and lower surfaces are horizontal. At their sides we observe two depressions, one at their upper, and the other at their lower edge, which, united with similar depressions in the vertebræ above and below, form articulating surfaces, covered with cartilage, in which the heads of the ribs are received. These depressions, however, are not exactly alike in all the dorsal vertebræ; for we find the head of the first rib articulated solely with the first of these vertebræ, which has therefore the whole of the superior articulating surface within itself, independently of the vertebra above it. We may likewise observe a similarity in this respect in the eleventh and twelfth of the dorsal vertebræ, with which the eleventh and twelfth ribs are articulated separately. Their spinous processes are long, flattened at the sides, divided at their upper and back part into two surfaces by a middle ridge, which is received by a small groove in the inner part of the spinous process immediately above it, and connected to it by a ligament. These spinous processes are terminated by a kind of round tubercle, which slopes considerably downwards, except in the three lowermost vertebræ, where they are shorter and more erect. Their transverse processes are of considerable length and thickness, and are turned obliquely backwards. Anteriorly they have an articulating surface, for receiving the tuberosity of the ribs, except in the eleventh and twelfth of the dorsal vertebræ, to which the ribs are articulated by their heads only. In the last of these vertebræ the transverse pro-

cesses are very short and thick, because otherwise they would be apt to strike against the lowermost ribs, when we bend the body to either side.

The *lumbar vertebræ*, the lowest of the true vertebræ, are five in number. They are larger than the dorsal vertebræ. Their bodies are extremely prominent, and nearly of a circular form at their fore part; posteriorly they are concave. Their intermediate cartilages are of considerable thickness, especially anteriorly, by which means the curvature of the spine forwards, towards the abdomen, in this part, is greatly assisted. Their spinous processes are short and thick, of considerable breadth, erect, and terminated by a kind of tuberosity. Their oblique processes are of considerable thickness: the superior ones are concave, and turned inwards; the inferior ones convex, and turned outwards. Their transverse processes are thin and long, except in the first and last vertebræ, where they are much shorter, that the lateral motions of the trunk might not be impeded. The inferior surface of all these vertebræ is slightly oblique, so that the fore part of the body of each is somewhat thicker than its hind part; but this is more particularly observable in the lowermost vertebra, which is connected with the os sacrum. Many anatomists describe the os sacrum and the os coccygis when considering the bones of the spine, whilst others regard them as belonging more properly to the pelvis. These bones the reader may consult. It now remains to notice the uses of the spine. We find the spinal marrow lodged in this bony canal, secure from external injury. It defends the thoracic and abdominal viscera, and forms a pillar which supports the head, and gives a general firmness to the whole trunk.

To give it a firm basis, we find the bodies of the vertebræ gradually increasing in breadth as they descend; and to fit it for a variety of motion, it is composed of a great number of joints, with an intermediate elastic substance, so that to great firmness there is added a perfect flexibility.

We have already observed, that the lowermost and largest vertebræ are not so heavy in proportion as those above them; their bodies being more spongy excepting at their circumference, where they are more immediately exposed to pressure; so that nature seems every where endeavouring to relieve us of an unnecessary weight of bone. But behind, where the spinal marrow is more exposed to injury, we find the processes composed of very hard bone; and the spinous processes are in general placed over each other in a slanting direction, so that a pointed instrument cannot easily get between them, excepting in the neck, where they are almost perpendicular, and leave a greater space between them. Hence, in some countries, it is usual to kill cattle by thrusting a pointed instrument between the occiput and the atlas, or between the atlas and the second vertebra. Besides these uses of the vertebræ in defending the spinal marrow, and in articulating the several vertebræ, as is the case with the oblique processes, we shall find that they all serve to form a greater surface for the lodgment of muscles, and to enable the latter to act more powerfully on the trunk, by affording them a lever of considerable length.

In the neck, we see the spine projecting somewhat forward, to support the head, which, without this assistance, would require a greater number of muscles. Through the whole length of the thorax it is carried in a curved direction backwards, and thus adds considerably to the cavity of the chest, and consequently affords more room to the lungs, heart, and large blood-vessels. In the loins, the spine again projects forwards, in a direction with the centre of gravity, by which means the body is easily kept in an erect posture; for otherwise we should be liable to fall forwards. But, at its inferior part, it again recedes backwards, and helps to form a cavity called the pelvis, in which the urinary bladder, intestinum rectum, and other viscera are placed.

In a part of the body that is composed of so great a number of bones, and constructed for such a variety of motion, as the spine is, luxation is more to be expected than fracture; and this is very wisely guarded against in every direction, by the many processes that are to be found in each vertebra, and by the cartilages, ligaments, and other means of connection, which we have described as uniting them together.

VERTEBRAL. *Vertebralis.* Appertaining to the vertebræ, or bones of the spine.

Vertebral artery. *Arteria vertebralis.* A branch of the subclavian, proceeding through the vertebræ to within the cranium, where, with its fellow, it forms the basillary artery, the internal auditory, and the posterior artery of the dura mater.

VE'RTEX. (*ex, icis.* m.; from *verto.*) The crown of the head. The os verticis is the parietal bone.

VERTICAL. *Verticalis.* Perpendicular: applied to leaves which have both sides at right angles with the horizon; as in *Lactuca scariola.*

Verticalia ossa. See *Parietal bone.*

VERTICI'LLUS. A whorl. The botanical name of a species of inflorescence, in which the flowers surround the stem in a sort of ring.

From the *insertion* of the flowers, the *vesture*, and *distance* of the verticillus, it is called,

1. *Pedunculatus;* as in *Melissa officinalis.*
2. *Sessilis,* in *Mentha arvensis.*
3. *Dimidiatus,* going half round; as in *Ballota distícha.*
4. *Nudus,* without floral or other leaf; as in *Salvia verticellata.*
5. *Bracteatus,* in *Ballota nigra.*
6. *Distans,* in *Salvia indica.*
7. *Confertus,* when crowded together.

Ve'rticis os. See *Parietal bones.*

VE'RTIGO. (*o, inis.* f.; from *verto, à vertendo.*) Giddiness or swimming of the head. This carries its own meaning, but there

are some varieties of it. It is, in the generality of cases, a dizziness, with a fear of falling, and more or less of mental confusion. Objects appear to be moving horizontally or perpendicularly, and not unfrequently the person thinks he is also moving. In many cases, the person hears whispering sounds, ringing of bells, or sounds like the beating of drums. This affection takes place whether the person be in the dark or light, whether the eyes be closed or open. In some cases the representations of objects are very numerous and rapid, and in others far less so; and as the affection advances the representations are confused, indistinct, and more rapid in succession, often conjoined with a sense of dimness or darkness, forming the *scotodinus* of Hippocrates and the Greek writers.

The predisposing causes of this affection are such as produce debility or exhaustion of the nervous power; and the exciting causes are, whatever has a tendency to disturb the uniformity with which the nervous power is supplied through the whole of its fibres, and from one fibre to another. Hence they are the most subject to vertiginous affections whose nervous systems are constitutionally weak, or have become so by disease or accident: dyspeptic persons are peculiarly subject to them; as are those who are faint from sudden and violent evacuations, want of food, or a long course of labour: indulgence in the pleasures of the table and sexual intercourse produce vertigo in the same way; and hence also it is so frequently symptomatic of fevers, inflammations, and many other diseases.

In attempting the removal of vertiginous states, the attention must be directed to the removal of determination or congestion of blood to the head; the clearing the stomach and bowels, which done, ammoniated and camphorated remedies will generally allay the nervous agitation: but if, on the other hand, it proceeds from emptiness of the stomach, hæmorrhage, or the like debilitating causes, food and stimulants are the immediate restoratives.

VERVAIN. See *Verbena officinalis.*

Vervain, female. See *Erysimum alliaria.*

VE'RVEX. The lamb castrated about the sixth month.

VESALIUS, Andrew, was born at Brussels about the year 1514. After pursuing his studies at different universities, and serving for two years professionally with the Imperial army, he settled at Padua, and taught anatomy with great applause, which he subsequently continued at some other schools in Italy. In 1544, he became physician to Charles V., and resided chiefly at the Imperial Court. About twenty years after, in the midst of his professional career, an extraordinary circumstance occurred, which was the cause of his ruin. Being summoned to examine the body of a Spanish gentleman, and having begun the operation too precipitately, the heart was observed to palpitate; in consequence of which, he was accused before the Inquisition: but the interposition of Philip II. procured him to be merely enjoined to make a pilgrimage to the Holy Land. While at Jerusalem, he was invited to the anatomical chair at Padua; but on his return, the ship was wrecked on the coast of Zante, where he soon after died. Vesalius has been represented as the first person who rescued anatomy from the slavery imposed upon it by deference to ancient opinions, and led the way to modern improvements. His first publication of note was a set of Anatomical Tables, which was soon followed by his great work *De Corporis Humani Fabricâ,* printed at Basil in 1543, and often since in several countries. The earliest impressions of the plates are most valued, but the explanations were made subsequently more correct. In a treatise "De Radicis Chinæ Usu," he severely criticised the errors of Galen, which engaged him in a controversy with Fallopius. His medical and surgical writings are not held in much estimation.

VESA'NIÆ. (The plural of *vesania;* from *vesanus,* a madman.) The fourth order in the Class *Neuroses* of Cullen's nosological arrangement; comprehending diseases in which the judgment is impaired, without either coma or pyrexia.

VE'SICA. (*a, æ.* f.; a diminutive of *vas,* a vessel.) A bladder.

Vesica fellis. The gall-bladder. See *Gall-bladder.*

Vesica urinaria. The urinary bladder. See *Urinary bladder.*

VESICATO'RIUS. (From *vesica,* a bladder: because it raises a bladder.) Having the property when applied to the skin of raising a bladder, by causing a fluid to collect between the cuticle and cutis. Various substances produce this effect on the skin; but the powder of the *cantharis,* or blistering fly, is what operates with most certainty and expedition, and is now invariably made use of for the purpose.

It is a principle sufficiently established with regard to the living system, that where a morbid action exists, it may often be removed by inducing an action of a different kind in the same or neighbouring part. On this principle is explained the utility of blisters in local inflammation and spasmodic action, and it regulates their application in pneumonia, gastritis, hepatitis, phrenitis, angina, rheumatism, colic, and spasmodic affections of the stomach; diseases in which they are employed with the most marked advantage. A similar principle exists with respect to pain; exciting one pain often relieves another. Hence blisters often give relief in toothache, and some other painful affections. Lastly, blisters, by their operation, communicate a stimulus to the whole system, and raise the vigour of the circulation. Hence, in part, their utility in fevers of the typhoid kind, though in such cases they are used with still more advantage to obviate or remove local inflammation.

When it is not wished to maintain a dis-

charge from the blistered part, it is sufficient to make a puncture in the cuticle to let out the fluid; but when the case requires keeping up a secretion of pus, the surgeon must remove the whole of the detached cuticle with a pair of scissars, and dress the excoriated surface in a particular manner. Practitioners used formerly to mix powder of cantharides with an ointment, and dress the part with this composition. But such a dressing not unfrequently occasioned very painful affections of the bladder, a scalding sensation in making of water, and very afflicting stranguries. The treatment of such complaints consists in removing every particle of the fly from the blistered part, making the patient drink abundantly of mucilaginous drinks, giving emulsions, and some doses of camphor.

These objections to the employment of salves containing the lytta, for dressing blistered surfaces, led to the use of mezereon, euphorbium, and other irritating substances, which, when incorporated with ointment, form very proper compositions for keeping blisters open, which they do without the inconvenience of irritating the bladder, like the blistering fly. The favourite application, however, for keeping open blisters, is the savine cerate, which was brought into notice by Mr. Crowther, in his book on white swellings. (See *Ceratum sabinæ*.) On the use of the savine cerate, immediately after the cuticle raised by the blister is removed, says Mr. Crowther, it should be observed that experience has proved the advantage of using the application lowered by half or two thirds of the unguentum ceræ. An attention to this direction will produce less irritation and more discharge than if the savine cerate were used in its full strength. Mr. Crowther says also, that he has found fomenting the part with flannel, wrung out of warm water, a more easy and preferable way of keeping the blistered surface clean, and fit for the impression of the ointment, than scraping the part, as has been directed by others. An occasional dressing of unguentum resinæ flavæ, he has found a very useful application for rendering the sore free from an appearance of slough, or rather dense lymph, which has sometimes been so firm in its texture as to be separated by the probe, with as much readiness as the cuticle is detached after blistering. As the discharge diminishes, the strength of the savine dressing should be proportionably increased. The ceratum sabinæ must be used in a stronger or weaker degree, in proportion to the excitement produced on the patient's skin.

VESICLE. (*Vesicula, æ.* f.; a diminutive of *vesica*, a bladder.) An elevation of the cuticle or bladder-like tumour in any part, containing a transparent watery fluid.

Vesicula fellis. The gall-bladder.

Vesiculæ divæ barbaræ. The confluent small-pox.

Vesiculæ gingivarum. The thrush.

Vesiculæ pulmonales. The air-cells which compose the greatest part of the lungs, and are situated at the termination of the bronchia.

Vesiculæ seminales. Two membraneous receptacles, situated on the back part of the bladder, above its neck. The excretory ducts are called ejaculatory ducts. They proceed to the urethra, into which they open by a peculiar office at the top of the verumontanum. They have vessels and nerves from the neighbouring parts, and are well supplied with absorbent vessels, which proceed to the lymphatic glands about the loins. The use of the vesiculæ seminales is to receive the semen brought into them by the vasa deferentia, to retain, somewhat inspissate, and to excern it *sub coitu* into the urethra, from whence it is propelled into the vagina uteri.

Vesicular fever. See *Pemphigus.*

VE'SPA. (*a, æ.* f.) The name of a genus of insects, of the order *Hymenoptera.* The wasp.

Vespa crabro. The hornet. The sting of this insect is very severe, and the effect best allayed by dilute subcarbonate of ammonia.

Vespa vulgaris. The common wasp, the sting of which produces much irritation. The best application is diluted ammonia, alone or with oil.

VESTI'BULUM. (*um, i.* n.) A round cavity of the internal ear, between the cochlea and semicircular canals, in which are an oval opening communicating with the cavity of the tympanum, and the orifices of the semicircular canals. It is within this cavity and the semicircular canals, that the new apparatus, discovered by the celebrated neurologist Scarpa, lies. He has demonstrated membranous tubes, connected loosely by cellular texture, within the bony semicircular canals, each of which is dilated in the cavity of the vestibule into an ampulla; it is upon these ampullæ, which communicate by means of an *alveus communis*, that branches of the portio mollis are expanded.

VESUVIAN. Idocrase of Haüy. A subspecies of pyramidal garnet of a green or brown colour, found in great abundance in unaltered dejected rocks in the vicinity of Vesuvius. At Naples it is cut into ring stones.

Veto'nica cordi. See *Betonica.*

VEXI'LLUM. (*um, i.* n.; a banner or standard.) The standard, or large uppermost petal at the back of a papilionaceous flower.

VI'A. (*a, æ.* f.) A way or passage. Used in anatomy. See *Primæ viæ.*

VI'BEX. (*ex, icis.*; plu. *Vibices.*) The large purple spot which appears under the skin in certain malignant fevers.

VIBRI'SSÆ. (*æ, arum.* f. and *i, orum.* m.; *quòd his evulsis caput vibretur.*) Hairs growing in the nostrils. See *Capillus.*

VIBU'RNUM. (*um, i.* n.; from *vieo*, to bind.) The name of a genus of plants. Class, *Pentandria*; Order, *Trigynia.*

Viburnum lantana. *Liburnum.* The

pliant mealy tree. The berries are considered as astringent.

VICHY. The name of a town in France, in the neighbourhood of which is a tepid mineral spring. On account of its chalybeate and alkaline ingredients, it is taken internally, being reputed to be of great service in bilious colics, diarrhœas, and in disorders of the stomach, especially such as arise from a relaxed or debilitated state of that organ.

These waters are likewise very useful when employed as a tepid bath, particularly in rheumatism, sciatica, gout, &c. By combining the internal use with the external application, they have often effected a cure where other remedies had failed to afford relief.

VI'CIA. (*a, æ.* f.; an old Latin name, derived by some etymologists from *vincio*, to bind together: as the various species of this genus twine, with their tendrils, round other plants.) The name of a genus of plants in the Linnæan system. Class, *Diadelphia*; Order, *Decandria*.

VICIA FABA. The systematic name of the common bean plant. It is a native of Egypt. There are many varieties. Beans are very wholesome and nutritious to those whose stomachs are strong, and accustomed to the coarser modes of living. In delicate stomachs they produce flatulency, dyspepsia, cardialgia, &c. especially when old. See *Legumina*.

VICTORIA'LIS LONGA. See *Allium*.

VIEUSSENS, RAYMOND, was born in Rovergne, about 1640. The result of his anatomical researches was published under the title of *Neurology*, and gained him great reputation. He died in 1726.

VIGILANCE. *Pervigilium*. Vigilance, when attended by anxiety, pain in the head, loss of appetite, and diminution of strength, is by Sauvages and Sagar, considered as a genus of disease, and is called *Agrypnia*.

VILLO'SUS. Villous, shaggy: applied, in *Anatomy*, to a velvet-like arrangement of fibres or vessels, as the villous coat of the intestines; and, in *Botany*, to the stem of the *Cineraria integrifolia*, and to other parts of plants; as the receptacle of the *Artemisia absynthium*.

VI'LLUS. (*us, i.* m.) A species of hairy pubescens of plants, consisting of soft, slender, upright, short, and scarcely conspicuous, and for the most part white hair-like filaments.

VI'MEN. (*en, inis.* n.; from *vieo*, to bind.) A slender and flexible twig.

VI'NCA. (From *vincio*, to bind: because of its usefulness in making bands.) The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia*.

VINCA MINOR. The systematic name of the lesser periwinkle. *Vinca pervinca. Clematis daphnoides major.* It possesses bitter and astringent virtues, and is said to be efficacious in stopping nasal hæmorrhages when bruised and put into the nose. Boiled, it forms a useful astringent gargle in common sore throat, and it is given by some in phthisical complaints.

VINCA PERVINCA. See *Vinca minor*.

VINCETO'XICUM. (*um, i.* n.; from *vinco*, to overcome, and *toxicum*, poison: so named from its supposed virtue of resisting and expelling poison.) See *Asclepias vincetoxicum*.

VINE. See *Vitis*.

Vine, white. See *Bryonia alba*.

Vine, wild. See *Bryonia alba*.

VINEGAR. See *Acetum*.

Vinegar, aromatic. See *Acetum*.

Vinegar, distilled. See *Acetum*.

Vinegar of squills. See *Acetum scillæ*.

Vinegar, spirits of. See *Acetum*.

Vinegar, thieves'. See *Acetum*.

VI'NUM. See *Wine*.

VINUM ALOES. Wine of aloes. Formerly known by the names of *Tinctura hieræ*, and *Tinctura sacra*. Take of extract of spiked aloe, eight ounces; canella-bark, two ounces; wine, six pints; proof spirits, two pints. Rub the aloes into powder with white sand, previously cleansed from any impurities: rub the canella-bark also into powder; and, after having mixed these powders together, pour on the wine and spirit. Macerate for fourteen days, occasionally shaking the mixture, and afterwards strain. A stomachic purgative, calculated for the aged and phlegmatic, who are not troubled with the piles. The dose is from a half to a whole fluid ounce.

VINUM ANTIMONII. In small doses this proves alterative and diaphoretic, and a large dose emetic; for which last intention it is the common emetic for children.

VINUM ANTIMONII TARTARIZATI. See *Antimonium tartarizatum*.

VINUM FERRI. Wine of iron; formerly called *Vinum chalybeatum*. Take of iron filings, two ounces; wine, two pints: mix, and set the mixture by for a month, occasionally shaking it; then filter it through paper. For its virtues, see *Ferrum tartarizatum*.

VINUM IPECACUANHÆ. Wine of ipecacuanha. Take of ipecacuanha-root, bruised, two ounces; wine, two pints: macerate for fourteen days, and strain. The dose, when used as an emetic, is from two fluid drachms to half a fluid ounce.

VINUM OPII. Wine of opium; formerly known by the names of *Laudanum liquidum Sydenhami*, and *Tinctura thebaica*. Take of extract of opium, an ounce; cinnamon-bark, bruised, cloves, bruised, of each a drachm; wine, a pint: macerate for eight days, and strain. See *Opium*.

VINUM VERATRI. Wine of white hellebore. Take of white hellebore-root, sliced, eight ounces; wine, two pints and a half: macerate for fourteen days, and strain. See *Veratrum*.

VI'OLA. (From Ιον: because it was first found in Ionia.) 1. The name of a genus of plants in the Linnæan system. Class, *Syngenesia*; Order, *Monogynia*. The violet.

2. The pharmacopœial name of the sweet violet. See *Viola odorata*.

VIOLA CANINA. The dog violet. The root of this plant possesses the power of vomiting and purging the bowels; with which intention a scruple of the dried root must be exhibited. It appears, though neglected in this country, worthy the attention of physicians.

VIOLA IPECACUANHA. The plant which was supposed to afford the ipecacuanha-root.

VIOLA LUTEA. See *Cheiranthus cheiri.*

VIOLA ODORATA. The systematic name of the sweet violet. *Viola—acaulis, foliis cordatis, stolonibus repentibus,* of Linnæus. The recent flowers of this plant are received into the catalogues of the Materia Medica. They have an agreeable sweet smell, and a mucilaginous bitterish taste. Their virtues are purgative or laxative, and by some they are said to possess an anodyne and pectoral quality. The officinal preparation of this flower is a syrup, which, to young children, answers the purpose of a purgative; it is also of considerable utility in many chemical enquiries, to detect an acid or an alkali; the former changing the blue colour to a red, and the latter to a green.

VIOLA PALUSTRIS. See *Pinguicula.*

VIOLA TRICOLOR. Heart's-ease. Pansies. This well-known beautiful little plant grows in corn-fields, and in waste and cultivated grounds, flowering all the summer months. It varies much by cultivation; and by the vivid colouring of its flowers often becomes extremely beautiful in gardens, where it is distinguished by various names. To the taste, this plant in its recent state is extremely glutinous, or mucilaginous, accompanied with the common herbaceous flavour and roughness. By distillation with water, according to Haase, it affords a small quantity of odorous essential oil, of a somewhat acrid taste. The dried herb yields about half its weight of watery extract, the fresh plant about one eighth. Though many of the old writers on the Materia Medica represent this plant as a powerful medicine in epilepsy, asthma, ulcers, scabies, and cutaneous complaints, yet the viola tricolor owes its present character as a medicine to the modern authorities of Stoerck, Metzger, Haase, and others, especially as a remedy for the crusta lactea. For this purpose, a handful of the fresh herb, or half a drachm of it dried, boiled two hours in milk, is to be strained, and taken night and morning. Bread, with this decoction, is also to be formed into a poultice, and applied to the part. By this treatment, it has been observed, that the eruption, during the first eight days, increases, and that the urine, when the medicine succeeds, has an odour similar to that of cats'; but on continuing the use of the plant a sufficient time, this smell goes off, the scabs disappear, and the skin recovers its natural purity. Instances of the successful exhibition of this medicine, as cited by these authors, are very numerous; indeed this remedy, under their management, seems rarely, if ever, to have failed. It appears, however, that Mursinna, Akermann, and Henning were less fortunate in the employment of this plant; the last of whom declares, that in the different cutaneous disorders in which he used it, no benefit was derived. Haase, who administered this species of violet in various forms, and large doses, extended its use to many chronic disorders; and, from the great number of cases in which it proved successful, we are desirous of recommending it to a farther trial in this country.

It is remarkable that Bergius speaks of this plant as a useful mucilaginous purgative, and takes no notice of its efficacy in the crustea lactea, or in any other disease.

VIOLACEOUS. *Violaceus.* 1. Applied to a deep bluish purple or violet colour.

2. Applied to a smell like that of the *Viola odorata,* or sweet-smelling violet.

VIOLA'RIA. See *Viola.*

VIOLET. See *Viola odorata.*

Violet, dog. See *Viola canina.*

VIPER. See *Vipera.*

VIPER-GRASS. See *Scorzonera.*

VI'PERA. (*Quod vi pariat;* because it was thought that its young eat through the mother's bowels.) The viper or adder. See *Coluber berus.*

VIPERA'RIA. See *Aristolochia serpentaria.*

VIPERI'NA. (From *vipera,* a snake: so called from the serpentine appearance of its roots.) See *Aristolochia serpentaria.*

VIPERINA VIRGINIANA. See *Aristolochia.*

VI'RGA AUREA. See *Solidago virga aurea.*

VIRGA'TA SUTURA. The sagittal suture of the skull.

VIRGA'TUS. Rodshaped.

VIRGIN'S BOWER. See *Clematis.*

Virgin's milk. A solution of benzoin.

VIRGINA'LE CLAUSTRUM. The hymen.

Virginian snake-root. See *Aristolochia.*

Virginian tobacco. See *Nicotiana.*

VI'RUS. See *Contagion.*

VIS. (*Vis, viris.* f.) Power. In *Physiology,* applied to vital power and its effects: hence *vis vitæ, vis insita, vis irritabilis, vis nervia,* &c.

VIS A TERGO. Any impulsive power.

VIS CONSERVATRIX. See *Vis medicatrix.*

VIS ELASTICA. Elasticity.

VIS INERTIÆ. The propensity to rest inherent in nature.

VIS INSITA. This property is defined by Haller to be that power by which a muscle, when wounded, touched, or irritated, contracts, independently of the will of the animal that is the object of the experiment, and without its feeling pain. See *Irritability.*

VIS MEDICATRIX NATURÆ. *Vis conservatrix.* A term employed by physicians to express that healing power in an animated body, by which, when diseased, the body is enabled to regain its healthy actions.

VIS MORTUA. That property by which a muscle, after the death of the animal, or immediately after having been cut out from a living body, contracts.

VIS NERVOSA. This property is considered by Whytt to be another power of the muscles by which they act when excited by the nerves.

VIS PLASTICA. That facility of formation which spontaneously operates in animals.

VIS VITÆ. The natural power of the animal machine in preserving life.

From the most remote antiquity, philosophers were persuaded that a great part of the phænomena peculiar to living bodies did not follow the same course, nor obey the same laws, as the phænomena proper to brute matter.

To these phænomena of living bodies a particular cause has been assigned, which has received different denominations. Hippocrates bestows on it the appellation of *physis*, or nature; Aristotle calls it the *moving* or *generating principle*; Kaw Boerhaave, the *impetum faciens*; Van Helmont, *archæa*; Stahl, the *soul*; others, the *vis insita*, *vis vitæ*, *vital force*, &c.

VISCID. *Viscidus.* 1. Of the nature of ropy pulp of the *viscum*, or misletoe. In general use to imply viscidity in fluids, &c.

2. See *Lentor.*

VISCIDITY. (*Visciditas*; from *viscus.*) Viscosity: glutinous, sticky, like the bird-lime.

VISCOSITY. *Viscositas.* Viscidity: clamminess.

VIS'CUM. (*um, i.* n.; and *us, i.* m. Derived from the Greek, *ιξος*, altered by the Æolians into *βισκος.*)

1. The fruit of the misletoe. See *Viscum album.*

2. The name of a genus of parasitical plants in the Linnæan system. Class, *Diœcia*; Order, *Tetrandria.*

VISCUM ALBUM. *Viscus quercinus.* Misletoe. This singular parasitical plant most commonly grows on apple-trees, also on the pear, hawthorn, service, oak, hazel, mapel, ash, lime-tree, willow, elm, horn-bean, &c. It is supposed to be propagated by birds, especially by the field-fare and thrush, which feed upon its berries, the seeds of which pass through the bowels unchanged, and, along with the excrement, adhere to the branches of trees where they vegetate.

The misletoe of the oak has, from the times of the ancient Druids, been always preferred to that produced on other trees; but it is now well known that the *viscus quercus* differs in no respect from others.

This plant is the *ιξ* of the Greeks, and was in former times thought to possess many medicinal virtues; however, we learn but little concerning its efficacy from the ancient writers on the Materia Medica, nor will it be deemed necessary to state the extraordinary powers ascribed to the misletoe by the crafty designs of druidical knavery. Both the leaves and branches of the plant have very little smell, and a very weak taste of the nauseous kind. In distillation they impregnate water with their faint unpleasant smell, but yield no essential oil. Extracts, made from them by water, are bitterish, roughish, and subsaline. The spirituous extract of the wood has the greatest austerity, and that of the leaves the greatest bitterness. The berries abound with an extremely tenacious and sweet mucilage.

The *viscus quercus* obtained great reputation for the cure of epilepsy; and a case of this disease, of a woman of quality, in which it proved remarkably successful, is mentioned by Boyle. Some years afterwards its use was strongly recommended in various convulsive disorders by Colbach, who has related several instances of its good effects. He administered it in substance, in doses of half a drachm or a drachm of the wood or leaves, or an infusion of an ounce. This author was followed by others, who have not only given testimony of the efficacy of the misletoe in different convulsive affections, but also in those complaints denominated nervous, in which it was supposed to act in the character of a tonic. But all that has been written in favour of this remedy, which is certainly well deserving of notice, has not prevented it from falling into general neglect; and the colleges of London and Edinburgh have, perhaps not without reason, expunged it from their catalogues of the Materia Medica.

VI'SCUS. (*us, eris.* n.; plural, *viscera.*) 1. Any organ or part which has an appropriate use; as the viscera of the abdomen, &c.

2. (*Viscus, i.* m.) The name of the misletoe. See *Viscum album.*

VISION. (*Visus, ûs.* m.) The function which enables us to perceive the magnitude, figure, colour, distance, &c. of bodies. The organs which compose the apparatus of vision enter into action under the influence of a particular excitant, or stimulus, called *light*.

We perceive bodies, we take cognizance of many of their properties, though they are often at a great distance;—there must then be between them and our eye some intermediate agent; this intermediate substance we denominate *light*. Light is an excessively subtle fluid, which emanates from those bodies called *luminous*; as the sun, the fixed stars, bodies in a state of ignition, phosphorescence, &c. Light is composed of atoms which move with a prodigious rapidity, since they pass through about eighty thousand leagues of space in a second.

A series of atoms, or particles, which succeed each other in a right line without interruption, are denominated a *ray of light*. The atoms which compose every ray of light are separated by intervals, that are considerable in proportion to their mass; which circumstance permits many rays to cross each other in the same point, without their particles coming in contact.

The light that proceeds from luminous bodies forms diverging cones, which would prolong themselves indefinitely, did they meet with no obstacles. Philosophers have from thence concluded, that the intensity of light in any place is always in an inverse ratio to the square of the distance of the luminous bodies from which it proceeds. The cones that are

formed by the light in passing from luminous bodies are, in general, called pencils of light, or pencils of rays; and the bodies through which the light moves are designated by the name of *media*.

When light happens to come in contact with certain bodies that are called opake, it is repulsed, and its direction is modified according to the disposition of those bodies.— The change that light suffers in its course is, in this case, called *reflection*. The study of reflection constitutes that part of physics which is named *catoptrics*.

Certain bodies allow the light to pass through them; for instance, glass: they are said to be *transparent*. In passing through these bodies, light suffers a certain change, which is called *refraction*. As the mechanism of vision rests entirely upon the principles of refraction, the examination of these becomes, therefore, a matter of importance.

The point where a ray of light enters into a medium is called the point of immersion; and that where it goes out is called the point of emergence.

If the ray comes in contact with a medium in a line perpendicular to its surface, the ray then continues its direction without any change; but if its direction is oblique to the surface of the medium, the ray is then turned out of its course, and appears broken at the point of immersion.

The *angle of incidence* is that which the incident ray makes with a perpendicular line drawn over the point of immersion upon the surface of the medium, and the *angle of refraction* is that which the broken ray makes with the perpendicular.

If the ray of light pass from a rare medium into one more dense, it inclines towards the perpendicular at the point of contact; but it declines from it if it pass from a dense medium into one that is rarer. The same phænomenon takes place, but in a contrary direction, when the ray enters into the first medium: this takes place in such a manner, that if the two surfaces of the medium traversed by the ray are parallel to each other, the ray in passing into the surrounding medium will take a direction parallel to that of the incident ray.

Bodies refract the light in proportion to their density and combustibility. Thus, of two bodies of equal density, one of which being composed of more combustible elements than the other, the refractive power of the first will be greater than that of the second.

All transparent bodies refract at the same time that they reflect the light. On account of this property, these bodies are capable of being used as a sort of mirror. When their density is very inconsiderable, such as that of the air, they are not visible unless their mass be considerable.

The form of a refractive body has no influence upon its refractive power; but it modifies the disposition of the refracted rays in respect to each other. In fact, the perpendiculars to the surfaces of the body approaching or receding according to the form of the body, the refracting rays should at the same time approach or recede.

When, by the effort of a refractive body, the rays tend towards each other, the point where they unite is called *the focus of the refractive body*. Bodies of a lenticular form are those which present principally this phænomenon.

A refractive body, with parallel surfaces, does not change the direction of the rays, but it inclines them towards its axis by a sort of *transportation*. A refractive body of two convex sides does not possess a greater refractive power than a body convex on one side, and plane on the other; but the point behind it, in which the rays are united, is much nearer.

The discovery of the action of refractive bodies upon light has not been an object of simple curiosity; it has led to the construction of ingenious instruments, by means of which the sphere of human vision has been extended to an extraordinary degree.

Apparatus of Vision.—The apparatus of vision is composed of three distinct parts.

The *first* modifies the light.

The *second* receives the impression of that fluid.

The *third* transmits this impression to the brain.

The apparatus of vision is of an extremely delicate texture, capable of being deranged by the least accident. Nature has also placed before this apparatus a series of organs, the use of which is to protect and maintain it in those conditions necessary to the perfect exercise of its functions. Those protecting parts are the eyebrows, the eyelids, and the *secreting* and *excreting* apparatus of the tears.

The eyebrows, which are peculiar to man, are formed,

1. By *hair*, of a variable colour.
2. By the *skin*.
3. By *sebaceous* follicles placed at the root of every hair.
4. By *muscles* destined for their various motions; viz. the frontal portion of the occipito-frontalis, the superior edge of the orbicularis palpebrarum, the supercilium.
5. Numerous *vessels*.
6. *Nerves*.

The eye is composed of parts which have very different uses in the production of vision. They may be distinguished into refractive, and non-refractive.

The refractive parts are,—

A. The *transparent cornea*, a refractive body, convex and concave, which in its transparency, its form, and its insertion, pretty much resembles the glass that is placed before the face of a watch.

B. The *aqueous humour* which fills the chambers of the eye; a liquid which is not purely aqueous, as its name indicates, but is essentially composed of water, and of a little albumen.

C. The *crystalline humour*, which is im-

properly compared to a lens. The comparison would be exact, were it merely for the form; but it is defective in regard to structure. The crystalline is composed of concentric layers, the hardness of which increases from the surface to the centre, and which probably possess different refractive powers. The crystalline is, besides, surrounded by a membrane, which has a great effect upon vision, as experience teaches us. A lens is homogeneous in all its parts; at its surface, as in every point of its substance; it possesses every where the same refractive power. However, it is necessary to remark, that the curve of the anterior surface of the crystalline is very far from being similar to that of the posterior aspect. This last belongs to a sphere, of which the diameter is much less than that of the sphere to which the curve of the anterior surface belongs. Until now it has been understood that the crystalline was composed mostly of albumen; but, according to a new analysis of Berzelius, it does not contain any: it is formed almost entirely of water, and of a peculiar matter, that has a great analogy, in its chemical properties, to the colouring matter of the blood.

D. Behind the crystalline is the *vitreous humour*, so called because of its resemblance to melted glass.

Each of the parts which we have noticed is enveloped by a very thin membrane, which is transparent like the part that it covers: thus, before the cornea is the conjunctiva; behind it is the membrane of the aqueous humour, which lines all the anterior chamber of the eye; that is, the anterior surface of the iris, and the posterior surface of the cornea.

The crystalline is surrounded by the crystalline capsule, which adheres by its circumference to the membrane that covers the vitreous humour. This, in passing from the circumference of the crystalline upon the anterior and posterior surfaces, leaves between an interval which has been called the *canal goudronné*.

The vitreous humour is contained in the innumerable cells of a membrane called the *hyaloid*, which also surrounds the whole. The details of anatomy, with regard to the disposition of the cells, have not hitherto added any thing to what is known of the use of the vitreous humour.

The eye is not only composed of parts that are refractive, but it is composed also of membranes which have each a particular use; these are, —

a. The *sclerotic*, the exterior envelope of the eye, which is a membrane of a fibrous nature; it is thick and resisting, and its use is evidently to protect the interior parts of the organ; it serves besides as a point of insertion for many muscles that move the eye.

b. The *choroid*, a vascular and nervous membrane, formed by two distinct plates; it is impregnated with a dark matter which is very important to vision.

c. The *iris*, which is seen behind the transparent cornea, is differently coloured in different individuals; it is pierced in the centre by an opening called the *pupil*, which dilates or contracts according to certain circumstances which we shall notice. The iris adheres outwardly, and by its circumference, to the sclerotic, by a cellular tissue of a particular nature, which is called the *ciliary*, or *iridian* ligament. There are behind the iris a great number of white lines, arranged in the manner of rays, which would unite at the centre of the iris, if they were sufficiently prolonged: these are the *ciliary processes*.

Neither the use nor the structure of these bodies have been properly determined: they are believed by some to be nervous, by others to be muscular; whilst others think them glandular, or vascular. The truth is, their real structure is not understood.

The colour of the iris depends on its structure, which is variable, and on that of the dark layer of its posterior surface, the colour of which shines through the iris. For instance, the tissue of the iris is nearly white in blue eyes; in this case the dark colour behind appears almost alone, and determines the colour of the eyes.

Anatomists differ about the nature of the tissue of the iris: some think it entirely like that of the choroid, essentially composed of vessels and of nerves; others have imagined they saw a great many muscular fibres in it; others consider this membrane a tissue *sui generis*; and others confound it with the *erectile* structure. Edwards has shown that the iris is formed by four layers very easy to be distinguished, two of which are a continuation of the laminæ of the choroid; a third belongs to the membrane of the aqueous humour; and a fourth forms the proper tissue of the iris.

Between the choroid and the hyaloid there exists a membrane essentially nervous. This membrane, known by the name of the *retina*, is almost transparent; it presents a slight opacity, and a tint feebly inclining to *lilac*; it is composed of the expansion of the threads which compose the optic nerve.

The eye receives a great number of vessels, the *ciliary arteries* and *veins*, and many nerves, the greater part of which come from the *ophthalmic ganglion*.

The *optic nerve* preserves the communication between the brain and the eye.

Mechanism of Vision. — In order the better to explain the action of light in the eye, let us suppose a luminous cone commencing in a point placed in the prolongation of the *anterior posterior axis* of the eye. We see that only the light which falls upon the cornea can be useful for vision; that which falls on the white of the eye, the eyelids, and eyelashes, contributes nothing: it is reflected by those parts differently according to their colour. The cornea itself does not receive the light on its whole extent; for it is generally covered in part by the border of the eyelids.

The cornea having a fine polish on its sur-

face, as soon as the light reaches it, part of it is reflected, which contributes to form the brilliancy of the eye. The same reflected light forms the images which one sees behind the cornea. In this case the cornea acts as a convex mirror. The form of the cornea indicates the influence it should have upon the light which enters the eye: on account of its thickness, it only causes the rays to converge a little towards the axis of the pencil; in other words, it increases the intensity of the light which penetrates into the anterior chamber.

The rays, in traversing the cornea, pass from a more rare to a denser medium: consequently they ought to converge from the perpendicular towards the point of contact. If, on entering into the anterior chamber, they passed out again, they would diverge as much from the perpendicular as they had converged before; and would, therefore, assume their former divergence: but as they enter into the aqueous humour, which is a medium more refractive than air, they incline less from the perpendicular, and consequently diverge less than if they had passed back into the air.

Of all the light transmitted to the anterior chamber, only that which passes the pupil can be of use to vision; all that which falls upon the iris is reflected, returns through the cornea, and exhibits the colour of the iris.

In traversing the posterior chamber the light undergoes no new modification, as it proceeds always in the same medium (the aqueous humour).

It is in traversing the crystalline that light undergoes the most important modification. Philosophers compare the action of this body to that of a lens, the use of which would be to assemble all the rays of any cone of light upon a certain point of the retina. But as the crystalline is very far from being like a lens, we merely mention this opinion, which is generally received, to remark that it merits a fresh investigation. Every thing positive which can be said on the subject is, that the crystalline ought to increase the intensity of the light which is directed towards the bottom of the eye, with an energy proportionate to the convexity of its posterior surface. It may be added, that the light which passes near the circumference of the crystalline is probably reflected in a different manner from that which passes through the centre; and that, therefore, the contraction and dilatation of the pupil ought to possess an influence upon the mechanism of vision, which deserves the attention of philosophers.

The whole of the light which arrives at the anterior surface of the crystalline does not penetrate into the vitreous body; it is partly reflected. One part of this reflected light traverses the aqueous humour and the cornea, and contributes to form the brilliancy of the eye; another falls upon the posterior surface of the iris, and is absorbed by the dark matter found there.

It is probable that something of this sort happens at every one of the strata or layers which forms the crystalline.

The vitreous body possesses a less refractive power than the crystalline: consequently the rays of light which, after having passed the crystalline, penetrate into the vitreous body, diverge from the perpendicular at the point of contact. Its use then, with regard to the direction of the rays in the eye, is to increase their convergence. It might be said, that, in order to produce the same result, Nature had only to render the crystalline a little more refractive; but the vitreous humour has another most essential use, which is, to give a larger extent to the retina, and thus to increase the field of vision.

What we said about a cone of light, commencing in a point placed in the prolongation of the anterio-posterior axis of the eye, must be repeated for every luminous cone commencing in other points, and directed towards the eye; with this difference, that, in the first case, the light tends to unite at the centre of the retina; whilst the light of the other cones tend to unite in different points, according to that form which they commence. Thus the luminous cones commencing from below, unite at the upper parts of the retina; whilst those that come from above, unite at the lower part of this membrane. The other rays follow a direction analogous; so that there will be formed at the bottom of the eye an exact representation of every body placed before it, with this difference, that the images will be inverted, or in a position contrary to that of the objects they represent.

This result is ascertained by different means. For this purpose, eyes, constructed artificially of glass, which represent the transparent cornea, and the crystalline; and of water, which represent the aqueous and vitreous humours, have long been employed.

Motions of the Iris. — Some say that the pupil varies its dimensions according to the distance of the object. This fact has not been sufficiently demonstrated: hitherto the influence of the intensity of light is the only thing that has been correctly observed.

The choroid is of use to vision, principally by the dark matter with which it is impregnated, and which absorbs the light immediately after it has traversed the retina. One may consider as a confirmation of this opinion what happens to some individuals, in whom some parts of this membrane become *varicose:* the dilated vessels throw off the dark matter which covered them, and every time that the image of the object falls upon the point of the retina corresponding to these vessels, the object appears spotted with red.

The state of vision in Albino men and animals, in which the choroid and the iris are not coloured black, supports still more this assertion; vision is extremely imperfect in them: during the day, they can scarcely see sufficiently to go about. Mariotte, Lecat, and others have allowed to the choroid the faculty

of perceiving light. This idea is completely without proof.

We know very little, that is certain, of the ciliary processes. They are generally supposed *contractile;* but some think that they are destined to the motions of the iris, whilst others imagine they are intended to bring forward the crystalline.

The rays of light have now reached the retina, which receives the impression of light when it is within certain limits of intensity. A very feeble light is not felt by the retina; too strong a light hurts it, and renders it unfit for action.

When the retina receives too strong a light, the impression is called *dazzling;* the retina is then incapable for some time of feeling the presence of the light. This happens when one looks at the sun. After having been long in the dark, even a very feeble light produces dazzling. — When the light is exceedingly weak, and the eye made to observe objects narrowly, the retina becomes fatigued, there follows a painful feeling in the orbit, and also in the head.

A light, of which the intensity is not very strong, but which acts for a certain time upon a determined point of the retina, renders it at last insensible in this point. When we look for some time at a white spot upon a black ground, and afterwards carry the eye to a white ground, we seem to perceive a black spot; this happens because the retina has become insensible in the point which was formerly fatigued by the white light. In the same manner, after the retina has been some time without acting in one of its points whilst the others have acted, the point which has been in repose becomes of an extreme sensibility, and on this account objects seem as if they were spotted. In this manner it is explained, why, after having looked a long time at a red spot, white bodies appear as if spotted with green: in this case, the retina has become insensible to the red rays; and we know that a ray of white light, from which the red is subtracted, produces the sensation of green.

The same sort of phænomena happens when we have looked long at a red body, or one of any other colour, and afterwards look at white or differently coloured bodies. — We perceive with facility the *direction* of the light received by the retina. We believe instinctively that light proceeds in a right line, and that this line is the prolongation of that according to which the light penetrated into the cornea. Therefore, whenever the light has been modified in its direction, before reaching the eye, the retina gives us nothing certain. Optical illusions proceed principally from this cause.

The retina can receive at the same time impressions in every point of its extent, but the sensations which result from them are then incorrect. It may be affected by the image of one or two objects only, though a much greater number be impressed on it; the vision is then much more defined.

The central part of the membrane appears to possess much more sensibility than the rest of its extent; we therefore make the image fall on this part when we wish to examine an object with attention.

Does the light act upon the retina by simple contact only, or must it traverse this membrane? The presence of the choroid in the eye, or rather the dark matter which covers it, renders this second opinion the most probable.

That part of the retina which corresponds with the centre of the optic nerve, has been said to be insensible to the impression of light. No experiment has hitherto directly proved this assertion.

There is no doubt that the optic nerve transmits to the brain, in an instant, the impression that the light makes on the retina; but by what mechanism we are entirely ignorant. The manner in which the two optic nerves are confounded upon the *sphenoid bone,* ought, doubtless, to have a considerable influence upon the transmission of the impressions received by the eyes; — but this is also a point upon which it is difficult to form any probable conjecture.

Notwithstanding what has been said at different periods, as well as the late efforts of Gall, to prove that we see with only one eye at a time, there seems sufficient proof not only that the two eyes concur at the same time in the production of vision, but that it is absolutely necessary this should be so, for certain most important operations of this function.

There are, however, certain cases in which it is more convenient to employ only one eye; for instance, when it is necessary to understand perfectly the *direction* of the light, or the *situation* of any body relative to us. Thus we shut one eye to take aim with a gun, or to place a number of bodies upon a level in a right line.

Another case in which it is advantageous to employ only one eye is, when the two organs are unequal, either in refractive power or in sensibility. For the same reason we shut one eye when we employ a telescope. But, except in these particular cases, it is of the utmost importance to employ both eyes at once. The following experiment proves that both eyes see the same object at the same time.

Receive the image of the sun upon a plane in a dark chamber; put before your eyes two thick glasses, each of which presents one of the prismatic colours. If your eyes are good, and both equally strong, the image of the sun will appear of a dirty white, whatever be the colour of the glasses employed. If one of your eyes is much stronger than the other, the image of the sun will be seen of the same colour as the glass which is before the strongest eye.

One object produces, then, really two impressions whilst the brain perceives only one. To produce this the motions of the two eyes must be in unison. If, after a disease, the movement of the eyes are no longer regular, we receive two impressions from the same object, which constitutes *strabismus,* or squint-

ing. We may also, at pleasure, receive two impressions from one body; for that purpose, it is only necessary to derange the harmony of the two eyes.

Estimation of the Distance of Objects. — Vision is produced essentially by the action of light upon the retina, and yet we always consider the bodies from which light proceeds as being the cause of it, though they are often placed at a considerable distance. This result can be produced only by an intellectual operation.

We judge differently of the distance of bodies according to the degree of that distance; we judge correctly when they are near us, but it is not the same when they are at a short distance; our judgment is then often incorrect: but when they are at a great distance, we are constantly deceived. The united action of the two eyes is absolutely necessary to determine exactly the distance, as the following experiment proves: —

Suspend a ring by a thread, and fix a hook to the end of a long rod, of a size that will easily pass the ring; stand at a convenient distance, and try to introduce the hook: in using both eyes, you may succeed with ease in every attempt you make; but if you shut one eye, and then endeavour to pass the hook through, you will not succeed any longer; the hook will go either too far or else not far enough, and it will only be after trying repeatedly that it will be got through. Those persons whose eyes are very unequal in their power, are sure to fail in this experiment, even when they use them both.

When a person loses an eye by accident, it is sometimes a whole year before he can judge correctly of the distance of a body placed near him. Those who have only one eye, determine distance, for the most part, very incorrectly. The size of the object, the intensity of the light that proceeds from it, the presence of intermediate bodies, &c. have a great influence upon our just estimation of distance.

We judge most correctly of objects that are placed upon a level with our bodies. Thus, when we look upon the top of a tower at the objects below, they appear much less than they would if they were placed at the same distance on the same plane with ourselves. Hence the necessity of giving a considerable volume to objects that are intended to be placed on the tops of buildings, and which are to be seen from a distance. The smaller the dimensions of an object are, the nearer it ought to be to the eye, in order to be distinctly seen. What is called the distinct point of view, is also very variable. A horse is seen very distinctly at six yards, but a bird could not be distinctly seen at the same distance. If we wish to examine the hair or the feathers of those animals, the eye requires to be much nearer. However, the same object may be seen distinctly at different distances; for example, it is quite the same to many persons whether they place the book that they are reading at one or two feet of distance from the eye. The intensity of the light which illuminates an object, has a considerable effect upon the distance at which it can be distinctly seen.

Estimation of the Size of Bodies. — The manner in which we arrive at a just determination of the size of bodies depends, more upon knowledge and habit than upon the action of the apparatus of vision. We form our judgment relative to the dimensions of bodies, from the size of the image which is formed in the eye, from the intensity of the light which proceeds from the object, from the distance at which we think it is placed, and, above all, from the habit of seeing such objects. We therefore judge with difficulty of the size of a body that we see for the first time, when we cannot appreciate the distance. A mountain which we see at a distance for the first time, appears generally much less than it really is; we think it is near us when it is very far away.

Beyond a distance somewhat considerable we are so completely deceived, that judgment is unable to correct us. Objects appear to us infinitely less than they really are: as happens with the celestial bodies.

Estimation of the Motion of Bodies. —We judge of the motion of a body by that of its image upon the retina, by the variations of the size of this image, or, which is the same thing, by the change of the direction of the light which arrives at the eye.

In order that we may be able to follow the motion of a body, it ought not to be displaced too rapidly, for we could not then perceive it; this happens with bodies projected by the force of gunpowder, particularly when they pass near us. When they move at a distance from us, the light comes from them to the eye for a much longer space of time, because the field of view is much greater, and we can see them with more facility. We ought to be ourselves at rest, in order to judge correctly of the motions of bodies.

When bodies are at a considerable distance from us, we cannot easily perceive their motions to or from us. In this case, we judge of the motion of the body only by the variation of the size of its image. Now this variation being infinitely small, because the body is at a great distance, it is very difficult, and frequently impossible, for us to estimate its motion. Generally we perceive with great difficulty, sometimes we cannot perceive at all, the motion of a body which moves extremely slow: this may be on account of the slowness of its own motion, as in the case of the hand of a watch; or it may be the result of the slow motion of the image, which happens with the stars, and objects very far from us.

Of Optical Illusions. — After what we have just said, of the manner in which we estimate the distance, the size, and the motion of bodies, we may easily see that we are often deceived by sight. These deceptions are known in *Physics*, and in *Physiology*, by the name of optical illusions. Generally we judge pretty well of bodies placed near us; but we

are most commonly deceived with regard to those that are distant. Those illusions which happen to us with regard to objects that are near us, are the result, sometimes of the reflection, sometimes of the refraction, of light before it reaches the eye; and sometimes of the law that we establish instinctively; namely, that light proceeds always in right lines.

We must refer to this cause those illusions occasioned by mirrors: objects are seen in plane mirrors at the same distance behind them, as the mirrors are distant from the eye. To this cause may be attributed also the apparent increase or diminution of bodies seen through a glass. If the glass make the rays converge, the body will appear greater; if it cause them to diverge, the body will appear less. These glasses produce still another illusion: objects appear surrounded by the colours of the solar spectrum, because their surfaces not being parallel, they decompose light in the manner of the prism.

We are constantly deceived by objects at a distance, in a manner that we cannot prevent, because those deceptions result from certain laws which govern the animal economy. An object seems near us in proportion as its image occupies a greater space upon the retina; or in proportion to the intensity of the light which proceeds from it.

Of two objects of a different volume, equally illuminated and placed at the same distance, the greatest will appear the nearest, should circumstances be such as to admit of the distance being justly estimated. Of two objects of equal volume, placed at an equal distance from the eye, but unequally illuminated, the brightest will appear the nearest; it would be the same if the objects were at unequal distances, as can be easily seen in looking at a string of lamps: if there happen to be one of them brighter than the rest, it will appear the nearest, whilst that which is really the nearest will appear the farthest if it is the least bright. An object seen without any intermedium always appears nearer than when there happens to be between it and the eye some body that may have an influence upon the estimation that we make of its distance.

When a bright object strikes the eye whilst all the objects around it are obscured, it appears much nearer than it really is; a light in the night produces this effect.

Objects appear always small in proportion as they are distant; thus, the trees in a long alley appear so much smaller, and so much nearer together, in proportion as they are farther from us. It is by observing these illusions, and the laws of the animal economy, upon which they are founded, that art has been enabled to imitate them. The art of painting, in certain cases, merely transfers to the canvass those optical errors into which we most habitually fall.

The construction of optical instruments is also founded upon these principles: some of them augment the intensity of the light, which proceeds from the objects observed; others cause it to diverge, or converge, in order to increase or diminish their apparent volume, &c.

By the constant exercise of the sense of sight, we are enabled to get over many optical illusions, as will be proved by the curious history of the blind youth, spoken of by Cheselden. This celebrated surgeon, by a surgical operation, generally said to be that for cataract, but, more probably, it was a division of the *membrana pupillaris*, procured sight to a very intelligent person who was born blind: and he observed the manner in which this sense was developed in this young man. "When he saw the light for the first time, he knew so little how to judge of distances, that he believed the objects which he saw touched his eyes (and this was his expression), as the things which he felt touched his skin. The objects which were most pleasant to him were those whose form was regular and smooth, though he had no idea of their form, nor could he tell why they pleased him better than the others. During the time of his blindness he had such an imperfect idea of colours, that he was then able to distinguish, by a very strong light, that they had not left an impression sufficient by which he could again recognise them. Indeed, when he saw them, he said the colours he then saw were not the same as those he had seen formerly; he did not know the form of any object; nor could he distinguish one object from another, however different their figure or size might be: when objects were shown to him which he had known formerly by the touch, he looked at them with attention, and observed them carefully in order to know them again; but as he had too many objects to retain at once, he forgot the greater part of them; and when he first learned, as he said, to see and to know objects, he forgot a thousand for one that he recollected. It was two months before he discovered that pictures represent solid bodies; until that time he had considered them as planes and surfaces differently coloured, and diversified by a variety of shades: but when he began to conceive that these pictures represented solid bodies, in touching the canvass of a picture with his hand he expected to find in reality something solid upon it, and he was much astonished when, upon touching those parts which seemed round and unequal, he found them flat, and smooth like the rest; he asked, which was the sense that deceived him,—the sight or the touch? There was shown to him a little portrait of his father, which was in the case of his mother's watch: he said, that he knew very well it was the resemblance of his father; but he asked, with great astonishment, how it was possible for so large a visage to be kept in so small a space, as that appeared to him as impossible as that a bushel should be contained in a pint. He could not support much light at first, and every object seemed very large to him; but after he had seen larger things he considered the first smaller: he thought there was no-

thing beyond the limits of his sight. The same operation was performed on the other eye about a year after the first, and it succeeded equally well. At first he saw objects with his second eye much larger than with the other, but not so large, however, as he had seen them with the first eye; and when he looked at the same object with both eyes at once, he said that it appeared twice as large as with the first eye; but he did not see double, at least it could not be ascertained that he saw objects double, after he had got the sight of the second eye."

This observation is not singular; there exists a number of others, and they have all given results nearly alike. The conclusion that may be drawn from it is, that the exact manner in which we determine the distance, size, and form of objects, is the result of habit, or, which is the same thing, of the education of the sense of sight.

Vision, defective. See *Dysopia.*

Vision, lateral. See *Dysopia.*

VI'SUS. See *Vision.*

Visus defiguratis. See *Pseudoblepsis.*

Visus duplicatus. See *Diplopia.*

Visus lateralis. See *Dysopia.*

Visus triplex. See *Diplopia.*

VITA. (*a, æ.* f.; from *vivo*, to live.) See *Life.*

Vitæ arbor. See *Arbor vitæ.*

Vitæ lignum. See *Guaiacum.*

Vital actions. See *Vital functions.*

Vital air. See *Oxygene.*

Vital force. See *Vis vitæ.*

Vital functions. See *Function.*

Vital principle. See *Life.*

VITA'LBA. See *Clematis recta.*

VITELLINE. *Vitellinus.* A colour which is yellow verging to orange.

VITE'LLUS. (*us, i.* m.; from *vita*, life: because the life of the chick is in it.) 1. The yolk of an egg.

2. In *Botany*, applied, by Gærtner, to that part of a seed which is very firmly and inseparably connected with the embryo, yet never rising out of the integuments of the seed in germination, but absorbed, like the albumen, for the nourishment of the embryo. If the albumen be present, the vitellus is always situated between it and the embryo, and yet is constantly distinct from the former. It is esteemed, by Gærtner, to compose the bulk of the seed in the fusci, mosses, and ferns. In the natural order of grasses, the vitellus forms a scale between the embryo and the albumen. Sir J. Smith thinks the vitellus is nothing else than a subterraneous cotyledon. See *Albumen.*

VI'TEX. (*ex, icis.* f.; from *vieo*, to bind.) The name of a genus of plants in the Linnæan system. Class, *Didynamia*; Order, *Angiospermia.*

Vitex agnus castus. The systematic name of the *Agnus castus. Elæagnon.* The chaste tree. *Vitex—foliis digitatis, serratis, spicis verticillatis*, of Linnæus. The seeds are the medicinal part, which have, when fresh, a fragrant smell, and an acrid, aromatic taste. Formerly they were celebrated as antiphrodisiacs; but experience does not discover in them any degree of such virtue, and some have ascribed to them an opposite one. They are now fallen into disuse.

Vi'ti saltus. See *Chorea.*

VITI'LIGO. (*o, inis.* f.; from *vitulus*, a calf: the white and glistening appearance of the skin in this disease bearing some resemblance to the flesh of calves.) The disease so designated by Dr. Willan, is somewhat rare, and perhaps but little known. It is characterised by the appearance of smooth, white, shining tubercles, which rise on the skin, sometimes in particular parts, as about the ears, neck, and face, and sometimes over nearly the whole body, intermixed with shining papulæ. They vary much in their course and progress: in some cases they reach their full size in the space of a week (attaining the magnitude of a large wart), and then begin to subside, becoming flattened to the level of the cuticle in about ten days; in other instances, they advance less rapidly, and the elevation which they acquire is less considerable; in fact, they are less distinctly tubercular. But in these cases they are more permanent; and, as they gradually subside to the level of the surface, they creep along in one direction, as, for example, across the face or along the limbs, checkering the whole superficies with a veal-skin appearance. All the hairs drop out where the disease passes, and never re-sprout; a smooth shining surface, as if polished, being left, and the morbid whiteness remaining through life. The eruption never goes on to ulceration.

There is no considerable constitutional disorder combined with this affection; but it has proved exceedingly unmanageable under the use of both internal and external medicines. The mineral acids internally, and the application of diluted caustic and spirituous substances externally, have been chiefly employed, but with little obvious effect. See *Alphus.*

VI'TIS. 1. The name of a genus of plants in the Linnæan system. Class, *Pentandria*; Order, *Monogynia.*

2. The pharmacopœial name of the grape. See *Vitis vinifera.*

Vitis alba. See *Bryonia alba.*

Vitis corinthica. The dried fruit of this tree is the *Uva passa minor*; *Passa corinthiaca.* The virtues of the currant are similar to those of the raisin. See *Vitis vinifera.*

Vitis idæa. See *Vaccinium.*

Vitis marina. See *Fucus natans.*

Vitis sylvestris. White bryony.

Vitis vinifera. The systematic name of the grape-tree. *Vitis—foliis lobatis sinuatis nudis*, of Linnæus. Vine-leaves and the tendrils have an astringent taste, and were formerly used in diarrhœas, hæmorrhages, and other disorders requiring refrigerant and styptic medicines. The juice or sap of the vine, called lachryma, has been recommended in

calculous disorders: and it is said to be an excellent application to weak eyes and specks of the cornea. The unripe fruit has a harsh, rough, sour taste: its expressed juice, called verjuice, was formerly much esteemed, but is now superseded by the juice of lemons; for external use, however, particularly in bruises and pains, verjuice is still employed, and considered to be a very useful application. The dried fruit is termed *Uva passa major. Passula major*, the raisin. Raisins are prepared by immersing the fresh fruit into a solution of alkaline salt and soap-ley, made boiling hot, to which is added some olive oil, and a small quantity of common salt, and afterwards drying them in the shade. They are used as agreeable, lubricating, acescent sweets, in pectoral decoctions, and for obtunding the acrimony in other medicines, and rendering them grateful to the palate and stomach. They are directed in the *decoctum hordei compositum, tinctura sennæ*, and *tinctura cardamomi composita*. See also *Wine*, and *Acetum*.

VITRA'RIA. The pellitory of the wall.

VITREOUS. (*Vitreus;* from *vitrum*, glass: so named from its transparency.) Glassy: applied to parts of the body.

VITREOUS HUMOUR. *Humor vitreus*. The pellucid body which fills the whole bulb of the eye behind the crystalline lens. The vitreous substance is composed of small cells which communicate with each other, and are distended with a transparent fluid.

VITRIOL. See *Vitriolum*.

Vitriol, acid of. See *Sulphuric acid*.

Vitriol, blue. See *Cupri sulphas*.

Vitriol, green. See *Ferri sulphas*.

Vitriol, oil of. The sulphuric acid was so called because it was obtained from green vitriol, and because, when rubbed between the fingers, it combined with the skin, and had an unctuous, soapy feel.

Vitriol, Roman. See *Cupri sulphas*.

Vitriol, sweet spirit of. See *Spiritus ætheris sulphurici*.

Vitriol, white. See *Zinci sulphas*.

Vitriolated kali. See *Potassæ sulphas*.

VITRI'OLUM. (*um, i.* n.; from *vitrum*, glass: so called from its likeness to glass. Hollandus says this word is fictitious, and composed from the initials of the following sentence: *Vade in terram rimando, invenies, optimum lapidem veram medicinam.*) *Calcadinum. Calcatar. Calcotar. Calcanthos. Calcanthum. Calcitea.* Vitriol, or sulphate of iron. See *Ferri sulphas*.

VITRIOLUM ALBUM. See *Zinci sulphas*.

VITRIOLUM CŒRULEUM. See *Cupri sulphas*.

VITRIOLUM ROMANUM. See *Cupri sulphas*.

VITRIOLUM VIRIDE. See *Ferri sulphas*.

VI'TRUM. (*um, i.* n.) See *Glass*.

VITRUM ANTIMONII. Glass of antimony. See *Antimonii vitrum*.

VITRUM ANTIMONII CERATUM. A diaphoretic compound, exhibited in the cure of dysenteries arising from checked perspiration.

VITRUM HYPOCLEPTICUM. A funnel to separate oil from water.

VI'TULUS. See *Bos taurus*.

VIVE'RRA. (*a, æ.* f.) The name of a genus of animals in the order *Feræ*, of the Linnæan classification.

VIVERRA CIVETTA. The systematic name of the ash-coloured weazel, which, with the following species, affords the perfume called civet.

VIVERRA ZIBETHA. The systematic name of the civet-cat. See *Civetta*.

VIVIPAROUS. *Viviparus*. That which bringeth forth its young alive and perfect, in opposition to that which lays eggs, and is called oviparous.

In *Botany*, it is applied to stems or stalks, producing bulbs, that are capable of vegetation. In *Dentaria*, these bulbs are found at the basis of the leaves; in some species of *Allium*, at the origin of the umbel.

VI'VUS. Living: variously applied: to mercury, because it moves about as if it were alive; hence *argentum vivum:* to lime, because, when moisture is added, it cracks and swells, as if alive.

VOICE. *Vox*. By *voice* we understand the sound which is produced in the larynx, at the instant when the air traverses this organ, either to enter or go out of the *trachea*.

In order to understand the mechanism by which the voice is produced and modified, we must say something of the manner in which sound is produced, in which it is propagated and modified in wind instruments, particularly those that have most analogy with the organ of voice.

A wind instrument is generally formed of a tube, either straight or bent, in which, by various processes, the air is made to vibrate.

Wind instruments are of two sorts: the one sort are called *mouth* instruments, the other sort *reed* instruments.

In the mouth instruments, (the horn, trumpet, *trombone*, flageolet, flute, organ,) the column of air contained in the tube is the sonorous body. The air must be caused to vibrate in it in order to produce sounds. For this purpose, the means employed are variable, according to the sort of instrument. The length, the width, the form of the tube, the openings in its sides, or its extremities, the power of the vibrations, and the manner in which they are excited, are the causes of the various sounds of this sort of instruments. The nature of the matter which forms the sounds has no influence but upon the tone.

The reed instruments are the most necessary to be known, for the organ of the voice is of this kind. Their theory is, unfortunately, much more imperfect than that of the other sort. In this sort of instruments, (the clarinet, hautboy, bassoon, voice organ, &c.) we ought to distinguish between the reed, or *anche*, and the body of the tube. Their mechanism is essentially different.

A reed is always formed of one, and sometimes of two, thin plates, susceptible of a rapid motion, the alternate vibrations of which are intended to intercept and permit, *by turns*, the passage of a current of air. For this rea-

son, the sounds which they produce do not follow the same laws as the sounds formed by elastic plates, with one end fixed and the other free, which produce sonorous undulations in the open air. In the reed instruments, the reed alone produces and modifies the sound. If the plate is long, the motions are long, slow, and, consequently, the sounds are grave. On the contrary, a short plate produces acute sounds, because the alternations of transmission and interception of the current of air are more rapid.

When a number of different sounds are intended to be produced by a reed, it is necessary to vary the length of the plate. The bassoon and clarionet players do this when they wish to produce different sounds on the same instrument. We add, as an important circumstance, that the greater or less elevation of sound produced by the instrument, partly depends on the elasticity, the weight, and the form of the little tongue, or plate, and on the force of the current of air. If all these elements are not the same, the length being invariable, the tone will be different.

A reed is never employed alone; it is always fitted to a tube through which the wind passes that has been blown into the reed, and which ought, on this account, to be open at the two extremities. The tube has no influence upon the tone of the music; it acts only upon the intensity, the *timbre*, and upon the power of making the reed *speak*.

Apparatus of Voice.—The larynx ought properly to be considered as the organ of voice.

The size of the larynx varies according to age and sex. It is placed at the anterior part of the neck, where a small projection is seen, between the tongue and the trachea. It is small in children and women, greater in young men, and still larger in adult age.

The larynx not only produces the voice, but it is also the agent of its principal modifications; on which account, a knowledge of the anatomy of this organ is indispensably necessary in order to be well acquainted with the mechanism of voice. As we cannot enter here into all the details of the structure of the larynx, we will only touch upon such as are most necessary to be known, many of which are not yet well understood.

Four cartilages and three fibro-cartilages enter into the composition of the larynx, and form the skeleton of it. The cartilages are the *cricoid*, the *thyroid*, and the two *arytænoid*. The *thyroid* joins with the *cricoid* by the extremity of its two inferior *horns*. In the living state, the *thyroid* is fixed with respect to the *cricoid*, which is contrary to what is generally supposed. Every *arytænoid* cartilage is articulated with the *cricoid* by means of a surface, which is oblong, and concave in a transverse direction. The *cricoid* presents a surface which is similarly disposed to that of the *arytænoid*, with this difference, that it is convex in the same direction in which the other is concave. Round the articulation there is a *synovial capsule*, firm before and behind, and moveable without and within. Before the articulation is the *thyro-arytænoid* ligament; behind is a strong ligamentous band, that might be called *crico-arytænoid*, on account of the manner in which it is fixed.

Thus disposed, the articulation admits only of lateral movements of the *arytænoid* upon the *cricoid cartilage*. No movement forward or backward can take place, nor a certain movement up and down, mentioned in anatomical books, which none of the muscles is so disposed as to produce. This articulation ought to be considered as a simple lateral *ginglymus*. The fibro-cartilages of the larynx are the *epiglottis*, and two small bodies that are found above the top of the *arytænoid* cartilages, and that have been called by Santorini, *capitula cartilaginum arytænoidearum*.

There are a great many muscles attached to the larynx. These muscles are called external: they are intended to move the whole organ, either in carrying it up or down, backward or forward, &c. The larynx has also other muscles, whose use is to give a movement to the different parts in respect of each other. These muscles have been called internal. They are,

1st, The *cryco-thyroid*, the use of which is not, as has hitherto been believed, to lower the thyroid upon the cricoid cartilage, but, on the contrary, to raise the cricoid towards the thyroid cartilage, or in making it pass a little below its inferior edge.

2d, The muscles *cryco-arytænoideus posterior*, and the *crico-arytænoideus lateralis*, the use of which is to draw outwards the arytænoid cartilages, in separating them from one another.

3d, The *arytænoid* muscle, which draws the arytænoid cartilages together.

4th, The *thyro-arytænoideus*, a knowledge of which is more important than that of all the muscles of the larynx, because its vibrations produce the vocal sound. This muscle forms the lips of the *glottis*, and the inferior, superior, and lateral sides of the ventricles of the larynx.

5th, Lastly, the muscles of the *epiglottis*, which are the *thyro-epiglottideus*, the *arytæno-epiglottideus*, and some fibres that may be considered as the vestige of the *glosso-epiglottideus* muscle that exists in some animals, whose contraction has an influence upon the position of the *epiglottis*.

The larynx is covered within by a *mucous membrane*. This membrane, in passing from the epiglottis to the arytænoid and thyroid cartilages, forms two folds, called lateral ligaments of the epiglottis. They concur in the formation of the superior and inferior ligaments of the glottis.

In the substance of the epiglottis, and behind it, are found a great number of *mucous follicles*, and some *mucous glands*. Within the mass of the ligaments of the epiglottis, there exists a collection of those bodies that have been very improperly called *arytænoid glands*.

Between the epiglottis behind, and the os hyoides and thyroid cartilage before, there is seen a considerable quantity of the adipose *cellular tissue,* which is very elastic, and similar to that which exists near certain articulations. There has been no use assigned to this body. Dr. Magendie believes it serves to facilitate the frequent movements of the thyroid cartilage upon the posterior face of the os hyoides, and to keep the epiglottis separated from the upper part of this bone, whilst, at the same time, it provides it with a very elastic support, favourable to the action of the *fibro-cartilages* in the production of the voice, or in deglutition.

The *vessels* of the larynx present nothing remarkable. It is not so with the nerves of this organ. Their distribution merits a careful examination. There are four of these nerves, the *superior laryngeal* and the *inferior.*

The *recurrent nerve* is distributed to the posterior crico-arytænoid, to the lateral crico-arytænoid, and thyro-arytænoid. None of the ramifications of this nerve go to the arytænoid, or to the crico-thyroid, muscles. On the contrary, the superior nerve of the larynx goes to the arytænoid muscle, which it provides with a considerable branch; and to the cryco-thyroid, to which it gives a small filament, more remarkable for the distance it proceeds than for its size. In certain cases this filament does not exist. The external branch of the nerve of the larynx is then of a larger size. The remainder of the filaments of the laryngeal nerves are distributed to the epiglottis, and to the mucous membrane which covers the entrance of the larynx. This part possesses an extraordinary sensibility.

The interval which separates the thyro-arytænoid muscles, and the arytænoid cartilages, is called *glottis.* In the dead body, the glottis presents the appearance of a longitudinal slit of about eight or ten lines long, and two or three wide: it is wider behind than before. Here the two sides meet at the point of their insertion into the *thyroid* cartilage. The posterior extremity of the glottis is formed by the *arytænoid* muscles.

If the arytænoid cartilages are brought together so as to touch on their internal faces, the glottis is diminished nearly a third of its length. It then presents a slit which is from five to six inches long, and from half a line to a line long. The sides of this slit are called the *lips of the glottis.* They present a sharp edge, turned upward and inward. They are essentially formed by the arytænoid muscle, and by the ligament of the same name, which, as an *aponeurosis,* covers the muscle to which it adheres strongly, and which, being itself covered by the mucous membrane, forms the thinnest parts or edge of the *lip.* These lips of the glottis vibrate in the production of the voice; they might be called the *human reed.* Above the inferior ligaments of the glottis are the *ventricles of the larynx,* the cavity of which is larger than it seems at first sight. The superior, inferior, and external sides of it are formed by the thyro-arytænoid muscle, turned upon itself. The extremity, or anterior side, is formed by the thyroid cartilage. By means of these ventricles, the lips of the glottis are completely isolated upon their upper side.

Above the opening of the ventricles we see two bodies, which, in their manner of being disposed, have a great deal of analogy with the vocal chords, and which form a sort of second glottis above the first. These bodies are called the *superior ligaments of the glottis.* They are formed by the superior edge of the thyro-arytænoid muscle, a little adipose cellular tissue, and the mucous membrane of the larynx, which covers them before penetrating into the ventricles. These observations are easily made upon the larynx of dead bodies. The glottis of a living person has never been examined, at least there has been nothing written on this subject; but when those of animals, as of dogs, are examined, they contract and enlarge alternately. The arytænoid cartilages are directed outwards when the air penetrates into the lungs; and in the instant when the air passes out, they come close together.

Mechanism of the Production of Voice.— If we take the trachea and the larynx of an animal or of a man, and blow air strongly into the trachea, directing it towards the larynx, there is no sound produced, but only a slight noise, resulting from the pressure of the air against the sides of the larynx. If, in blowing, we bring together the arytænoid cartilages, so that they may touch upon their internal face, a sound will be produced, something like the voice of the animal to which the larynx used in the experiment belongs.

The sound will be dull or sharp, according as the cartilages are pressed more or less forcibly together: its intensity will be more or less, according to the intensity of the air. It is easily seen, in this experiment, that the sound is produced by the vibrations of the inferior ligament of the glottis.

Both man and the animals are deprived of voice by making an opening below the larynx. The voice is reproduced if the opening is closed mechanically. Dr. Magendie knows a person who has been in this situation for four years. He cannot speak without pressing a cravat strongly against a fistulous opening in the larynx. The same thing takes place when the larynx is opened below the inferior ligaments of the glottis.

But if a wound exist above the glottis, if the epiglottis and its muscles are affected, if the superior ligament of the glottis, even if the superior aspect of the *arytænoid* cartilages are injured, the voice continues.

Lastly, the glottis of an animal being laid bare in the instant that it cries, shows very well that voice is produced by the vibrations of the vocal chords, or lips of the glottis. This is enough to prove, beyond all doubt, that the voice is formed in the glottis by the motion of its inferior ligaments.

This fact being established, is it possible,

on physical principles, to account for the formation of the voice? The following explanation appears the most probable:—

The air being pressed from the lungs, proceeds in a pipe of a considerable size. This pipe very soon becomes contracted, and the air is forced to pass through a narrow slit, the two sides of which are vibrating plates, which permit and intercept the air, like the plates of reeds, and which ought, in the same manner, by these alternations, to produce sonorous undulations in the transmitted current of air.

But, in blowing into the trachea of a dead body, why does it not produce a sound like that of the human voice? Why is the palsied state of the internal muscles of this organ followed by the loss of the voice? Why, in a word, is an act of the will necessary to produce the vocal sound? The answer to this is not difficult. The ligaments of the glottis have not the faculty of vibrating like the plates of reeds, except the thyro-arytænoid muscles are contracted; and, therefore, in every case in which the muscles are not contracted the voice will not be produced.

Experiments performed on animals are perfectly in unison with this doctrine. Divide the two recurrent nerves, and the voice will cease. If only one is cut, the voice will be only half lost.

Dr. Magendie, however, has seen a number of animals, in which the two recurrent nerves had been cut, cry very loud when they suffered severe pain. These sounds were very similar to the sounds that would be produced mechanically with the larynx of the animal when dead, by blowing into the trachea, and bringing together the arytænoid cartilages. This phænomenon is easily understood by the distribution of the nerves of the larynx. The recurrents being cut, the thyro-arytænoid muscles do not contract, and thence results the loss of voice; but the arytænoid muscle, that receive its nerves from the superior laryngeal, contracts, and brings together, in the instant of a strong expiration, the arytænoid cartilages, and the slit of the glottis becomes sufficiently narrow for the air to throw the thyro-arytænoid muscles, though they are not contracted, into vibration.

Intensity or Volume of the Voice.—The intensity of the voice, like that of all other sounds, depends upon the extent of the vibrations.

The vibrations of the *vocal chords* will be in proportion to the force with which the air is expelled from the breast; and the longer the chords are,—that is, the more voluminous the larynx is,—the more considerable will be the extent of the vibrations. A strong person, with a large chest, and a larynx of large dimensions, presents the most advantageous condition for the intensity of the voice. If such a person becomes sick, his voice, on account of his weakness, loses much of its intensity, because it is no longer expelled with the same force from the chest.

Children, women, and eunuchs, whose larynx is proportionably less than that of a man in adult age, have also much less intensity of voice.

In the ordinary production of the voice, it results from the simultaneous motions of the two sides of the glottis. Were one of these sides to lose the faculty of causing the air to vibrate, the voice would lose, necessarily, half its intensity, the force of expiration being the same. This may be proved in cutting one of the recurrent nerves of a dog, or in paying attention to the voice of a person who has had a complete attack of *hemiplegia*.

Tone of the Voice.—Every individual has a particular tone of voice by which he is known: there is also a particular tone which belongs to the different sexes and age. The tone of the voice presents an infinite number of modifications. Upon what circumstances do these depend? This is unknown. The feminine tone, however, which is found in children and eunuchs, generally agrees with the state of the cartilages of the larynx. On the contrary, the masculine tone which women sometimes possess appears to be connected with the state of these cartilages, and particularly with that of the thyroids. Tone is a modification of sound, of which philosophers have by no means given an exact explanation.

Of the Extent of the Voice.—The sounds which the human larynx is capable of producing are very numerous. Many celebrated authors have endeavoured to explain the manner of their formation; but they have rather given us comparisons than explanations.

We have examined the reed of the organ of voice; we shall now consider the tube that the vocal sound traverses after having been produced. In proceeding from below upwards, the tube is composed, 1st, of the interval between the epiglottis before, its lateral ligaments upon the sides, and of the posterior side of the pharynx; 2dly, of the pharynx behind, and laterally, and of the most posterior part of the base of the tongue before; 3dly, sometimes of the mouth, and sometimes of the nasal cavities; at other times of these two cavities together.

This tube, capable of being prolonged or shortened, of being made wider or narrower; being susceptible of assuming an infinite variety of forms, ought to be very capable of performing all the functions of the body of a reed instrument;—that is, to be capable of harmonising with the larynx, and of thus favouring the production of the numerous tones of which the voice is susceptible; of increasing the intensity of the vocal sound, by taking a conical form, with the base outwards; of giving a roundness and agreeableness to the sound, by suitably disposing its exterior opening, or by almost entirely shutting it, &c.

Until the influence of the tube of reed instruments has been determined with precision, it is evident that we can form only probable conjectures respecting the influence of the tube of the organ of voice. In this respect we can make only a small number of obser-

vations, which relate particularly to the most apparent phænomena.

A. The larynx is raised in the production of acute sounds; it is lowered, on the contrary, in the formation of those that are grave: consequently the vocal tube is shortened in the first case, and lengthened in the second.

We suppose that a short tube is more favourable to the transmission of acute sounds, whilst a long one is more so for those that are grave. The tube changes its length at the same time that it changes its breadth; and this is remarkable, as we have seen above that the breadth of the tube has a great influence upon its facility of transmitting sounds.

When the larynx descends, that is, when the vocal tube is prolonged, the thyroid cartilage descends, and removes from the os hyoides the whole height of the thyro-hyoid membrane. By this separation the gland of the epiglottis is carried forward, and places itself in the cavity of the posterior aspect of the os hyoides; this gland draws after it the epiglottis: from this results a considerable enlargement of the inferior part of the vocal tube.

The contrary phænomenon happens when the larynx is raised. The thyroid cartilage then rises, and becomes engaged behind the os hyoides, by displacing and pushing backward the epiglotted gland; this pushes the epiglottis, and the vocal tube is much contracted. By imitating the motion upon the dead body, we may easily ascertain that the narrowing may proceed to five sixths of the breadth of the tube. Now, we adapt a large tube to a reed for the purpose of producing grave sounds; on the contrary, it is a narrow tube which is generally employed for the purpose of transmitting acute sounds. We can then, to a certain degree, account for the utility of the changes of breadth which take place in the inferior part of the vocal tube.

B. The presence of the ventricles of the larynx immediately above the inferior ligaments of the glottis, appears intended to isolate those ligaments, so that they may vibrate freely in the air. When foreign bodies enter the ventricles, or when a false membrane or mucosities are formed, the voice is generally extinguished, or much weakened.

C. From its form, its position, its elasticity, —from the motions which its muscles impress upon it, the epiglottis appears to belong essentially to the apparatus of the voice; but what are its uses? We have already seen that it contributes powerfully to the narrowing of the vocal tube; it may be supposed that it has a more important function.

D. The vocal tube has visibly an influence upon the intensity of the voice. The most intense sounds which the voice can produce cause the mouth to be opened very wide, the tongue to be drawn a little back, and the velum of the palate raised into a horizontal position, and to become elastic, closing all communication with the nostrils.

In this case the pharynx and the mouth evidently perform the office of a speaking trumpet; that is to say, they represent very exactly a tube with a reed, which increases in wideness outwards, the effect of which is to augment the intensity of the sound produced by the reed. If the mouth is in part closed, the lips carried forward and turned towards each other, the sound will acquire rotundity, and an agreeable expression; but it will lose part of its intensity: this result is easily explained after what we have said of the influence of the form of tubes in reed instruments.

For the same reasons, whenever the vocal sound passes into the nose, it will become dull; for the form of the cavities of the nose is well fitted for diminishing the intensity of sounds. If the mouth and nose are shut at the same time, no sound can be produced.

E. We have seen, in considering the production of voice, that a great number of modifications relative to expression arise from changes of the thickness and of the elasticity of the lips of the glottis. The tube may produce a number of others, according to its different degrees of length or breadth; according to its form, the contraction of the pharynx, the position of the tongue, or of the velum of the palate; according as the sound passes wholly or in part through the mouth or the nose, or both together; according to the individual disposition of the mouth or nose, the existence or non-existence of teeth, the size of the tongue, &c.: the expression of the voice is continually modified according to all these circumstances. For example, whenever the sound traverses the nasal cavities, it becomes disagreeably nasal.

Those persons are mistaken who think that the intensity of vocal sound may be augmented by repercussion, in passing through the nasal cavities; these cavities produce quite a contrary effect. Whenever the voice is introduced into them, from whatever cause, it becomes dull.

F. Besides the numerous modifications which the tube of the vocal organ causes in the intensity and the expression of the voice, in alternately permitting or intercepting its productions, there is another very important kind of modification produced by it. By means of this the vocal sound is divided into very small portions, each possessing a distinct character, because each of them is produced by a distinct motion of the tube. This sort of influence of the vocal tube is called the *faculty of articulating*, which presents, besides, an infinite variety of individual differences suitable to the peculiar organisation of the vocal tube.

We have hitherto treated of the human voice in a general manner; we now proceed to speak of its principal modifications: namely, the cry or native voice; the voice properly so called, or acquired voice; speech, or articulate voice; singing, or *appreciable* voice.

The Cry, or Native Voice.— The cry is a

sound which cannot be appreciated: it is, like all those sounds produced by the larynx, susceptible of variation in tone, intensity, and expression. The cry is easily distinguished from all other vocal sounds; but as its character depends upon the expression, it is impossible to account physically for the difference between it and the latter. Whatever is the condition of man, or whatever his age, he is capable of crying. The new-born child, the idiot, the person deaf from birth, the savage, the civilised, the decrepit old man, all are capable of producing cries. We ought, then, to consider the cry as particularly attached to organisation; indeed we may be convinced of this in examining its uses.

By the cry we express vivid sensations, whether they proceed from without or within; whether they are agreeable or painful: — there are cries of pleasure and of pain. By the cry we express our most simple instinctive wants, the natural passions. There is a cry of fury, another of fear, &c.

The social wants and passions, not being an indispensable consequence of organisation, and the state of civilisation being necessary for their developement, they have no peculiar cry. The cry comprehends, generally, the most intense sounds that the organ of voice can produce: its expression has often something in it which offends the ear, and it has a strong action upon those who are near it.

By means of the cry, important relations are established among mankind. The cry of joy inclines to joy; the cry of pain excites pity; the cry produced by terror causes fear, even in those at a distance, &c. This sort of language is found in most animals; it is almost the only language which has been given them; the song of birds ought to be considered as a modification of their cry.

Acquired Voice, or Voice properly so called. — In the usual state of man, — that is, when he lives in society, and when he is possessed of the faculty of hearing, — he knows, from earliest youth, that mankind utters sounds which are not cries; he very soon finds that he can produce the same sort of sounds with his larynx, and immediately what is called *acquired voice* is developed in him, by the effect of imitation, and the advantages he derives from it. A deaf child cannot make any remark with regard to sound, and therefore he never acquires it. There seems to be no difference between the voice and the cry, except in intensity and expression; for it is likewise formed of inappreciable sounds, or of sounds whose intervals are not exactly distinguished by the ear.

Since the voice is the consequence of hearing, and of an intellectual process, it cannot be developed if those circumstances by which it is produced do not exist. In fact, children born deaf, who have never had any idea of sound; idiots, that establish no relation between the sounds which they hear and those which their larynx can produce, have no voice, though the vocal apparatus of both may be fit to form and modify sounds as well as that of individuals perfectly formed.

For the same reason, those whom we improperly term *savages*, because they have been found wandering in forests since their infancy, can have no voice; the understanding not being developed in a solitary state, but only in social life.

The expression, the intensity, the tone of the voice, are susceptible of numerous modifications on the part of the larynx; the vocal tube also exerts a powerful influence upon the voice: speech and singing are only modifications of the social voice.

Modifications of the Voice by Age. — The larynx is in proportion very small in the fœtus and the new-born infant: its small volume forms a contrast with that of the os hyoides, with the tongue and other organs of deglutition, which are already much developed. Besides, it is round, and the thyroid cartilage forms no projection in the neck.

The lips of the glottis, the ventricles, the superior ligaments, are very short in proportion to what they become afterwards; for the thyroid cartilage not being much developed, they consequently occupy a small space. The cartilages are flexible, and have not near the solidity which they possess afterwards.

The larynx preserves these characters almost till puberty; at this period a general revolution takes place in the economy. The developement of the genital organs determines a sudden increase in the nutrition of many of the organs, of which that of the voice is one.

The greatest activity of nutrition is first remarked in the muscles; afterwards, but more slowly, it is seen in the cartilages: the general form of the larynx is then modified; the thyroid cartilage becomes developed in its anterior part, it forms a projection in the neck, but greater in the male than in the female. From this circumstance results a considerable prolongation of the lips of the glottis, or thyro-arythænoid muscles; and this phænomenon is much more worthy of remark than the general increase of the glottis which happens at the same time.

Though these changes in the larynx are rapid, they do not happen all at once; sometimes it is six or eight months before they terminate.

After puberty the larynx does not suffer any other remarkable changes; its volume and the projection of the thyroid cartilage continue to increase, and become more strongly marked. The cartilages become partially ossified in manhood.

In old age the ossification of the cartilages continues, and becomes almost complete; the epiglottid gland diminishes considerably, and the internal muscles, but those particularly that form the lips of the glottis, diminish in volume, assume a colour less deep, and lose their elasticity; in a word, they take the same modifications as the muscular system in general.

The production of voice, as it supposes the

passage of air to and from the lungs to take place, cannot exist in the fœtus, plunged as it is in the *liquor amnii;* but the child is capable of producing very acute sounds at the instant of birth.

Vagitus is the name that is given to this voice, or cry of children, by which they express their wants and feelings. We must recollect that this is the object of the cry.

Towards the end of the first year, the child begins to form sounds that are easily distinguished from the vagitus. These sounds, at first vague and irregular, very soon become more distinct and connected; nurses then begin to make them pronounce the most simple words, and afterwards those that are more complicated.

The pronunciation of children has very little resemblance to that of adults; but there is also a great difference between them. In children, the teeth have not yet quitted their alveoli; the tongue is comparatively very large; when the lips are closed they are larger than is necessary for covering anteriorly the gums; the nasal cavities are not much developed, &c.

Children advance only by degrees, and in proportion as their organs of pronunciation approach those of the adult, to articulate exactly the different combinations of letters. They are not capable of forming appreciable sounds, or of singing, until long after they have acquired the faculty of speech. This sort of sounds is the voice properly so called, or acquired: they could not exist in the child were it deaf. They ought not to be considered as a modification of the vagitus.

Until the period of puberty, the larynx remains proportionably very small, as well as the lips of the glottis: the voice is also composed entirely of acute sounds. It is physically impossible that the larynx should produce grave ones.

At puberty, particularly in males, the voice undergoes a remarkable modification: it acquires in a few days, often all at once, a gravity, and a dull or deaf expression, that it was far from having before.

It sinks in general about an octave. The voice of a young man is said to *moult*, according to the common expression. In certain cases the voice is almost entirely lost for some weeks; it frequently contracts a marked hoarseness. Sometimes it happens that the young man produces, involuntarily, a very acute sound when he wishes to produce a grave one: it is then scarcely possible for him to produce appreciable sounds, or to sing true.

This state of things continues sometimes nearly a year, after which the voice becomes more clear, and remains so during life: but some individuals lose entirely, during the *moulting* of the voice, the faculty of singing; others, who had a fine and extensive voice before the *moulting*, have afterwards only a very ordinary one.

The gravity that the voice acquires depends evidently upon the developement of the larynx, and particularly on the prolongation of the lips of the glottis. As these parts cannot stretch backward, they come forward: it is also at this time that the larynx projects in the neck, and the *pomum Adami* appears. In the female, the lips of the glottis do not present at puberty this increase in breadth; the voice also generally remains acute.

The voice generally preserves the same characters until after adult age; at least, the modifications that it undergoes in the interval are but inconsiderable, and affect principally the expression and the volume. Towards the beginning of old age, the voice changes anew, its expression alters, and its extent diminishes: singing is more difficult, the sounds become noisy, and their production painful and fatiguing. The organs of pronunciation being changed by the effect of age, the teeth become shorter, and frequently being lost, the pronunciation is sensibly changed. All these phænomena are more noted in confirmed old age. The voice is weak, shaken, and broken; singing has the same characters, which depend on impaired muscular contraction. Speech also undergoes remarkable modifications; the slowness of the motions of the tongue, the want of the teeth, the lips proportionally longer, &c., necessarily influence the pronunciation."—*Magendie's Physiology.*

VOLATILE. (*Volaticus; Volatilis;* from *volo*, to fly.) That goeth or flieth, as it were, away suddenly.

Volatile alkali. See *Ammonia.*

Volatile caustic, alkali. See *Ammonia.*

VOLATILITY. The property of bodies by which they are disposed to assume the vaporous or elastic state, and quit the vessels in which they are placed.

VOLCANITE. See *Augite.*

VOLSE'LLA. A probang, or instrument to remove bodies sticking in the throat.

VOLUBI'LIS. Twining. Botanists apply it to stems which twine round other plants by their own spiral form, either from left to right, supposing the observer in the centre; (or, in other words, according to the apparent motions of the sun;) as in *Tamus communis*, and the honey-suckle: or from right to left, contrary to the sun; as with *Convolvulus sæpium*, the French bean, &c.

VO'LVA. (*a, æ.* f.; from *valva.*) The curtain wrapper or covering of the fungous tribe, of a membraneous texture, concealing their parts of fructification, and in due time bursting all around, forming a ring upon the stalk; as in *Agaricus campestris.* Such is the original meaning of this term, as explained by Linnæus; but it has become more generally used by Linnæus himself for the fleshy external covering of some other fungi, which is scarcely raised out of the ground, and enfolds the whole plant when young. It is *simple, double*, or *stellated*, very much cut; as in *Lycopodium stellatum.*

VO'LVULUS. (From *volvo*, to roll up: so called because it was supposed to be a twisting of the bowels.) See *Iliac passion.*

VOLVULUS TERRESTRIS. Small bind-weed. The *Convolvulus minor.*

VO'MER. (*er, eris.* m.: so named from its great resemblance to a plough-share.) A slender thin bone, separating the nostrils from each other, consisting of two plates much compressed together, very dense and strong, yet so thin as to be transparent; these two plates seem at every edge to separate from each other, and thus a groove is formed at every side. — 1. This groove on the upper edge, or, as it may be called, its base, is wide, and receives into it the projecting points of the ethmoid and sphenoid bones; and thus it stands very firmly and securely on the skull, and capable of resisting blows of considerable violence. — 2. The groove, upon the lower part, is narrower, and receives the rising line in the middle of the palate plate, where the bones join to form the palate suture. At the fore part it is united by a ragged surface, and by something like a groove, to the middle cartilage of the nose; and as the vomer receives the other bones into its grooves, it is, as it were, locked in on all sides, receiving support and strength from each, but more particularly from the thick and strong membrane which covers the whole, and which is so continuous as to resemble a periosteum, or rather a continued ligament, from its strength: thus the slender vomer possesses sufficient strength to avert from it all those evils which must inevitably have occurred, had it been less strongly or otherwise constructed.

VO'MICA. (*a, æ.* f.; from *vomo,* to spit up: because it discharges a sanies.) An abscess of the lungs.

VOMITING. *Vomitio.* A forcible ejection of food, or any other substance, from the stomach, through the œsophagus and mouth.

That internal sensation which announces the necessity of vomiting is called *nausea;* it consists of a general uneasiness, with a feeling of dizziness in the head, or in the epigastric region: the lower lip trembles, and the saliva flows in abundance. Instantly, and involuntarily, convulsive contractions of the abdominal muscles, and at the same time of the diaphragm, succeed to this state: the first are not very intense, but those that follow are more so: they at last become such, that the matters contained in the stomach surmount the resistance of the *cardia,* and are thus darted, as it were, into the œsophagus and mouth: the same effect is produced many times in succession: it ceases for a time, and begins again after some interval.

At the instant that the matters driven from the stomach traverse the pharynx and the mouth, the glottis shuts, the *velum* of the palate rises, and becomes horizontal, as in deglutition; nevertheless, every time that one vomits a certain quantity of liquid is introduced, either into the larynx or the nasal canals.

Vomiting was long believed to depend upon the rapid convulsive contraction of the stomach: but it has been shown, by a series of experiments, that, in the process, this viscus is nearly passive; and that the true agents of vomiting are, on the one hand, the diaphragm, and, on the other, the large abdominal muscles.

In the ordinary state, the diaphragm and the muscles of the abdomen co-operate in vomiting; but each of them can, nevertheless, produce it separately. Thus, an animal still vomits, though the diaphragm has been rendered immoveable by cutting the diaphragmatic nerves; it vomits the same, though the whole abdominal muscles have been taken away by the knife, with the precaution of leaving the linea alba and the peritonæum untouched. See *Sickness.*

Vomiting of blood. See *Hæmatemesis.*

VO'MITUS CRUENTUS. See *Hæmatemesis.*

Voracious appetite. See *Bulimia.*

VORACITY. See *Bulimia.*

VORACIOUSNESS. See *Bulimia.*

VOX ABSCISSA. A loss of voice. See *Aphonia.*

VULGA'GO. The asarabacca was so called. See *Asarum.*

VULNERA'RIA. (*a, æ.* f.; from *vulnus,* a wound.) Medicines which heal wounds. A herb named from its use in healing wounds.

VULNERARIA AQUA. Arquebusade.

VU'LNUS. (*us, eris.* n.) A wound.

VULNUS SCLOPETICUM. A gun-shot wound.

VULPENITE. A mineral of a greyish-white colour, found along with granular foliated limestone, at Vulpino, in Italy.

VU'LVA. (*a, æ.* f.; *quasi valva,* the aperture to the womb; or *quasi volva,* because the fœtus is wrapped up in it.) The pudendum muliebre, or parts of generation proper to women; also a foramen in the brain.

VULVA'RIA. (*a, æ.* f.; from *vulva,* the womb: so named from its smell, or use in disorders of the womb.) Stinking orach. See *Chenopodium vulvaria.*

W.

WACKE. A mineral substance intermediate between clay and basalt.

WADD. A name of plumbago.

Wadd, black. An ore of manganese: so called in Derbyshire.

WAKEFULNESS. See *Agrypnia.*

WAKE-ROBIN. See *Arum.*

WALL. Mostly applied to plants which flourish and are generally found on the wall.

Wall-flower. See *Cheiranthus.*

Wall-pellitory. See *Parietaria.*

Wall-pepper. See *Sedum acre.*

Wall-rue. See *Asplenium murale.*

Wall-wort. The *Sambucus ebulus.*

WALNUT. See *Juglans.*

WALTHER, Augustine Frederic. Several of his dissertations on anatomical subjects are commended, and have been reprinted by Haller. The best of his larger pieces is, *De Linguâ Humanâ Libellus,* in quarto. As a botanist, he published a Catalogue of the Plants in his own garden, and a work on the Structure of Plants. He died about the year 1746.

WALTON. A town near Tewkesbury, in Gloucestershire, where there is a mineral chalybeate spring, chiefly efficacious in obstructions and other affections of the glands.

WARTY. See *Verrucosus.*

WATCHFULNESS. See *Agrypnia.*

WATER. *Aqua.* A transparent fluid, without colour, smell, or taste; in a very slight degree compressible; when pure, not liable to spontaneous change; liquid in the common temperature of our atmosphere, assuming the solid form at 32° Fahrenheit, and the gaseous at 212°, but returning unaltered to its liquid state on resuming any degree of heat between these points; capable of dissolving a greater number of natural bodies than any other fluid whatever, and especially those known by the name of the saline; performing the most important functions in the vegetable and animal kingdoms, and entering largely into their composition as a constituent part.

Native water is seldom, if ever, found perfectly pure. The waters that flow within or upon the surface of the earth contain various earthy, saline, metallic, vegetable, or animal particles, according to the substances over or through which they pass. Rain and snow waters are much purer than these, although they also contain whatever floats in the air, or has been exhaled along with the watery vapours.

The purity of water may be known by the following marks or properties of pure water: —

1. Pure water is lighter than water that is not pure.
2. Pure water is more fluid than water that is not pure.
3. It has no colour, smell, or taste.
4. It wets more easily than the waters containing metallic and earthy salts, called hard waters, and feels softer when touched.
5. Soap, or a solution of soap in alkohol, mixes easily and perfectly with it.
6. It is not rendered turbid by adding to it a solution of gold in aqua regia, or a solution of silver, or of lead, or of mercury, in nitric acid, or a solution of acetate of lead in water.

Water was, till modern times, considered as an elementary or simple substance.

Previous to the month of October 1776, the celebrated Macquer, assisted by Sigaud de la Fond, made an experiment by burning hydrogene gas in a bottle, without explosion, and holding a white china saucer over the flame. His intention appears to have been that of ascertaining whether any fuliginous smoke was produced; and he observes, that the saucer remained perfectly clean and white, but was moistened with perceptible drops of a clear fluid, resembling water; and which, in fact, appeared to him and his assistant to be nothing but pure water. He does not say whether any test was applied to ascertain this purity, neither does he make any remark on the fact.

In the summer of the year 1781, Mr. Henry Cavendish was busied in examining what becomes of the air lost by combustion, and made those valuable experiments which were read before the Royal Society on the 15th of January 1784. He burned 500,000 grain measures of hydrogene gas, with about two and a half times the quantity of common air; and, by causing the burned air to pass through a glass tube eight feet in length, 135 grains of pure water were condensed. He also exploded a mixture of 19,500 grain measures of oxygene gas, and 37,000 of hydrogene, in a close vessel. The condensed liquor was found to contain a small portion of nitric acid, when the mixture of the air was such, that the burned air still contained a considerable proportion of oxygene. In this case it may be presumed, that some of the oxygene combines with a portion of nitrogene present.

In the mean time, Lavoisier, during the winter of 1781-1782, together with Gingembre, filled a bottle of six pints with hydrogene; which being fired, and two ounces of lime-water poured in, was instantly stopped with a cork, through which a flexible tube communicating with a vessel of oxygene was passed. The inflammation ceased, except at the orifice of the tube, through which the oxygene was passed, where a beautiful flame appeared. The combustion continued a considerable time, during which the lime-water was agitated in the bottle. Neither this, nor the same experiment repeated with pure water, and with a weak solution of alkali instead of lime-water, afforded the information

sought after; for these substances were not at all altered.

The inference of Mr. Warltire, respecting the moisture on the inside of the glass in which Dr. Priestley first fired hydrogene and common air, was, that these airs, by combustion, deposited the moisture they contained. Mr. Watt, however, inferred from these experiments, that water is a compound of the burned airs, which have given out their latent heat by combustion; and communicated his sentiments to Dr. Priestley, in a letter dated April 26. 1783.

It does not appear that the composition of water was known or admitted in France till the summer of 1783, when Lavoisier and De la Place, on the 24th of June, repeated the experiment of burning hydrogene and oxygene in a glass vessel over mercury, in a still greater quantity than had been burned by Mr. Cavendish. The result was nearly five gross of pure water. Monge made a similar experiment at Paris nearly at the same time, or perhaps before.

This assiduous and accurate philosopher then proceeded, in conjunction with Meusnier, to pass the steam of water through a red-hot iron tube, and found that the iron was oxidised, and hydrogene disengaged; and the steam of water being passed over a variety of other combustible or oxidable substances, produced similar results, the water disappearing and hydrogene being disengaged. These capital experiments were accounted for by Lavoisier, by supposing the water to be decomposed into its component parts, oxygene and hydrogene, the former of which unites with the ignited substance, while the latter is disengaged.

The grand experiment of the composition of water, by Fourcroy, Vauquelin, and Seguin, was begun on Wednesday, May 13. 1790, and was finished on Friday the 22d of the same month. The combustion was kept up 185 hours with little interruption, during which time the machine was not quitted for a moment. The experimenters alternately refreshed themselves when fatigued, by lying for a few hours on mattresses in the laboratory.

To obtain the hydrogene, 1. Zinc was melted and rubbed into a powder in a very hot mortar. 2. This metal was dissolved in concentrated sulphuric acid, diluted with seven parts of water. The air procured was made to pass through caustic alkali. To obtain the oxygene, two pounds and a half of crystallised hyperoxymuriate of potash were distilled, and the air was transferred through caustic alkali.

The volume of hydrogene employed was 25963·568 cubic inches, and the weight was 1039·358 grains.

The volume of oxygene was 12570·942, and the weight was 6209·869 grains.

The total weight of both elastic fluids was 7249·227.

The weight of water obtained was 7244 grains, or 12 ounces 4 gros 45 grains.

The weight of water which should have been obtained was 12 ounces 4 gros 49·227 grains.

The deficit was 4·227 grains.

The quantity of azotic air before the experiment was 415·256 cubic inches, and at the close of it 467. The excess after the experiment was, consequently, 51·744 cubic inches. This augmentation is to be attributed, the academicians think, to the small quantity of atmospheric air in the cylinders of the gasometers at the time the other airs were introduced. These additional 51 cubic inches could not arise from the hydrogene, for experiment showed that it contained no azotic air. Some addition of this last fluid, the experimenters think, cannot be avoided, on account of the construction of the machine.

The water being examined, was found to be as pure as distilled water. Its specific gravity to distilled water was as 18671 : 18670.

The decomposition of water is effected by electricity in a most elegant manner.

The composition of water is best demonstrated by exploding 2 volumes of hydrogene and 1 of oxygene, in the eudiometer. They disappear totally, and pure water results. A cubic inch of this liquid, at 60°, weighs 252·52 grains; consisting of

28·06 grains hydrogene, and
224·46 oxygene.

The bulk of the former gas is	1325 cubic inches.
That of the latter is	662
	1987

Hence there is a condensation of nearly two thousand volumes into one; and one volume of water contains 662 volumes of oxygene. The prime equivalent of water is 1·125; composed of a prime of oxygene = 1·0 + a prime of hydrogene = 0·125; or 9 parts by weight of water consist of 8 oxygene + 1 hydrogene.

The simple waters are the following: —

1. *Distilled water.* This is the lightest of all others, containing neither solid nor gaseous substances in solution, is perfectly void of taste and smell, colourless and beautifully transparent, has a soft feel, and wets the fingers more readily than any other. It mixes uniformly with soap into a smooth opaline mixture, but may be added to a solution of soap in spirit of wine without injuring its transparency. The clearness of distilled water is not impaired by the most delicate chemical re-agents, such as lime-water, a solution of barytes in any acid, nitrated silver, or acid of sugar. When evaporated in a silver vessel it leaves no residuum: if preserved from access of foreign matter floating in the air, it may be kept for ages unaltered in vessels upon which it has no action, as it does not possess within itself the power of decomposition. As it freezes exactly at 32° of Fahrenheit, and boils at 212° under the atmospherical pressure of 29·8 inches, these points are made

use of as the standard ones for thermometrical division; and its specific weight being always the same under the mean pressure and temperature, it is employed for the comparative standard of specific gravity.

Pure distilled water can only be procured from water which contains no volatile matters that will rise in distillation, and continue still in union with the vapour when condensed. Many substances are volatile during distillation; but most of the gases, such as common air, carbonic acid, and the like, are incapable of uniting with water at a high temperature: other bodies, however, such as vegetable essential oil, and, in general, much of that which gives the peculiar odour to vegetable and animal matter, will remain in water after distillation. So the steam of many animal and vegetable decoctions has a certain flavour which distinguishes it from pure water; and the aqueous exhalation from living bodies, which is a kind of distillation, has a similar impregnation.

To obtain distilled water perfectly pure, much stress was laid by former chemists on repeating the process a great number of times; but it was found by Lavoisier, that rain water once distilled, rejecting the first and last products, was as pure a water as could be procured by any subsequent distillations.

Distilled water appears to possess a higher power than any other as a solvent of all animal and vegetable matter, and these it holds in solution as little as possible altered from the state in which they existed in the body that yielded them. Hence the great practical utility of that kind of chemical analysis which presents the proximate constituent parts of these bodies, and which is effected particularly by the assistance of pure water. On the other hand, a saline, earthy, or otherwise impure water will alter the texture of some of the parts, impair their solubility, produce material changes on the colouring matter, and become a less accurate analyser on account of the admixture of foreign contents.

Distilled water is seldom employed to any extent in the preparation of food, or in manufactures, on account of the trouble of procuring it in large quantities; but for preparing a great number of medicines, and in almost every one of the nicer chemical processes that are carried on in the liquid way, this water is an essential requisite. The only cases in which it has been used largely as an article of drink, have been in those important trials made of the practicability of procuring it by condensing the steam of sea water, by means of a simple apparatus adapted to a ship's boiler; and these have fully shown the ease with which a large quantity of fresh water, of the purest kind, may be had at sea, at a moderate expense, whereby one of the most distressing of all wants may be relieved. There are one or two circumstances which seem to show that water, when not already loaded with foreign matter, may become a solvent for concretions in urinary passages. At least, we know that very material advantage has been derived in these cases from very pure natural springs; and hence a course of distilled water has been recommended as a fair subject of experiment.

2. *Rain water*, the next in purity to distilled water, is that which has undergone a natural distillation from the earth, and is condensed in the form of rain. This is a water so nearly approaching to absolute purity as probably to be equal to distilled water for every purpose except in the nicer chemical experiments. The foreign contents of rain water appear to vary according to the state of the air through which it falls. The heterogeneous atmosphere of a smoky town will give some impregnation to rain as it passes through, and this, though it may not be at once perceptible on chemical examination, will yet render it liable to spontaneous change; and hence rain water, if long kept, especially in hot climates, acquires a strong smell, becomes full of animalcula, and in some degree putrid. According to Margraaf, the constant foreign contents of rain water appear to be some traces of the muriatic and nitric acids; but as this water is always very soft, it is admirably adapted for dissolving soap, or for the solution of alimentary or colouring matter, and it is accordingly used largely for these purposes. The specific gravity of rain water is so nearly the same as that of distilled water, that it requires the most delicate instruments to ascertain the difference. Rain that falls in towns acquires a small quantity of sulphate of lime and calcareous matter from the mortar and plaster of the houses.

3. *Ice* and *snow water*. This equals rain water in purity, and, when fresh melted, contains no air, which is expelled during freezing. In cold climates, and in high latitudes, thawed snow forms the constant drink of the inhabitants during winter; and the vast masses of ice which float on the polar seas afford an abundant supply to the mariner. It is well known, that in a weak brine, exposed to a moderate freezing cold, it is only the watery part that congeals, leaving the unfrozen liquor proportionably stronger of the salt. The same happens with a dilute solution of vegetable acids, with fermented liquors, and the like; and advantage is taken of this property to reduce the saline part to a more concentrated form. Snow water has long lain under the imputation of occasioning those strumous swellings in the neck which deform the inhabitants of many of the Alpine valleys; but this opinion is not supported by any well-authenticated indisputable facts, and is rendered still more improbable, if not entirely overturned, by the frequency of the disease in Sumatra, where ice and snow are never seen, and its being quite unknown in Chili and in Thibet, though the rivers of those countries are chiefly supplied by the melting of the snow, with which the countries are covered.

4. *Spring water.* Under this comprehensive class are included all waters that spring from some depth beneath the soil, and are used at the fountain head, or at least before they have run any considerable distance exposed to the air. It is obvious that spring water will be as various in its contents as the substances that compose the soil through which it flows. When the ingredients are not such as to give any peculiar medical or sensible properties, and the water is used for common purposes, it is distinguished as a hard or soft spring, sweet or brackish, clear or turbid, and the like. Ordinary springs insensibly pass into mineral springs, as their foreign contents become more notable and uncommon; though sometimes waters have acquired great medical reputation from mere purity.

By far the greater number of springs are cold; but as they take their origin at some depth from the surface, and below the influence of the external atmosphere, their temperature is, in general, pretty uniform during every vicissitude of season, and always several degrees higher than the freezing point. Others, again, arise constantly hot, or with a temperature always exceeding the summer heat; and the warmth possessed by the water is entirely independent of that of the atmosphere, and varies little winter or summer.

One of the principal inconveniences in almost every spring water is its hardness, owing to the presence of earthy salts, which, in by far the greater number of cases, are only the insipid substances chalk and selenite, which do not impair the taste of the water; whilst the air which it contains, and its grateful coolness, render it a most agreeable, and generally a perfectly innocent drink; though sometimes, in weak stomachs, it is apt to occasion an uneasy sense of weight in that organ, followed by a degree of dyspepsia. The quantity of earthy salts varies considerably; but, in general, it appears that the proportion of five grains of these in the pint will constitute a hard water, unfit for washing with soap, and for many other purposes of household use or manufactures. The water of deep wells is always, *ceteris paribus*, much harder than that of springs which overflow their channel; for much agitation and exposure to air produce a gradual deposition of the calcareous earth; and hence spring water often incrusts to a considerable thickness the inside of any kind of tube through which it flows, as it arises from the earth. The specific gravity of these waters is also, in general, greater than that of any other kind of water, that of the sea excepted. Springs that overflow their channel, and form to themselves a limited bed, pass insensibly into the state of stream, or river water, and become thereby altered in some of their chemical properties.

5. *River water.* This is in general much softer and more free from earthy salts than the last, but contains less air of any kind: for, by the agitation of a long current, and in most cases a great increase of temperature, it loses common air and carbonic acid, and, with this last, much of the lime which it held in solution. The specific gravity thereby becomes less, the taste not so harsh, but less fresh and agreeable, and out of a hard spring is often made a stream of sufficient purity for most of the purposes requiring soft water. Some streams, however, that arise from a clean siliceous rock, and flow in a sandy or stony bed, are from the outset remarkably pure. Such are the mountain lakes and rivulets in the rocky districts of Wales, the source of the beautiful waters of the Dee, and numberless other rivers that flow through the hollow of every valley. Switzerland has long been celebrated for the purity and excellence of its waters, which pour in copious streams from the mountains, and give rise to some of the finest rivers in Europe. An excellent observer and naturalist, the illustrious Haller, thus speaks of the Swiss waters: — "Vulgaribus aquis Helvetia super omnes fere Europæ regiones excellit. Nusquam liquidas illas aquas et crystalli simillimas se mihi obtulisse memini postquam ex Helvetiâ excessi; ex scopulis enim nostræ per puros silices percolatæ nulla terra vitiantur." Some of them never freeze in the severest winter, the cause of which is probably, as Haller conjectures, that they spring at once out of a subterraneous reservoir so deep as to be out of the reach of frost; and during their short course, when exposed to day, they have not time to be cooled down from 53°, their original temperature, to below the freezing point.

Some river waters, however, that do not take their rise from a rocky soil, and are indeed at first considerably charged with foreign matter, during a long course, even over a rich cultivated plain, become remarkably pure as to saline contents, but often fouled with mud, and vegetable or animal exuviæ, which are rather suspended than held in true solution. Such is that of the Thames, which, taken up at London at low water, is very soft and tolerably good, and, after rest and filtration, it holds but a very small portion of any thing that could prove noxious or impede any manufacture. It is also excellently fitted for sea-store; but it here undergoes a remarkable spontaneous change. No water carried to sea becomes putrid sooner than that of the Thames. When a cask is opened after being kept a month or two, a quantity of inflammable air escapes, and the water is so black and offensive as scarcely to be borne. Upon racking it off, however, into large earthen vessels (oil jars are commonly used for the purpose), and exposing it to the air, it gradually deposits a quantity of black slimy mud, becomes clear as crystal, and remarkably sweet and palatable. The Seine has as high a reputation in France, and appears from accurate experiments to be a river of great

purity. It might be expected that a river which has passed by a large town, and received all its impurities, and been used by numerous dyers, tanners, hatters, and the like, that crowd to its banks for the convenience of plenty of water, should thereby acquire such a foulness as to be very perceptible to chemical examination for a considerable distance below the town; but it appears, from the most accurate examination, that where the stream is at all considerable these kinds of impurity have but little influence in permanently altering the quality of the water, especially as they are for the most part only suspended, and not truly dissolved; and, therefore, mere rest, and especially filtration, will restore the water to its original purity. Probably, therefore, the most accurate chemist would find it difficult to distinguish water taken up at London from that procured at Hampton Court, after each has been purified by simple filtration.

6. *Stagnated waters.* The waters that present the greatest impurities to the senses, are those of stagnant pools, and low marshy countries. They are filled with the remains of animal and vegetable matter undergoing decomposition, and, during that process, becoming in part soluble in water, thereby affording a rich nutriment to the succession of living plants and insects, thereby supplying the place of those that perish. From the want of sufficient agitation in these waters, vegetation goes on undisturbed, and the surface becomes covered with conferva and other aquatic plants; and as these standing waters are in general shallow, they receive the full influence of the sun, which further promotes all the changes that are going on within them. The taste is generally vapid, and destitute of that freshness and agreeable coolness which distinguish spring water. However, it should be remarked, that stagnant waters are generally soft, and many of the impurities are only suspended, and therefore separable by filtration; and perhaps the unpalatableness of this drink has caused it to be in worse credit than it deserves, on the score of salubrity. The decidedly noxious effects produced by the air of marshes and stagnant pools, have been supposed to extend to the internal use of these waters; and often, especially in hot climates, a residence near these places has been as much condemned on the one account as on the other; and, in like manner, an improvement in health has been as much attributed to a change of water as of air.

Water-brash. See *Pyrosis.*

Water-cress. See *Sisymbrium nasturtium.*

Water-dock. See *Rumex hydrolapathum.*

Water-flag, yellow. See *Iris pseudacorus.*

Water-germander. See *Teucrium scordium.*

Water-hemp. See *Eupatorium.*

Water-lily, white. See *Nymphæa alba.*

Water-lily, yellow. See *Nymphæa lutea.*

Water-parsnep. See *Sium nodiflorum.*

Water-pepper. See *Polygonum hydropiper.*

Water-plantain. See *Alisma plantago aquatica.*

Water-zizania. See *Zizania aquatica.*

Waters, mineral. See *Mineral waters.*

WAVED. See *Undulatus.*

WAVELITE. (So named after Dr. Wavell, who first discovered it at Barnstaple, in Devonshire.) A mineral of a greyish-white colour, composed of alumina, lime, or water, as hard as fluor spar.

WAX. See *Cera.*

WEANING. See *Ablactation.*

WEB. *Tela.* Applied to that which resembles a web; as the arachnoid membrane, cellular tissue, &c.

Web, mucous. The name adopted by Professor Blumenbach for cellular membrane. See *Membrane.*

WEDEL, George Wolffgang, was born in 1645, at Golzan, in Lusatia. He is celebrated for his pharmaceutical knowledge, and his elegance of prescription. Of his works, besides his academical dissertations, the principal are, *Opiologia; Pharmacia in Artis formam redacta; De Medicamentorum Facultatibus; De Morbis Infantum;* and *Exercitationes Medico-Philologicæ.*

Wedge-shaped. See *Cuneiformis.*

WELD. Woald. The *Reseda luteola* of Linnæus, which is used as a yellow dye.

WELDING. The property which the particles of some metals have of adhering together from the stroke of the hammer: iron and platina only have this property.

WEPFER, John James, was born in 1620. In 1658, he published a celebrated work, entitled *Observationes Anatomicæ,* &c. since often reprinted with the title of *Historia Apoplecticorum.* In an epistle *De Dubiis Anatomicis,* he asserted the entire glandular structure of the liver, prior to Malpighi. Another valuable work is called *Cicutæ Aquaticæ Historia et Noxæ.* His papers were published by two of his grandsons, in a work entitled *Observationes Medico-Practicæ,* &c.

WERNERITE. Foliated scapolite.

WETHER. See *Ovis aries.*

WHARTON, Thomas, was born in Yorkshire in 1610. In 1652, he read lectures on the glands before the College of Physicians; and afterwards published a work on that subject, entitled *Adenographia.* His name has been affixed to the salivary ducts on the side of the tongue.

WHEAL. An elevation of the skin, like what is produced by a sharp stroke of a cane, and which is seen in some forms of nettle-rash. See *Urticaria.*

WHEAT. *Triticum.* The seeds of the *Triticum hibernum,* and *æstivum,* of Linnæus, are so termed. It is to these plants we are indebted for our bread, and the various kinds of pastry. The wheat is first ground between mill-stones, and then sifted to obtain its farina or flour. The flour of wheat may be separated into its three constituent parts, in the following manner: — The flour is to be kneaded

into a paste with water in an earthen vessel, and the water continue pouring upon it from a cock; this liquid, as it falls upon the paste, takes up from it a very fine white powder, by means of which it acquires the colour and consistency of milk. This process is to be continued till the water run off clear, when the flour will be separated into three distinct parts: 1. A grey elastic matter that sticks to the hand, and on account of its properties has gained the name of the glutinous, or vegeto-animal part. 2. A white powder which falls to the bottom of the water, and is the *fæculum* or starch. 3. A matter which remains dissolved in the water, and seems to be a sort of mucilaginous extract.

Flour, from whatever species of corn obtained, is likewise disposed to vinous fermentation, on account of its saccharine contents. The aptitude for fermentation of these mealy seeds increases if they be first converted into malt; inasmuch as by this process the gluten which forms the germ is separated, and the starchy part appears to be converted into saccharine matter. The making of malt, for which purpose barley and wheat are generally chosen, is as follows:—The grains are put in the malting tub, and immersed in cold water, in a temperate and warm season, changing this fluid several times, especially in hot weather; and they are thus kept soaking till they be sufficiently soft to the touch. Upon this they are piled up in heaps on a roomy, clean, airy floor, where, by the heat spontaneously taking place, the vegetation begins, and the grains germinate. To cause the germination to go on uniformly, the heaps are frequently turned. In this state the vegetation is suffered to continue till the germs have about two thirds or three fourths of the length of the corn. It is carried too far when the leafy germs have begun to sprout.

For this reason, limits are set to the germination by drying the malt, which is effected by transferring it to the kiln, or by spreading it about in spacious airy lofts. Dried in the last way, it is called air-dried malt; in the first, kiln-malt. In drying this latter, care must be taken that it does not receive a burnt smell, or be in part converted into coal.

From this malt, beer is made by extraction with water and fermentation.

Wheat, buck. See *Polygonum.*

Wheat, Eastern buck. See *Polygonum.*

Wheat, Indian. See *Zea mays.*

Wheat, Turkey. The Turkey wheat is a native of America, where it is much cultivated, as it is also in some parts of Europe, especially in Italy and Germany. There are many varieties, which differ in the colour of the grain, and are frequently raised in our gardens by way of curiosity, whereby the plant is well known. It is the chief bread corn in some of the southern parts of America, but, since the introduction of rice into Carolina, it is but little used in the northern colonies. It makes a main part, too, of the food of the poor people in Italy and Germany. This is the sort of wheat mentioned in the book of Ruth, where it is said that Boaz treated Ruth with parched ears of corn dipped in vinegar. This method of eating the roasted ears of Turkey wheat is still practised in the East: they gather in the ears when about half ripe, and having scorched them to their minds, eat them with as much satisfaction as we do the best flour bread.

In several parts of South America they parch the ripe corn, never making it into bread, but grinding it between two stones, mix it with water in a calabash, and so eat it. The Indians make a sort of drink from this grain, which they call *bici.* This liquor is very windy and intoxicating, and has nearly the taste of sour small beer: but they do not use it in common, being too lazy to make it often, and therefore it is chiefly kept for the celebration of feasts and weddings, at which times they mostly get intolerably drunk with it. The manner of making this precious beverage, is to steep a parcel of corn in a vessel of water, till it grows sour; then the old women, being provided with calibashes for the purpose, chew some grains of the corn in their mouths, and spitting it into the calabashes, empty them, spittle and all, into the sour liquor, having previously drawn off the latter into another vessel.

The chewed grain soon raises a fermentation; and when this ceases, the liquor is let off from the dregs, and set by till wanted. In some of the islands in the South Sea, where each individual is his own lawgiver, it is no uncommon thing for a near relation to excuse a murderer for a good drunken bout of ciri.

Wheel-shaped. See *Rotatus.*

WHEEZING. See *Cerchnus.*

WHELK. See *Ionthus.*

WHET-SLATE. A greenish grey-coloured mineral, used to sharpen steel instruments.

WHEY. The fluid part of milk which remains after the curd has been separated. It contains a saccharine matter, some butter, and a small portion of cheese.

WHIRL. See *Verticillus.*

WHISKEY. (From *Usquebaugh*, the Irish name for it.) A dilute alcohol obtained by distilling malt.

WHISPERING. A lowness of speech, caused by uttering the words so feebly as not to produce any vibration of the larynx.

WHITE-BAIT. This fish, which was long supposed to be the fry of some larger, and very generally of the barbel, is now considered as a distinct species. See *Barbel.*

WHITE-LEG. This disease mostly occurs to women soon after delivery; and hence it has been called the puerperal tumid leg. Dr. Hall names it *phlegmasia dolens;* and it has been described as *phlegmasia lactea, ecchymoma lymphatica;* and by Dr. Cullen, as *anasarca serosa;* and Dr. Good calls it *buck-*

nemia sparganosis. The swelling has been ascribed to a redundancy of milk, and a morbid deposition in consequence of such redundancy; whence the French call it *dépôt laiteux*, and *lait répandu*; and the Germans, *milch-streithen.* A minuter attention, however, will sufficiently prove that it has seldom anything to do with the milk, perhaps never. It has occurred where the breasts have been long destitute of milk, and where they have overflowed; when suckling has been relinquished, and where it has been continued; and several instances of it have occurred in virgins and in men. It principally, however, affects women in the puerperal state; in a few instances it has been observed to attack pregnant women; and, in one or two cases, nurses, on losing their children, have been affected by it. Women of all descriptions are liable to be attacked by it during and soon after childbed; but those whose limbs have been pained or anasarcous during pregnancy, and who do not suckle their offspring, are more especially subject to it. It has rarely occurred oftener than once to the same female. It supervenes to easy and natural, as well as to difficult and preternatural births. It sometimes makes its appearance in twenty-four or forty-eight hours after delivery, and at other times, not till a month or six weeks after; but, in general, the attack takes place from the tenth to the sixteenth day of the lying-in. It has, in many instances, attacked women who were recovering from puerperal fever; and, in some cases, has supervened, or succeeded, to thoracic inflammation. It not uncommonly begins with coldness and rigors: these are succeeded by heat, thirst, and other symptoms of pyrexia; and then pain, stiffness, and other symptoms of topical inflammation, supervene. Sometimes the local affection is from the first accompanied with, but is not preceded by, febrile symptoms. Upon other occasions, the topical affection is neither preceded by puerperal fever nor rigors, &c.; but soon after it has taken place, the pulse becomes more frequent, the heat of the body is increased, and the patient is affected with thirst, head-ache, &c. The pyrexia is very various in degree in different patients, and sometimes assumes an irregular remittent or intermittent type. The complaint generally takes place on one side only at first, and the part where it commences is various; but it most commonly begins in the lumbar, hypogastric, or inguinal region, on one side, or in the hip, or top of the thigh, and corresponding labium pudendi. In this case, the patient first perceives a sense of pain, weight, and stiffness in some of the above-mentioned parts, which are increased by every attempt to move the pelvis, or lower limb. If the part be carefully examined, it generally is found rather fuller or hotter than natural, and tender to the touch, but not discoloured. The pain increases, always becomes very severe, and, in some cases, is of the most excruciating kind. It extends along the thigh; and when it has subsisted for some time, longer or shorter in different patients, the top of the thigh and the labium pudendi become greatly swelled, and the pain is then sometimes alleviated, but accompanied with a greater sense of distension. The pain next extends down to the knee, and is generally the most severe on the inside and back of the thigh, in the direction of the internal cutaneous and the crural nerves; when it has continued for some time, the whole of the thigh becomes swelled, and the pain is somewhat relieved. The pain then extends down the leg to the foot, and is commonly the most severe in the direction of the posterior tibial nerve; after some time, the parts last attacked begin to swell, and the pain abates in violence, but is still very considerable, especially on any attempt to move the limb. The extremity being now swelled throughout its whole extent, appears perfectly or nearly uniform, and it is not perceptibly lessened by an horizontal position, like an œdematose limb. It is of the natural colour, or even whiter, is hotter than usual, excessively tense, and exquisitely tender when touched. When pressed by the finger in different parts, it is found to be elastic, little, if any, impression remaining, and that only for a very short time. If a puncture or incision be made into the limb, in some instances no fluid is discharged; in others, a small quantity only issues out, which coagulates soon after; and in others, a large quantity of fluid escapes, which does not coagulate; but the whole of the effused matter cannot be drawn off in this way. The swelling of the limb varies both in degree and in the space of time requisite for its full formation. In most instances, it arrives at double the natural size, and in some cases at a much greater. In lax habits, and in patients whose legs have been very much affected with anasarca during pregnancy, the swelling takes place more rapidly than in those who are differently circumstanced; it sometimes arrives, in the former class of patients, at its greatest extent in twenty-four hours, or less, from the first attack.

Instead of beginning invariably at the upper part of the limb, and descending to the lower, this complaint has been known to begin in the foot, the middle of the leg, the ham, and the knee. In whichsoever of these parts it happens to begin, it is generally soon diffused over the whole of the limb; and when this has taken place, the limb presents the same phænomena exactly that have been stated above as observable when the inguen, &c. are first affected.

After some days, generally from two to eight, the febrile symptoms diminish, and the swelling, heat, tension, weight, and tenderness of the lower extremity begin to abate, first about the upper part of the thigh, or about the knee, and afterwards in the leg and foot. Some inequalities are found in the limb, which,

at first, feel like indurated glands, but, upon being more nicely examined, their edges are not so well defined as those of conglobate glands; and they appear to be occasioned by the effused matter being of different degrees of consistence in different points. The conglobate glands of the thigh and leg are sometimes felt distinctly, and are tender to the touch, but are seldom materially enlarged: and as the swelling subsides, it has happened, that an enlargement of the lymphatic vessels, in some part of the limb, has been felt, or been supposed to be felt.

The febrile symptoms having gradually disappeared, the pain and tenderness of the limb being much relieved, and the swelling and tension being considerably diminished, the patient is debilitated and much reduced, and the limb feels stiff, heavy, benumbed, and weak. When the finger is pressed strongly against it for some time, in different points, it is found to be less elastic than at first, in some places retaining the impression of the finger for a longer, in other places for a shorter time, or scarcely at all; and, if the limb be suffered to hang down, or if the patient walk much, it is found to be more swelled in the evening, and assumes more of an œdematose appearance. In this state the limb continues for a longer or shorter time, and is commonly at length reduced wholly, or nearly, to the natural size.

Hitherto the disease has been described as affecting only one of the inferior extremities, and as terminating by resolution, or the effusion of a fluid that is removed by the absorbents; but, unfortunately, it sometimes happens, that after it abates in one limb, the other is attacked in a similar way. It also happens, in some cases, that the swelling is not terminated by resolution; for sometimes a *suppuration* takes places in one or both legs, and ulcers are formed which are difficult to heal. In a few cases a gangrene has supervened. In some instances, the patient has been destroyed by the violence of the disease, before either suppuration or gangrene have happened.

The *predisposing causes* of this disease, when it occurs during the pregnant or puerperal state, or in a short time afterwards, appear to be, 1st, The increased irritability and disposition to inflammation which prevail during pregnancy, and in a still higher degree for some time after parturition. 2dly, The over-distended or relaxed state of the blood-vessels of the inferior part of the trunk, and of the lower extremities, produced during the latter months of utero-gestation.

Amongst the *exciting causes* of this disease may be enumerated, 1st, *Contusions*, or violent exertions of the lower portions of the abdominal and other muscles inserted in the pelvis or thighs, or other muscles of the inferior extremities, and contusions of the cellular texture connected with these muscles, during a tedious labour. 2dly, The *application of cold and moisture*, which are known to act very powerfully upon every system in changing the natural distribution of the circulating fluids, and consequently, in a system predisposed by parturition, may assist in producing the disease, by occasioning the fluids to be impelled, in unusual quantity, into the weakened vessels of the lumbar, hypogastric, and inguinal regions, and of the inferior extremities. 3dly, *Suppression*, or diminution of the lochia, and of the secretion of milk, which, by inducing a plethoric state of the sanguiferous system, may occasion an inflammatory diathesis, may favour congestion, and the determination of an unusual quantity of blood to the vessels of the parts just mentioned, and thus contribute to the production of an inflammation of these parts. 4thly, *Food taken in too large quantity, and of a too stimulating quality*, especially when the patient does not give suck. This cause both favours the production of plethora, and stimulates the heart and arteries to more frequent and violent action; the effects of which may be expected to be particularly felt in the lumbar, hypogastric, or inguinal regions, and in the lower extremities, from the state of their blood-vessels. 5thly, *Standing or walking too much*, before the arteries and veins of the lower half of the body have recovered sufficiently from the effects of the distension which existed during the latter months of pregnancy. This must necessarily occasion too great a determination of blood to these parts, and consequently too great a congestion in them; whence they will be more stimulated than the upper parts of the body, and inflammation will sometimes be excited in them.

From an attentive consideration of the whole of the phænomena observable in this disease, and of its remote causes and cure, no doubt remains, that the proximate cause consists in an inflammatory affection, producing suddenly a considerable effusion of serum and coagulating lymph from the exhalants into the cellular membrane of the lymph.

The cure is to be attempted first by leeches applied down the course of the limb, poppy-head fomentations, and alvine evacuants; and afterwards, as soon as the inflammatory symptoms have abated, by local stimulants, so as to excite the torpid absorbents to increased action, of which the volatile liniment, with laudanum, is often serviceable. Laudanum tends to take off the pain and irritation that still remains, and thus enables the tranquillised vessels the more easily to recover their tone. Yet, whatever application of this kind is employed, it should be accompanied with gentle friction, continued for half an hour or more, as the limb is able to bear it: for the friction itself is of essential service, and tends, perhaps, even more than any other local stimulant, to restore the limb to a healthy action. Mercurial liniment is occasionally beneficial. The chronic weakness is to be removed by a continuation of the fric-

tion, bathing with sea-water, or, which is much better, bathing in the sea itself; an elastic bandage round the limb; pure air; and, if necessary, bark, cascarilla, and a generous diet.

White swelling. See *Arthropuosis,* and *Hydarthrus.*

WHITES. See *Leucorrhœa.*

WHITING. See *Gadus morlangus.*

WHITLOW. See *Paronychia.*

WHORL. See *Verticillus.*

Whortle-berry, bears'. See *Arbutus uva ursi.*

Whortle-berry, red. See *Vaccinium vitis idæa.*

WHYTT, Robert, was born in 1714, at Edinburgh. The first of his publications was an *Essay on the Vital and other involuntary Motions of Animals,* in which he opposed the Stahlian Theory, and ascribed them to the operation of stimuli. Four years after his *Physiological Essays* appeared, in which he supposes the circulation assisted by an oscillatory motion of the minute vessels, and treats of sensibility and irritability. He also wrote on the *Use of Lime-water in Calculous Complaints,* and on *Nervous Diseases;* and contributed likewise some papers to the Edinburgh Essays. The *Observations on Hydrocephalus* were published after his death, which occurred in 1766, after labouring long under a complication of chronic complaints.

WIDOW-WAIL. See *Daphne mezereum.*

Wild carrot. See *Daucus sylvestris.*

Wild cucumber. See *Momordica elaterium.*

Wild navew. See *Brassica napus.*

WILLIS, Thomas, was born in Wiltshire, about the year 1621. He was ambitious of excelling as a chemist, and published, in 1659, a treatise on *Fermentation,* and another on *Fever,* with a *Dissertation on the Urine.* In 1664, he published his celebrated work, *Cerebri Anatome,* with a description of the nerves; which was followed, after three years, by his *Pathologia Cerebri et Nervosi Generis,* in which he treats of Convulsive Diseases, and the Scurvy. In the mean time he settled in London, and being nominated a physician in ordinary to the king, was advancing to the first rank in practice. His next publication was on *Hysteria* and *Hypochondriasis.* In 1672, he produced another work, *De Animâ Brutorum;* which he supposed like the vital principle in man of a corporeal nature. The year following he began to print his *Pharmaceutice Rationalis,* which he did not live to complete, being carried off by a pleurisy in his fifty-fourth year. His works engaged great attention at first, and are still admired, though modern improvements have diminished their value. They are written in an elegant Latin style.

WILLOW. See *Salix.*

Willow, crack. See *Salix fragilis.*

Willow, sweet. See *Myrica gale.*

Willow, white. See *Salix fragilis.*

Willow-herb. See *Lythrum salicaria.*

Willow-herb, rosebay. See *Epilobium angustifolium.*

Willow-leaved oak. See *Quercus phellos.*

WINE. The name of wine is given in general to all liquors that have become spirituous by fermentation. Thus cider, beer, hydromel, or mead, and other similar liquors, are wines.

The principles and theory of the fermentation which produces these liquors are essentially the same. See *Fermentation.*

All those nutritive, vegetable, and animal matters which contain sugar ready formed, are susceptible of spirituous fermentation. Thus wine may be made of all the juices of plants, the sap of trees, the infusions and decoctions of farinaceous vegetables, the milk of frugiverous animals; and, lastly, it may be made of all ripe succulent fruits. But of all substances susceptible of the spirituous fermentation, none is capable of being converted into so good wine as the juice of the grapes of France, or of other countries that are nearly in the same latitude, or in the same temperature. The grapes of hotter countries, and even those of the southern provinces of France, do indeed furnish wines that have a more agreeable, that is, more of a saccharine taste; but these wines, though they are sufficiently strong, are not so spirituous as those of the provinces near the middle of France: at least from these latter wines the best vinegar and brandy are made. As an example, therefore, of spirituous fermentation in general, we shall describe the method of making wine from the juice of the grapes of France.

This juice, when newly expressed, and before it has began to ferment, is called *must,* and in common language sweet wine. It is turbid, and has an agreeable and very saccharine taste. It is very laxative; and when drunk too freely, or by persons disposed to diarrhœas, it is apt to occasion these disorders. Its consistence is somewhat less fluid than that of water, and it becomes almost of a pitchy thickness when dried.

When the must is pressed from the grapes, and put into a proper vessel and place, with a temperature between fifty-five and sixty degrees, very sensible effects are produced in it, in a shorter or longer time, according to the nature of the liquor, and the exposure of the place. It then swells, and is so rarefied that it frequently overflows the vessel containing it, if this be nearly full. An intestine motion is excited among its parts, accompanied with a small hissing noise and evident ebullition. The bubbles rise to the surface, and at the same time is disengaged a quantity of carbonic acid, of such purity, and so subtle and dangerous, that it is capable of killing, instantly, men and animals exposed to it in a place where the air is not renewed. The skins, stones, and other grosser matters of the grapes are buoyed up by the particles of disengaged air that adhere to their surface, are

variously agitated, and are raised in form of a scum, or soft and spongy crust, that covers the whole liquor. During the fermentation, this crust is frequently raised, and broken by the air disengaged from the liquor which forces its way through it; afterwards the crust subsides, and becomes entire as before.

These effects continue while the fermentation is brisk, and at last gradually cease: then the crust, being no longer supported, falls in pieces to the bottom of the liquor. At this time, if we would have a strong and generous wine, all sensible fermentation must be stopped. This is done by putting the wine into close vessels, and carrying these into a cellar or other cool place.

After this first operation, an interval of repose takes place, as is indicated by the cessation of the sensible effects of the spirituous fermentation; and thus enables us to preserve a liquor no less agreeable in its taste, than useful for its reviving and nutritive qualities, when drunk moderately.

If we examine the wine produced by this first fermentation, we shall find that it differs entirely and essentially from the juice of grapes before fermentation. Its sweet and saccharine taste is changed into one that is very different, though still agreeable, and somewhat spirituous and piquant. It has not the laxative quality of must, but affects the head, and occasions, as is well known, drunkenness. Lastly, if it be distilled, it yields, instead of the insipid water obtained from must by distillation with the heat of boiling water, a volatile, spirituous, and inflammable liquor, called spirit of wine, or alkohol. This spirit is consequently a new being, produced by the kind of fermentation called the vinous or spirituous.

When any liquor undergoes the spirituous fermentation, all its parts seem not to ferment at the same time, otherwise the fermentation would probably be very quickly completed, and the appearances would be much more striking: hence, in a liquor much disposed to fermentation, this motion is more quick and simultaneous than in another liquor less disposed. Experience has shown, that a wine, the fermentation of which is very slow and tedious, is never good or very spirituous; and therefore, when the weather is too cold, the fermentation is usually accelerated by heating the place in which the wine is made. A proposal has been made by a person very intelligent in economical affairs, to apply a greater than the usual heat to accelerate the fermentation of the wine, in those years in which grapes have not been sufficiently ripened, and when the juice is not sufficiently disposed to fermentation.

A too hasty and violent fermentation is perhaps also hurtful, from the dissipation and loss of some of the spirit; but of this we are not certain. However, we may distinguish, in the ordinary method of making wine of grapes, two periods in the fermentation; the first of which lasts during the appearance of the sensible effects above mentioned, in which the greatest number of fermentable particles ferment. After this first effort of fermentation, these effects sensibly diminish, and ought to be stopped, for reasons hereafter to be mentioned. The fermentative motion of the liquors then ceases. The heterogeneous parts that were suspended in the wines by this motion, and render it muddy, are separated and form a sediment, called the lees; after which the wine becomes clear; but though the operation is then considered as finished, and the fermentation is apparently over, it does not really cease; and it ought to be continued in some degree, if we would have good wine.

In this new wine a part of the liquor probably remains that has not fermented, and which afterwards ferments, but so very slowly, that none of the sensible effects produced in the first fermentation are here perceived. The fermentation, therefore, still continues in the wine, during a longer or shorter time, although in an imperceptible manner; and this is the second period of the spirituous fermentation, which may be called the imperceptible fermentation. We may easily perceive that the effect of this imperceptible fermentation is the gradual increase of the quantity of alkohol. It has also another effect no less advantageous, namely, the separation of the acid salt called tartar from the wine. This matter is, therefore, a second sediment, that is formed in the wine, and adheres to the sides of the containing vessels. As the taste of tartar is harsh and disagreeable, it is evident that the wine, which by means of the insensible fermentation has acquired more alkohol, and has disengaged itself of the greater part of its tartar, ought to be much better and more agreeable; and for this reason chiefly old wine is universally preferable to new wine.

But insensible fermentation can only ripen and ameliorate the wine, if the sensible fermentation have regularly proceeded, and been stopped in due time. We know certainly that if a sufficient time has not been allowed for the first period of the fermentation, the unfermented matter that remains, being in too large a quantity, will then ferment in the bottles, or close vessels, in which the wine is put, and will occasion effects so much more sensible, as the first fermentation shall have been sooner interrupted: hence these wines are always turbid, emit bubbles, and sometimes break the bottles from the large quantity of air disengaged during the fermentation.

We have an instance of these effects in the wine of Champagne, and in others of the same kind. The sensible fermentation of these wines is interrupted, or rather suppressed, that they may have this sparkling quality. It is well known that these wines make the corks fly out of the bottles; that they sparkle and froth when they are poured into glasses; and

lastly, that they have a taste much more lively and piquant than wines that do not sparkle: but this sparkling quality, and all the effects depending on it, are only caused by a considerable quantity of carbonic acid gas, which is disengaged during the confined fermentation that the wine has undergone in close vessels. This air, not having an opportunity of escaping, and of being dissipated as fast as it is disengaged, and being interposed betwixt all the parts of the wine, combines in some measure with them, and adheres in the same manner as it does to certain mineral waters, in which it produces nearly the same effects. When this air is entirely disengaged from these wines, they no longer sparkle, they lose their piquancy of taste, become mild, and even almost insipid.

Such are the qualities that wine acquires in time, when its first fermentation has not continued sufficiently long. These qualities are given purposely to certain kinds of wine, to indulge taste or caprice; but such wines are supposed to be unfit for daily use. Wines for daily use ought to have undergone so completely the sensible fermentation, that the succeeding fermentation shall be insensible, or at least exceedingly little perceived. Wine, in which the first fermentation has been too far advanced, is liable to worse inconveniences than that in which the first fermentation has been too quickly suppressed; for every fermentable liquor is, from its nature, in a continual intestine motion, more or less strong according to circumstances, from the first instant of the spirituous fermentation, till it is completely purified: hence, from the time of the completion of the spirituous fermentation, or even before, the wine begins to undergo the acid or acetous fermentation. This acid fermentation is very slow and insensible, when the wine is included in very close vessels, and in a cool place; but it gradually advances, so that in a certain time the wine, instead of being improved, becomes at last sour. This evil cannot be remedied; because the fermentation may advance, but cannot be reverted.

Wine-merchants, therefore, when their wines become sour, can only conceal or absorb this acidity by certain substances, as by alkalies and absorbent earths. But these substances give to wine a dark greenish colour, and a taste which, though not acid, is somewhat disagreeable. Besides, calcareous earths accelerate considerably the total destruction and putrefaction of the wine. Oxide of lead, having the property of forming with the acid of vinegar a salt of an agreeable saccharine taste, which does not alter the colour of the wine, and which, besides, has the advantage of stopping fermentation and putrefaction, might be very well employed to remedy the acidity of wine, if lead and all its preparations were not pernicious to health, as they occasion most terrible colics, and even death, when taken internally. We cannot believe that any wine-merchant, knowing the evil consequences of lead, should, for the sake of gain, employ it for the purpose mentioned; but if there be any such persons, they must be considered as the poisoners and murderers of the public. At Alicant, where very sweet wines are made, it is the practice to mix a little lime with the grapes before they are pressed. This, however, can only neutralise the acid already existing in the grape.

If wine contain litharge, or any other oxide of lead, it may be discovered by evaporating some pints of it to dryness, and melting the residuum in a crucible, at the bottom of which a small button of lead may be found after the fusion: but an easier and more expeditious proof is by pouring into the wine some liquid sulphuret. If the precipitate occasioned by this addition of the sulphuret be white, or only coloured by the wine, we may know that no lead is contained in it; but if the precipitate be dark coloured, brown, or blackish, we may conclude that it contains lead or iron.

The only substances that cannot absorb or destroy, but cover and render supportable the sharpness of wine, without any inconvenience, are sugar, honey, and other saccharine alimentary matters; but they can succeed only when the wine is very little acid, and when an exceedingly small quantity only of these substances is sufficient to produce the desired effect; otherwise the wine would have a sweetish, tart, and not agreeable taste.

From what is here said concerning the acescency of wine, we may conclude that, when this accident happens, it cannot by any good method be remedied, and that nothing remains to be done with sour wine but to sell it to vinegar-makers, as all honest wine-merchants do.

As the *must* of the grape contains a greater proportion of tartar than our currant and gooseberry juices do, Dr. Ure has been accustomed, for many years, to recommend, in his lectures, the addition of a small portion of that salt to our *must*, to make it ferment into a more genuine wine. Dr. M'Culloch has lately prescribed the same addition in his popular treatise on the art of making wine.

The following is Brande's valuable table of the quantity of spirit in different kinds of wine:—

		Proportion of spirit per cent. by measure.
1.	Lissa	26·47
	Ditto	24·35
	Average	25·41
2.	Raisin wine	26·40
	Ditto	25·77
	Ditto	23·20
	Average	25·12
3.	Marsala	26·30
	Ditto	25·05
	Average	25.09
4.	Madeira	24·42
	Ditto	23·93
	Ditto (Sircial)	21·40

	Madeira	19·24
	Average	22·27
5.	Currant wine	20·55
6.	Sherry	19·81
	Ditto	19·83
	Ditto	18·79
	Ditto	18·25
	Average	19·17
7.	Teneriffe	19·79
8.	Colares	19·75
9.	Lachryma Christi	19·70
10.	Constantia, white	19·75
11.	Ditto, red	18·92
12.	Lisbon	18·94
13.	Malaga (1666)	18·94
14.	Bucellas	18·49
15.	Red Madeira	22·30
	Ditto	18·40
	Average	20·35
16.	Cape Muschat	18·25
17.	Cape Madeira	22·94
	Ditto	20·50
	Ditto	18·11
	Average	20·51
18.	Grape wine	18·11
19.	Calcavella	19·20
	Ditto	18·10
	Average	18·65
20.	Vidonia	19·25
21.	Alba Flora	17·26
22.	Malaga	17·26
23.	White Hermitage	17·43
24.	Rousillon	19·00
	Ditto	17·26
	Average	18·13
25.	Claret	17·11
	Ditto	16·32
	Ditto	14·08
	Ditto	12·91
	Average	15·10
26.	Malmsey Madeira	16·40
27.	Lunel	15·52
28.	Sheraaz	15·52
29.	Syracuse	15·28
30.	Sauterne	14·22
31.	Burgundy	16·60
	Ditto	15·22
	Ditto	14·53
	Ditto	11·95
	Average	14·57
32.	Hock	14·37
	Ditto	13·00
	Ditto (old in cask)	8·88
	Average	12·08
33.	Nice	14·63
34.	Barsac	13·86
35.	Tent	13·30
36.	Champagne (still)	13·80
	Ditto (sparkling)	12·80
	Ditto (red)	12·56
	Ditto (ditto)	11·30
	Average	12·61
37.	Red Hermitage	12·32
38.	Vin de Grave	13·94
	Ditto	12·80
	Average	13·37
39.	Frontignac	12·79
40.	Cote Rotie	12·32
41.	Gooseberry wine	11·84
42.	Orange wine—average of six samples made by a London manufacturer	11·26
43.	Tokay	9·88
44.	Elder wine	9·87
45.	Cider, highest average	9·87
	Ditto, lowest ditto	5·21
46.	Perry, average of four samples	7·26
47.	Mead	7·32
48.	Ale (Burton)	8·88
	Ditto (Edinburgh)	6·20
	Ditto (Dorchester)	5·56
	Average	6·87
49.	Brown stout	6·80
50.	London porter (average)	4·20
51.	Ditto small beer (ditto)	1·28
52.	Brandy	53·39
53.	Rum	53·68
54.	Gin	51·60
55.	Scotch whiskey	54·32
56.	Irish ditto	53·90

The wines principally used in medicine are, the *vinum album hispanicum*, or sherry, *vinum canarium*, canary or sack wine, the *vinum rhenanum*, or Rhenish wine, and the *vinum rubrum*, or Port wine. These differ from each other in the proportion of their constituent principles, and particularly in that of alkohol, which they contain. The qualities of wines depend not only upon the difference of the grapes, as containing more or less of saccharine juice, and the acid matter which accompanies it, but also upon circumstances attending the process of fermentation. New wines are liable to a strong degree of acescency when taken into the stomach, and thereby occasion much flatulency and eructatations of acid matter; heartburn and violent pains in the stomach from spasms are also often produced; and the acid matter, by passing into the intestines and mixing with the bile, is apt to occasion colics or excite diarrhoeas. Sweet wines are likewise more disposed to become acescent in the stomach than others; but as the quantity of alkohol which they contain is more considerable than appears sensibly to the taste, their acescency is thereby in a great measure counteracted. Red port, and most of the red wines, have an astringent quality, by which they strengthen the stomach, and prove useful in restraining immoderate evacuations; on the contrary, those which are of an acid nature, as Rhenish, pass freely by the kidneys, and gently loosen the belly. But this, and perhaps all the thin or weak wines, though of an agreeable flavour, yet as containing little alkohol, are readily disposed to become acid in the stomach, and thereby to aggravate all arthritic and calculous complaints, as well as to produce the effects of new wine. The general effects of wine are, to stimulate the stomach, exhilarate the spirits, warm the habit, quicken the circulation, promote perspiration, and, in large quantities,

to prove intoxicating, and powerfully sedative. In many disorders, wine is universally admitted to be of important service, and especially in fevers of the typhus kind, or of a putrid tendency; in which it is found to raise the pulse, support the strength, promote a diaphoresis, and to resist putrefaction; and in many cases it proves of more immediate advantage than the Peruvian bark. Delirium, which is the consequence of excessive irritability, and a defective state of nervous energy, is often entirely removed by the free use of wine. It is also a well-founded observation, that those who indulge in the use of wine are less subject to fevers of the malignant and intermittent kind. In the putrid sore throat, in the small-pox, when attended with great debility and symptoms of putridity, in gangrenes, and in the plague, wine is to be considered as a principal remedy; and in almost all cases of languor, and of great prostration of strength, wine is experienced to be a more grateful and efficacious cordial than can be furnished from the whole class of aromatics.

WING. See *Ala.*

WINGED. See *Alatus,* and *Pinnatus.*

WINSLOW, James Benignus, was born in 1669, in the Isle of Funen. He communicated several papers on anatomical and physiological subjects to the Academy of Sciences, as well as the Royal Society of Berlin. His great work, mentioned by Haller as superseding all former compositions of anatomy, and entitled, *Exposition Anatomique de la Structure du Corps Humain,* first appeared at Paris in 1732, in 4to. It was frequently reprinted, and translated into various languages; and is still regarded as of standard authority. It was intended as a plan of a larger work, which, however, he did not finish. He reached the advanced age of ninety-one.

Winter bark. See *Winteranus cortex.*

Winter cherry. See *Physalis alkekengi.*

WINTE'RA. (Named after Captain Winter, who brought the bark from the straits of Magellan in 1579, and introduced it to the knowledge of physicians as useful in scurvy, &c.)

Wintera aromatica. The systematic name of the winter bark tree. The bark is called *Cortex winteranus, Cortex magellanicus, Cortex canellæ albæ;* and the tree, *Winteranus spurius, Canella cubana, Winterania canella,* and *Winteria aromatica—pedunculus aggregatis terminalibus, pistalis quatuor,* of Linnæus. It is a native of the West Indies. The bark is brought into Europe in long quills, somewhat thicker than cinnamon. Their taste is moderately warm, aromatic, and bitterish, and of an agreeable smell, somewhat resembling that of cloves. Canella alba has been supposed to possess considerable medicinal powers in the cure of scurvy and some other complaints. It is now merely considered as a useful and cheap aromatic, and is chiefly employed for the purpose of correcting and rendering less disagreeable the more powerful and nauseous drugs; with which view it is used in the *tinctura amara, vinum amarum, vinum rhei,* &c. of the Edinburgh Pharmacopœia.

Wintera'nus cortex. See *Wintera.*

Winteranus spurius. See *Canella alba.*

WISEMAN, Richard, a surgeon in the civil wars of Charles I., and accompanied Prince Charles, when a fugitive, in France, Holland, and Flanders. He served for three years in the Spanish navy; in 1652, he settled in London. When Charles II. was restored, he became eminent in his profession, and was made one of the serjeant-surgeons to the king. The result of his experience was given in several surgical treatises on *Tumours, Ulcers, Diseases of the Anus, Scrofula, Wounds, Gunshot Wounds, Fractures and Luxations,* and *Syphilis.* His writings have long been regarded as standard authority.

WITHERING, William, was born in 1741. He was author of several valuable publications: *A Botanical Arrangement of British Plants,* which appeared at first in 1776, in two volumes, 8vo., but progressively increased to four; a translation of Bergman's *Sciagraphia Regni Mineralis,* and some chemical and mineralogical papers contributed to the Royal Society, of which he was a fellow; *Account of the Scarlet Fever,* &c.; *Account of the Foxglove, with Practical Remarks on the Dropsy and other Diseases,* published in 1785. His death occurred in 1799.

WITHERITE. See *Heavy spar.*

WOAD. See *Isatis tinctoria.*

WOLF'S-BANE. See *Aconitum napellus.*

WOLFRAM. An ore of tungsten.

WOMB. See *Uterus.*

Womb, inflammation of. See *Hysteritis.*

Wood-louse. See *Oniscus asellus.*

Wood-sorrel. See *Oxalis acetosella.*

Wood-stone. See *Hornstone.*

WOODCOCK. See *Scolopax rusticola.*

WOODVILLE, William, was born at Cockermouth in 1752. In 1790, he published, in four quarto volumes, a highly valuable work, entitled *Medical Botany.* The following year he was elected physician to the Small-pox Hospital; in 1796, he published the first part of a *History of the Small-pox in Great Britain,* &c.; but the discovery of vaccination superseded the necessity of completing that work. He died in 1805.

WOODWARD, John, was born in Derbyshire in 1664. He published an essay towards a *Natural History of the Earth:* in 1718, he published *The State of Physic and of Diseases.* He died at Gresham College in 1727. In 1737, his *Select Cases and Consultations in Physic* were published, containing some valuable observations. He supposed the vital principle to reside not in the nerves, but in the blood, and other parts of the body; and he made many experiments to establish the vis insita of muscles.

Woody nightshade. See *Solanum.*

WOOLLY. See *Lanatus.*

WORM. See *Vermis.*

Worm, guinea. See *Dracunculus.*

Worm, ring. See *Herpes.*

Worm-bark. See *Geoffræa jamaicensis.*

Worm-grass, perennial. See *Spigelia.*

WORMSEED. See *Artemisia.*

WORMWOOD. See *Artemisia.*

Wormwood, mountain. See *Artemisia.*

Wormwood, Roman. See *Artemisia.*

Wormwood, sea. See *Artemisia.*

Wormwood, Tartarian. See *Artemisia.*

WORT. An infusion of malt. This has been found useful in the cure of the scurvy. From one to four pints daily have generally been directed. The proportion recommended in preparing it, is one measure of ground malt to three equal measures of boiling water. The mixture must be well stirred, and left to stand, covered three or four hours. It should be made fresh every day.

Wort, St. John's. See *Hypericum.*

Wort, St. Peter's. See *Hypericum.*

Wort, mug. See *Artemisia.*

WOUNDWORT. See *Laserpitium.*

WRAPPER. See *Valva.*

WRINKLED. See *Rugosus.*

WRIST. See *Carpus.*

X.

XALA'PPA. (From the province of Xalappa, in New Spain, whence it comes.) Jalap.

XA'NTHIUM. (*um, i.* n.; from ξανθος, yellow: so named because it is said to make the hair yellow.) The name of a genus of plants in the Linnæan system. Class, *Monœcia;* Order, *Pentandria.* The lesser burdock.

XANTHIUM STRUMARIUM. The systematic name of the lesser burdock. This herb of Linnæus was once esteemed in the cure of scrophula, but, like most other remedies against this disease, proves ineffectual. The seeds are administered internally in some countries against erysipelas.

XERA'SIA. (*a, æ.* f.; from ξηρος, dry.) An excessive tenuity, or softness of the hairs, similar to down.

XEROCOLLY'RIUM. (From ξηρος, dry, and κολλυριον, a collyrium.) A dry collyrium.

XEROMY'RUM. (From ξηρος, dry, and μυρον, an ointment.) A dry ointment.

XEROPHTHA'LMIA. (*a, æ.* f. Ξηρος, dry, and οφθαλμια, an inflammation of the eye.) A dry inflammation of the eye without discharge.

XI'PHIAS. (From ξιφος, a sword.) The generic name of the sword-fish.

XIPHIAS GLADIUS. See *Sword-fish.*

XI'PHIUM. (From ξιφος, a sword: so named from the sword-like shape of its leaves.) Spurge-wort.

XIPHOID. (*Xiphoides;* from ξιφος, a sword, and ειδος, likeness.) Sword-like: applied to parts which had some resemblance to an ancient sword; hence xiphoid cartilage. See *Cartilago ensiformis.*

Xiphoid cartilage. See *Cartilago ensiformis.*

XYLOA'LOES. See *Lignum aloes.*

XYLOBA'LSAMUM. See *Amyris gileadensis.*

XYLOSTRO'MA. (*a, æ.* f.; from ξυλον, wood, and ϛρωμα, a layer: so called because it forms indeterminate expansions, like cloth or leather, in the inside of the trunks or branches of trees.) The name of a genus of plants. Class, *Cryptogamia;* Order, *Fungi.*

XYLOSTROMA GIGANTEUM. Oak-leather. This fungus is found in the cracks of oaks, and is used in Ireland as a dressing for ulcers, and in Virginia to spread plasters on.

Y.

YAM. See *Dioscorea.*

YANOLITE. See *Axinite.*

Yarrow. See *Achillea millefolium.*

YAWNING. See *Pandiculation.*

YAWS. 1. The African name for raspberry.

2. The name of a disease which resembles the raspberry. See *Frambœsia.*

Yayama. The Brazilian name of the pine apple.

Yellow earth. An ochre-yellow coloured mineral, found in Upper Lusatia.

Yellow fever. See *Remittent fever.*

Yellow saunders. See *Santalum album.*

Yenite. See *Lievrite.*

YEST. See *Fermentum.*

Yoked leaf. See *Conjugatus.*

YOLK. See *Vitellus.*

Yorkshire sanicle. See *Pinguicula.*

YPSILOGLO'SSUS. (From υψιλοειδες, the

ypsiloid bone, and γλωσσα, the tongue.) A muscle originating in the os hyoides, and terminating in the tongue.

Ypsiloi'des. (From υ, the Greek letter, called ypsilon, and ειδος, a likeness.) The os hyoides; so named from its likeness to the Greek letter ypsilon.

YTTRIA. Is an earth, discovered in 1794, by Professor Gadolin, in a stone from Ytterby, in Sweden. It is perfectly white, when not contaminated with oxide of manganese, from which it is not easily freed.

Some chemists are inclined to consider yttria rather as a metallic than as an earthy substance.

YTTRO-CERITE. A mineral of a reddish, greyish-white, and violet-blue colour, consisting of oxide of cerium, yttria, lime, and fluoric acid, found hitherto only at Finbo, in Sweden.

YTTRO-TANTALITE. An ore of tantaluna, from which the columbic acid is procured.

YU'CCA. (*a, æ. f.; Yucca, Yuca*, or *Iucea*, of the original inhabitants of America.) The name of a genus of plants in the Linnæan system. Class, *Hexandria*; Order, *Monogynia*.

Yucca gloriosa. Adam's needle. The roots of this plant are thick and tuberose, and used by the Indians instead of bread, being first reduced into a coarse meal. This, however, is only in times of scarcity.

Z.

ZA'CCHARUM. See *Saccharum*.

ZACCHIA, Paolo, was born at Rome in 1585. He published *Quæstiones Medico-legales*; he was also the author of two esteemed works, on the *Lent Diet*, and on *Hypochondriacal Affections*.

Za'ffran. (Arabian.) Saffron.

ZAFFRE. Saffre. The residuum of cobalt after the sulphur, arsenic, and other volatile matters of this mineral have been expelled by calcination.

Zai'bac. (Arabian.) Quicksilver.

Za'rza. An ancient and provincial name of the sarsaparilla.

ZE'A. (*a, æ.* f.; a name borrowed from the ancient Greeks, whose ζεια appears to have been some kind of *Triticum* or *Hordeum*, agreeing with this genus only as being a grain cultivated for the use of man.) The maize.

Zea Mays. The systematic name of the Indian wheat plant, the common maize, or Indian corn, a native of America, and cultivated in Italy and several parts of Europe, for its grain, which is ground for the same purposes as our wheat, to which it is very little inferior.

ZEAGONITE. See *Abrazite*.

ZEDOA'RIA. (*a, æ.* f.) 1. Zedoary.
2. The pharmacopœial name of a *Kæmpfera*. See *Kæmpferia rotunda*.

ZEINE. A yellow substance, having the appearance of wax, obtained from maize, or Indian corn.

ZEOLITE. The name of a very extensive mineral genus, containing leucite, analcime, chabasite, cross stone, laumonite, mesotype, and apophyllite.

Ze'rna. An ulcerated impetigo.

ZERO. The commencement of a scale marked 0: thus we say the zero of Fahrenheit, which is 32° below the melting point of ice; the zero of the centigrade scale, which coincides with the freezing of water. The absolute zero is the imaginary point in the scale of temperature, when the whole heat is exhausted; the term of absolute cold or privation of caloric.

ZI'BETHUM. (*um, i.* n.; from *Zobeth*, Arabian.) *Civetta*. Civet. A soft, unctuous, odoriferous substance, about the consistence of honey or butter, of a whitish, yellowish, or brownish colour, sometimes blackish, contained in some excretory follicles near the anus of the *Viverra zibetha*, of Linnæus. It has a grateful smell when diluted, and an unctuous subacrid taste, and possesses stimulating, nervine, and antispasmodic virtues.

ZIG-ZAG. See *Flexuosus*.

ZIMMERMAN, John George, was born in 1728, in the canton of Bern, and studied medicine under Haller at Gottingen. He published a popular work *On Solitude*. His treatise *On the Experience of Medicine* appeared in 1763, and three years after that *On Dysentery*.

ZIMOME. (From ζυμη, *fermentum*.) The name given by Taddey, an Italian physician, to one of the constituents of wheat. See *Gluten, vegetable*.

ZINC. (*Zincum, i.* n., a German word.) A metal found in nature combined with oxygene, carbonic acid, and sulphuric acid; and mineralised by sulphur. Native oxide of zinc is commonly called *calamine*. It occurs in a loose and in a compact form, amorphous, of a white, grey, yellow, or brown colour, without lustre or transparency. Combined with carbonic acid, it is called *vitreous zinc ore*, or *native carbonate of zinc*. It is found in solid masses, sometimes in six-sided compressed prisms, both ends being covered with pentagons. Its colour is generally greyish,

inclining to black. It is often transparent. *Sulphate of zinc* is found efflorescent in the form of stalactites, or in rhombs. *Sulphuret of zinc*, or *blende*, is the most abundant ore.

Metallic zinc is of a bluish-white colour, somewhat brighter than lead; of considerable hardness, and so malleable as not to be broken with the hammer, though it cannot be much extended in this way. It is very easily extended by the rollers of the flatting mill. Its sp. gr. is from 6·9 to 7·2. In a temperature between 210° and 300° of F., it has so much ductility that it can be drawn into wire, as well as laminated.

When broken by bending, its texture appears as if composed of cubical grains. On account of its imperfect malleability, it is difficult to reduce it into small parts by filing or hammering; but it may be granulated, like the malleable metals, by pouring it, when fused, into cold water; or, if it be heated nearly to melting, it is then sufficiently brittle to be pulverised.

It melts long before ignition, at about the 700dth degree of Fahrenheit's thermometer; and, soon after it becomes red-hot, it burns with a dazzling white flame, of a bluish or yellowish tinge, and is oxidised with such rapidity, that it flies up in the form of white flowers, called the *flowers of zinc*, or *philosophical wool*. See *Zinci oxidum*. These are generated so plentifully, that the access of air is soon intercepted; and the combustion ceases, unless the matter be stirred, and a considerable heat kept up. The white oxide of zinc is not volatile, but is driven up merely by the force of the combustion. When it is again urged by a strong heat, it becomes converted into a clear yellow glass. If zinc be heated in closed vessels, it rises without decomposition.

When zinc is burned in chlorine, a solid substance is formed of a whitish-grey colour, and semitransparent. This is the only chloride of zinc, as there is only one oxide of the metal. It has been called *butter of zinc*, and *muriate of zinc*.

Blende is the native sulphuret of zinc. The mineral, vegetable, and most of the acids act upon zinc; much hydrogene gas is extricated, and salts are formed. The salts used medicinally are the sulphate and acetate. See *Zinci sulphas*.

Zinc, vitriolated. See *Zinci sulphas*.

ZI'NCI ACETAS. Acetate of zinc. A salt composed of zinc and acetic acid. It is used as an astringent against inflammation of the urethra, eyes, and vagina, dissolved in water, or other solvents, in the proportion of one grain to an ounce.

ZINCI OXIDUM. *Zincum calcinatum*. Oxide of zinc. Flowers of zinc. *Nihil album; Lana philosophorum*. Throw gradually little pieces of zinc into a large deep crucible placed obliquely, and made of a white heat, another crucible being placed over it, so that the zinc may be exposed to the air, and that it may be frequently stirred with an iron spatula; take out directly the oxide which is formed from time to time; then pass the white and lighter part of it through a sieve. Lastly, pour water upon this, that a very fine powder may be formed, in the same manner as chalk is directed to be prepared. The properties of this oxide are analogous to those of the sulphate (except that it is hardly active enough to excite vomiting), if given in larger doses: but it is more precarious in its effects; and chiefly used at present as an external astringent.

ZINCI SULPHAS. *Zincum vitriolatum. Vitriolum album*. Sulphate of zinc. White vitriol. This occurs native, but not sufficiently pure for medical use. It is thus prepared in the pharmacopœia:—"Take of zinc, broken to little pieces, three ounces; sulphuric acid, by weight, five ounces; water, four pints: mix them in a glass vessel, and when the effervescence is over, filter the solution through paper; then boil it down till a pellicle appears, and set it by to crystallise." This preparation is given internally in the dose of from ℈j to ʒss. as a vomit. In small doses it cures dropsies, intermitting headaches, and some nervous diseases; and is a powerful antispasmodic and tonic. A solution of white vitriol is also used to remove gleets, gonorrhœas, and for cleaning foul ulcers, having an astringent or stimulant effect, according to its strength.

ZI'NCUM. See *Zinc*.

ZINCUM CALCINATUM. See *Zinci oxidum*.

ZINCUM VITRIOLATUM. See *Zinci sulphas*.

ZINCUM VITRIOLATUM PURIFICATUM. See *Zinci sulphas*.

ZINGI. An ancient name of the stellated aniseed. See *Illicium anisatum*.

ZI'NGIBER. (*Zingiberis, is*. f. *Zingiber, eris*. n. *Zingiberi*, indec. Ζιγγίβερις, of Dioscorides, a name which the Greeks seem to have taken from the Arabians, when they got the plant.) The name of a genus of plants, according to Roscoe. Class, *Monandria*; Order, *Monogynia*.

ZINGIBER ALBUM. Ginger-root when deprived of its radicles and sordes.

ZINGIBER NIGRUM. The root of the *zingiber officinale* is so called when suffered to dry with its radicles and the sordes which usually hang to it.

ZINGIBER OFFICINALE. The systematic name of the ginger plant. *Zingiber album; Zingiber nigrum; Zingiber commune; Zinziber; Amomum zingiber*. The white and black ginger are both the produce of the same plant, the difference depending upon the mode of preparing them. Ginger is generally considered as an aromatic, and less pungent and heating to the system than might be expected from its effects upon the organ of taste. It is used as an antispasmodic and carminative. The cases in which it is more immediately serviceable are flatulent colics, debility, and laxity of the stomach and intestines; and in torpid and phlegmatic constitutions to excite brisker vascular action. It is seldom given

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